

ISSN 2579 - 2555

## ՖԻՆԱՆՍՆԵՐ ԵՎ ՀԱՇՎԱՊԱՀԱԿԱՆ ՀԱՇՎԱՌՈՒՄ

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ุ่ԵՐԵՎԱՆ - 2021 www.iatc.am



# <UCUMU</th>NTERNATIONAL ACCOUNTANCY TRAINING CENTREМЕЖДУНАРОДНЫЙ ЦЕНТР ПО ОБУЧЕНИЮ БУХГАЛТЕРИИ

## ՖԻՆԱՆՍՆԵՐ ԵՎ ՀԱՇՎԱՊԱՀԱԿԱՆ ՀԱՇՎԱՌՈՒՄ

ԳԻՏԱԿԱՆ ՀԱՆԴԵՍ

1 (7)

## FINANCE AND ACCOUNTING

SCIENTIFIC JOURNAL

## ФИНАНСЫ И БУХГАЛТЕРСКИЙ УЧЕТ

НАУЧНЫЙ ЖУРНАЛ

ԵՐԵՎԱՆ 2021

«ՀՈՒՄԿ» ՀԻՄՆԱԴՐԱՄ ՀՐԱՏԱՐԱԿՉՈՒԹՅՈՒՆ

«Ֆինանսներ և հաշվապահական հաշվառում» գիտական հանդեսը լույս է տեսնում տարեկան երկու անգամ։ Հրատարակվում է 2018 թվականից։

The scientific journal "Finance and Accounting" is published twice a year. It has been published since 2018.

Научный журнал "Финансы и бухгалтерский учет" выходит два раза в год. Издается с 2018 года.

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## DIAGNOSTICS OF BANKRUPTCY FROM THE POINT OF VIEW OF FINANCIAL ANALYSIS

Abstract: The article presents the role of financial analysis in the bankruptcy process of an organization. A brief description of methods for predicting bankruptcy and diagnosing an organization is offered. The significance and role of each method in financial analysis was clarified separately. Special attention was given to the interpretation and analysis of the organization's solvency indicators, which are necessary for assessing the organization's financial position and predicting the risk of bankruptcy.

**Keywords:** bankruptcy, methods of bankruptcy diagnostics, financial stability, solvency indicators

JEL classification: G33

**Research aim:** provide a comparative description of the organization's bankruptcy forecasting and diagnostic methods.

**Research hypothesis:** The general methodological approach to forecasting the bankruptcy of organizations is not appropriate, consequently it is necessary to use different methodological methods in this area.

**Research novelty:** a comparative analysis of the methods of forecasting the bankruptcy of organizations was carried out furthermore revealing the advantages and disadvantages of each,

#### Introduction

At present, given the instability of the entire macroeconomic system, the management of the organization needs to analyze not only the financial condition of the organization, but also to consistently diagnose the probability of bankruptcy. To predict the bankruptcy of organizations, methodological approaches require constant development in accordance with constantly changing external and internal conditions. At the same time, the choice of creating a multifunctional method that will correspond to all spheres of the economy seems doubtful, since the differences in financial characteristics are significant. Currently, it is necessary to submit reasonable proposals to a particular partner of the organization, investors and other external users in the direction of improving the financial situation of the organization, and from this point of view, the methods of diagnosing bankruptcy are of particular importance, which from the point of view of financial analysis help to get a more accurate picture. To achieve this goal, it is necessary to study the signs of bankruptcy in the organization, the reasons, describe the approaches, methods and models used to assess the probability of bankruptcy, check the probability of bankruptcy.

#### Research results

The business cycle of an organization consists of the following stages: development, growth, maturity, and decline. These cycles are constantly changing depending on a number of external and internal, subjective and objective conditions. Some organizations successfully overcome the downturn and return to the growth phase, while others fail to overcome the downturn and go bankrupt. The problem is not how to avoid bankruptcy, but what methods of assessing insolvency to use to get more reliable information for making management decisions.

First, it is necessary to pay attention to the concepts of "insolvency" and "bankruptcy". There is a dialectical connection between them and they have a common essential basis: excess of the amount of the debtor's obligations over the value of its property. It follows from this that bankruptcy as a fact cannot be recognized by an Arbitration Court without insolvency, since insolvency is a precondition for the application of bankruptcy legislation. On the other hand, these closely related concepts do not coincide, since insolvency is not yet a fact of bankruptcy, but only a precondition. Insolvency may not always result in a court decision on bankruptcy. [1] Currently, there are several methods of diagnosing bankruptcy. The first involves the analysis of a wide range of criteria and features, the second is based on integral indicators, the third uses the analysis of a limited number of indicators that characterize the financial position of the organization. The analysis of a wide range of criteria and features in the first method includes:

- a prolonged decline in production, reduced sales and, as a result, a decrease in revenue,
- the presence of overdue accounts payable and receivables in the balance sheet of the organization,
- consecutive decline in the liquidity ratio,
- high proportion of borrowed capital in total capital,
- insufficient amount of own working capital,
- availability of raw materials, materials, finished products, and other excess inventory,
- loss of key customers and suppliers,
- the decrease in production capacity,
- underutilization of production capacity,
- insufficient volume of capital investments,
- loss of key employees, etc. [2]

The second method of diagnosing bankruptcy is integral indicators. The essence of this method is that the diagnosis is based on a financial model, which summarizes the main indicators that characterize the activities of the organization. As a result of the calculation, the resulting coefficient shows which group this organization belongs to, whether it is bankrupt or not. That is, with the help of these models, you can immediately assess the risk of insolvency. So far, a large number of models for diagnosing bankruptcy have been developed. Two-factor and five-factor models of Altman, R. Taffler and G. Tishou models, R. R. Saifulin-Kadikova model, etc.

The third method is based on financial analysis. It offers the calculation of a certain number of financial coefficients. As a rule, organizations use it, because this method allows you to

economically and reliably assess the financial position of the organization. First of all, it is necessary to analyze the indicators of solvency that depend on the liquidity of the organization and its assets. Solvency is the ability of an organization to pay its debts on time. This is the main indicator of its financial stability. In some cases, instead of the concept of "solvency", which, in general, is also true, the concept of" liquidity" is used, which implies the presence of various funds of the organization that form the active part of the organization's balance sheet, should be implemented. This concept is a broader set of solvencies. However, in a narrower and simpler sense, solvency means that the organization has at its disposal sufficient working capital necessary to repay all shortterm liabilities. Liquidity characterizes the possibility of converting assets into cash. [3] In other words, the concept of solvency is more dynamic than liquidity, since organizations tend to have an established structure of assets and liabilities, and any sharp change in them is rare, while solvency depends on many internal and external factors at a particular date. The current liquidity ratio indicates the adequacy of the organization's current assets, which, if necessary, can be used to repay its short-term liabilities. The cost of the lower limit of the ratio, equal to 1, is due to the fact that there must be the same working capital as short-term The excess of current assets (twice) creates liabilities. conditions for the stable development of production and financial activities. A liquidity ratio above 2 indicates that current assets are not being used effectively. The absolute

liquidity ratio is a more stringent indicator than the previous one and shows how much of the short-term debt can be repaid if necessary. The obtained values of the absolute liquidity ratio indicate the need for constant work with debtors in order to ensure the possibility of converting funds of the most liquid working capital for settlements with suppliers. Indicators of solvency, the order of their calculation, as well as the optimal values are presented in Table 1:

Table 1. Indicators of solvency

Indicators	Calculation of the	Acceptable	
	indicator	values	
Current liquidity ratio	Current assets /	1-2	
	Current liabilities		
Absolute liquidity ratio	(Cash + Short-term	0,2 - 0,4	
	financial investments)		
	/ Short-term liabilities		
The ratio of the security	(Amount of assets –	≥1	
of the debtor's own	Value added tax) /		
assets and liabilities	Balance sheet amount		
Solvency ratio of current	Current liabilities /	≤ 3 month	
liabilities	Average monthly		
	income		

The ratio of the debtor's own assets to the debtor's liabilities shows how much the organization's own assets cover long-term liabilities. The degree of solvency of current liabilities shows how many months an organization needs to repay short-term liabilities in compliance with the current level of income. Moreover, the coefficients that characterize the financial stability of the organization are calculated. Financial stability of an organization-the state of its financial resources,

their distribution and use, ensuring the development of an organization based on the growth of profit and capital, while maintaining the level of solvency and creditworthiness within acceptable limits. An organization that can accurately use the economic benefits available in its own assets, calculates the time limits set for its obligations, and does not allow unjustified receivables can be considered financially stable. [4] According to A. Sheremet: financial stability is the ability of an organization to maintain its existence and smooth operation due to certain free funds and the balance of financial flows. [5] The main indicator of financial stability is the growth of sales volumes, as this is the revenue from sales, which is a source of covering current expenses and generating profit. In turn, profit growth allows you to expand the scope of the organization, invest in improving the material and technical base, the development of new technologies, etc. The autonomy ratio reflects the share of equity in total assets. The higher its cost, the more independent the organization is from external sources of funding. The ratio of own working capital security is calculated as the ratio of own current assets to the total value of current assets. It describes the part of the reserves that is acquired from its own funds and thus reflects the financial stability of the organization.

Table 2 shows the indicators and their calculation procedure that characterize the financial stability of the organization:

Table 2. Financial stability indicators

Indicators	Calculation of the	Acceptable	
	indicator	values	
The coefficient of	Equity / Balance	0,5	
autonomy	sheet amount		
Coefficient of availability	(Equity + Non-	0,6 - 0,8	
of own working capital	current liabilities)		
	/ Inventories		
Share of overdue	Overdue accounts	No more than	
accounts payable in the	payable / Balance	20%	
total balance sheet	sheet amount		
Ratio of accounts	Accounts	0,4	
receivable to balance	receivable /		
sheet amount	Balance sheet		
	amount		

The share of overdue accounts payable in the total balance sheet is characterized by the presence of overdue accounts payable and its share in the total liabilities of the organization. The ratio of accounts receivable to total assets shows how much cash and other financial assets are diverted from turnover in favor of third parties. This is a softer indicator than the autonomy coefficient. In world practice, its cost is less than 0.4. Then you need to calculate the indicators that characterize the activity of the activity. It represents the totality of the efforts required to promote an organization in the market. In addition to quantitative indicators of business activity, it is also possible to distinguish the qualitative characteristics of the organization's activities that form its competitive advantages. product range, product quality, service quality, number of new products and services, employed

market share, employee qualifications, market reputation, etc. Note that there are no optimal values for profitability indicators. The higher the cost of these indicators, the more effective the organization will be. The optimal values of the coefficients presented in Tables 1 and 2 are conditional. In practice, it is necessary to analyze the dynamics of all the specified coefficients, as well as compare them with similar indicators of organizations operating in the same industry. In terms of assessing the financial condition of the organization, the quantitative indicators that characterize business activity are highlighted, which are presented in Table 3:

Table 3. Quantitative indicators that characterize business activity

Indicators	Calculation of	Comment		
	the indicator			
Return on assets	Net profit /	Reflects the degree of		
ratio	Balance sheet	efficiency of the use of the		
	total	organization's assets, as well as		
		the professional qualifications		
		for managing them		
Sales profitability	Net profit /	Provides information on the		
ratio	Revenue from	level of profitability of the		
	sales	organization		

Thus, a multi-level method of diagnosing bankruptcy is a system of a huge number of indicators that need to be calculated in dynamics. This method of diagnosis is good, as it allows you to assess the financial situation of the organization and the risk of bankruptcy in the most coordinated and comprehensive way. The main disadvantage of this method is the high degree of complexity of making decisions in multi-level tasks. The method based on integral indicators, on the contrary, does not require complex calculations, but there is no universal model for diagnosing bankruptcy. We should always consider the industry affiliation of the organization, as the indicators may differ greatly in different areas of activity. Such models should be developed separately for each industry sector, periodically adjusted and improved to consider new trends in the economy. The method of diagnosing bankruptcy based on a limited range of indicators is the optimal method of diagnosing bankruptcy, which is not as difficult to calculate and make decisions as the multi-level method, but not as simple as the method based on integral indicators. It allows you to select only the indicators necessary for the calculation, which allow you to comprehensively characterize the financial position of the organization and more reliably assess the risk of bankruptcy.

#### **Conclusions**

In our opinion, the indicators of bankruptcy diagnostics presented in the article allow any organization to accurately determine the ratio of its own and borrowed capital, predict the organization's cash flows and manage them, accurately service the organization's short-and long-term debts, assess the full potential of the organization and indicate ways that will help the organization to increase the level of business activity. These are the main areas that an organization of any field should pay attention to and develop a strategy for its activities based on the

scope and characteristics of its activities. We believe, that all organizations should conduct an analysis of the indicators listed in the article, which will show an assessment of the financial stability of the organization and will contribute to making more effective management decisions.

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**Աշոտ Մաթևոսյան** տ.գ.դ., պրոֆեսոր, ՀՊՏՀ

**Գևորգ Մարտիրոսյան** Մագիստրոս, <ՊՏ<

## ՍՆԱՆԿԱՑՄԱՆ ԱԽՏՈՐՈՇՈՒՄԸ ՖԻՆԱՆՍԱԿԱՆ ՎԵԼՈՒԾՈՒԹՅԱՆ ՏԵՍԱՆԿՅՈՒՆԻՑ

**Բանալի բառեր** - սնանկություն, սնանկության ախտորոշման մեթոդներ, ֆինանսական կայունություն, վճարունակության ցուցանիշներ

Հոդվածում ներկայացվում է ֆինանսական վերլուծության դերը կազմակերպության սնանկացման գործընթացում։ Ներկա-յացվել է կազմակերպության սնանկացման կանխատեսման և ախտորոշման մեթոդների համառոտ բնութագիրը։ Առանձին պարզաբանվել է յուրաքանչյուր մեթոդի նշանակությունը ֆինանսական վերլուծությունում։ Առանձնահատուկ տեղ է հատկացվել վճարունակության ցուցանիշների մեկնաբանմանը և վերլուծությանը, որոնք անհրաժեշտ են կազմակերպության ֆինանսական դրության գնահատման և սնանկացման ռիսկի կանխատեսման համար։

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## ДИАГНОСТИКА БАНКРОТСТВА С ТОЧКИ ЗРЕНИЯ ФИНАНСОВОГО АНАЛИЗА

**Ключевые слова** - банкротство, методы диагностики банкротства, финансовая стабильность, показатели платежеспособности

В статье представлена роль финансового анализа в процессе банкротства организации. Представлена краткая характеристика методов прогнозирования банкротства и диагностики организации. Выявлены роль и значение каждого метода в финансовом анализе. Особое место отведено интерпретации и анализу показателей платежеспособности организации, необходимых для оценки финансового положения организации и прогнозирования риска банкротства.

Ներկայացվել է՝ 25.01.2021 թ. Ընդունվել է ւրպագրության՝ 15.03.2021 թ.

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## UNIVERSITY'S COMPETITIVENES STRATEGIC ACCOUNTING METHODOLOGY

Abstract: Acting as a separate area of managerial accounting, strategic accounting performs unique functions. Strategic accounting monitors the actual results of the organization's to long-term economic activities, revealing not direct operational or tactical deviations, but direct or indirect threats to the failure of long-term business plans. Therefore, it is important not only to monitor the economic competitiveness of organizations, but also to group and coordinate that information, to develop a framework for internal management accountability, which can be done through strategic accounting. In this case, there is an opportunity to identify the competitive advantage (weaknesses) centers of the organizations through strategic accounting reports, to take measures to those responsible to eliminate these shortcomings in the foreseeable future.

**Keywords:** strategic accounting, assesment of competitiveness, double entry, managerial reports, decition making

JEL classification: M40, M41

**Research aim**: propose a methodology for strategic accounting of competitiveness.

**Research hypothesis:** the level of competitiveness of organizations can be accountable by double entry.

**Research novelty:** strategic accounting methodology is proposed for universities activity competitiveness.

#### Introduction

Acting as a separate area of managerial accounting, strategic accounting performs special functions. First of all, it integrates the information of the internal-external environment of economic activity, which is related to the indicators of the organization's competitiveness, implements strategic planning information based on the long-term business goals and mission. In addition, strategic accounting monitors the actual results of the organization's long-term economic activities, revealing not direct operational or tactical deviations, but direct or indirect threats to the failure of long-term business plans. Therefore, it is important not only to monitor the economic competitiveness of organizations, but also to group and coordinate that information, to develop a framework for internal management accountability, which can be done through strategic accounting. In this case, there is an opportunity to identify the competitive advantage centers of the organizations through the strategic accounting reports, to take measures to those responsible to eliminate these shortcomings in the foreseeable future.

#### Literature review

Despite the fact, that the functions of strategic accounting are gradually being clarified in the management system, there are still different approaches to this issue in the professional literature. [1] As a rule, in economically developed countries, strategic accounting is considered as a separate branch of traditional management accounting, hence, it is called "strategic management accounting". However, in our opinion, strategic accounting can not be considered a traditional management accounting in a number of respects. First, it is in information integration interconnections with both management and tax, financial and operational accounting systems; it cannot be part of management accounting. In addition, traditional management accounting typically serves internal management, which reports to the latter as a "trade secret." In contrast, the strategic accounting report is more open and public, as it is also used by shareholders, employees, and investors directly or indirectly involved in the business management system. Finally, in contrast to traditional management accounting, the scope of which is much more comprehensive, including the entire management system (cash flow, business activity, investment efficiency, etc.), the scope of strategic accounting studies can often be narrow. As it is "targeted" at the strategic hubs that support the mission of the organization's economic activity u mainly have long-term targets. [2]

By the way, these potential targets are not universal for all organizations, but differ greatly from each other, based not only on the specifics of the business, but also on the requirements of the competitive environment. In contrast, the professional literature presents a different view, assessing the scope of strategic accounting as more comprehensive, but not in terms of objectives, but in terms of a variety of research technologies and information sources. Thus, strategic accounting uses methods of analysis, planning, budgeting, statistical methods, principles of probability theory, while at the same time incorporating the traditional accounting methodology within its study technologies (double entry, accounting, balance sheet of indicators, factor assessment of causal changes, audit u internal control). The diversity of study technologies the wide range of information sources in practice also pose problems in the organizational field of strategic accounting, as it becomes necessary to methodically coordinate the "functions" of differrent study methods, to create a unified body for harmonization of different functions. In this regard, it is proposed in the professional literature to present the methodological system of strategic accounting organization with three interrelated sections. In addition, the first section presents the purpose of strategic accounting, tasks and functions, which in fact acts as a "driving force" in the accounting system, determines the methodology used and the scale of information presentation. [3]

## Research Methodology

As a rule, the purpose of strategic accounting is the provision of information on long-distance management decisions, which solves a number of problems, such as:

- internal and business environment analysis from the point of view of competitiveness strategy,
- supervision of the implementation of the goals of the organization's strategy according to the centers of responsibility L factors,
- operational, tactical cause-effect correlation and strategic management information flows harmonization in the accounting system.

The next step in organizing strategic accounting is the new methodology used. Moreover, this issue is discussed from generalized point of view. [4] Strategic accounting information flows are coordinated in such a way as to provide both qualitative and quantitative measurements of the causal changes in key indicators. However, such coordination will be considered ineffective if the scope of information does not include the areas that reflect the process of achieving strategic goals in the internal business environment, as well as in the competitive foreign market, supply, sales and investment. An important area of strategic accounting is the information gathering process. The peculiarity of this field lies not only in the various information sources (natural, value, tax, financial, operational accounting reports, marketing, control reports, market outsourcing analyzes, etc.), but also in the specific requirements for the information used.

Flexibility and speed of changing the range of information sources in the face of changes in the competitive environment. There is an opinion in the professional literature that traditional accounting information does not always provide

an opportunity to make forecasts in the field of strengthening the competitiveness of organizations, moreover, to make effective strategic long-term decisions. Thus, strategic accounting is presented as a "global model of information technology", combining financial and management accounting, also reporting within one system to make strategic decisions. There is is also of the opinion, that strategic accounting should be used as an effective means of managing innovation, considering that it includes such long-range indicators, that fall outside the traditional governmental and financial accounting system. [5]

Strategic accounting is also seen as an effective means of managing the sustainable development of the business, "securitization", when long-term control is established over the net assets of the organization, the quality of liabilities, structural reforms of competitive capital. We agree with the wording, according to which strategic accounting is defined as an information system adapted to the specifics of the business, which forms in a multidimensional management system, contributing to the strategic decision-making on increasing internal and external competitiveness. [6] Thus, the main features of strategic accounting, with which it acts as a separate area in the economic accounting system, are as follows:

First, strategic accounting is governed not by set national or international standards, but by dynamic incentives to improve business competitiveness, so it is never repeated at the level of different organizations, as its flexible organizational structure and methodology adapts to a specific business environment.

Second, strategic accounting is not limited to traditional management accounting methods; it uses a wider range of study tools. On the contrary, the scope of strategic accounting objects is narrower; it includes not the whole sector of the economy, but only the "engines" of competitiveness, ie strategic targets, far-reaching goals.

Third, strategic accounting is characterized by a multifaceted environment for the collection and processing of information, which relates not only to the internal and external competitive areas of the business, but also to financial and non-financial key indicators, critical criteria for sustainable business development, within which strategic management decisions are made.

#### Research results

In our opinion, it is expedient to introduce management accounts in the strategic accounting system, due to which the competitive positions of different segments of agribusiness will be registered. Moreover, these accounts are not integrated with financial accounting accounts, as they do not represent the financial position and financial results of the business, but describe the competitiveness, which is very important in the strategic management system.

Therefore, the proposed strategic accounting accounts do not participate in the preparation of financial statements. They provide information to the managerial accounting system on the degree of competitiveness of the business. At the same

time, we propose to build this information system on the principle of balance sheet, on the one hand, grouping the relative values of "benchmarks", on the other hand, recording deviations from them, such as.

Actual indicators = Competitive indicators +,- Deviations

Table 1. Competitive goals and facts of the university's strategic indicators. Composed by the authers.

Strategic		Com-	Actual	Implemen-	Devi-
Indicators		petitive		tation level	ation
Students	%	90	85	0,94	-0,06
demands					
satisfaction					
Student	stu-	5200	4260	0,82	-0,18
employability	dent				
level					
Diversity of	quan-	15	11	0,73	-0,27
education	tity				
programs					

Thus, in the foreseeable future, the university has set itself the task of appearing in the top five competing universities operating in the local education market, to achieve which a number of indicators must be met in the next three years, such as: meeting student needs by at least 90% and employing at least 5,200 graduates a year, a variety of professional educational programs in at least 15 areas. However, monitoring shows that the university does not achieve its goals even in the first year, producing lower competitive rates (see Table 1).

Based on the balance of competitively targeted indicators and deviations of actual achievements, we propose to apply the University's Strategic Competitiveness Accounting Methodology, based on double entry new management accounts, by retrieving the following accounting reports.

- 1. The maximum coefficient of satisfaction of the needs of the university students has been formulated:
  - DR Competitive Satisfaction Index... 1.0

    CR Actual Requirement Satisfaction Index ..... 1.0
- 2. The actual coefficient of satisfaction of the needs of the university students has been formulated:
  - DR Requirement Satisfaction Actual Index .... 0.94 CR Competitive Satisfaction Requirement .... 0.94
- 3. The deviation of the actual coefficient of satisfaction of the needs of the university students from the strategic goal has been formulated:
  - DR Actual Requirement Satisfaction....0.06

    CR Deviations from the strategic goals...... 0.06
- 4. Deviations of actual achievements from strategic competitive goals have been written off:
  - DR Deviations from Strategic Goals...... 0.06

    CR Competition Satisfaction Index....... 6 0.06

#### Conclusions

The proposed accounting reports are also applicable to other indicators of university competitiveness and information coordination (see Table 1). Therefore, by targeting any competitive indicator, the strategic accounting methodology presented by us, provides an opportunity to monitor the progress or shortcomings of the organizations' competitive position. Finally, the strategic accounting of deviations from competitive objectives creates a field of comparability of indicators of different dimensions (financial, natural) and based on it, effective management decisions are implemented.

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**Արմեն Ճուղուրյան** տ.գ.դ., պրոֆեսոր, ՀՊՏՀ

**Չուլիետտա Գևորգյան** տ.գ.թ., դոցենտ, ՀԱԱՀ

## ՀԱՄԱԼՍԱՐԱՆՆԵՐԻ ՄՐՑՈՒՆԱԿՈՒԹՅԱՆ ՌԱԶՄԱՎԱՐԱԿԱՆ ՀԱՇՎԱՌՄԱՆ ՄԵԹՈԴԱԲԱՆՈՒԹՅՈՒՆԸ

**Բանալի բառեր** – ռազմավարական հաշվառում, մրցունակության չափում կրկնակի գրանցում, կառավարչական հաշվետվություններ, կառավարչական որոշումներ

Որպես կառավարչական հաշվապահության առանձին ոլորտ՝ ռազմավարական հաշվառումը կատարում է առանձնակի գործառույթներ։ Այն իրականացնում է կազմակերպության երկարաժամկետ տնտեսական գործունեության իրական արոյունքների հաշվառում՝ բացահայտելով ոչ թե ուղղակի գործառնական կամ տակտիկական շեղումներ, այլ երկարաժամկետ բիզնես պլանների չկատարման ուղղակի կամ անուղղակի սպառնալիքներ։ Ուստի, կարևոր է ոչ միայն հետևել կազմակերպությունների տնտեսական մրցունակությանը, այլ նաև խմբավորել, համակարգել այս տեղեկատվությունը և մշակել ներքին կառավարման հաշվետվությունների կառուցվածք, որը հնարավոր կլինի իրականացնել ռազմավարական հաշվառման միջոցով։ Այս դեպքում ռազմավարական հաշվառման հաշվետվությունների միջոցով ինարավոր է դառնում հայտնաբերել համայսարանների մրզակզային առավելությունների (թերությունների) կենտրոնները տեսանելի ապագալում այդ թերությունները վերացնելու համար։

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## МЕТОЛОГИЯ СТРАТЕГИЧЕСКОГО УЧЕТА КОНКУРЕНТНО-СПОСОБНОСТИ УНИВЕРСИТЕТОВ

**Ключевые слова** - стратегический учет, оценка конкурентоспособности, двойная запись, управленческие отчеты, принятие решений

Стратегический область учет, как отдельная управленческого учета, выполняет определенные функции. Данный учет отслеживает фактические результаты долгосрочной экономической деятельности организации, выявляет прямые или косвенные угрозы невыполнения долгосрочных бизнес-планов, а не операционные или тактические отклонения. Следовательно, важно не только отслеживать экономическую конкурентоспособность унверситетов, но и группировать, координировать эту информацию и разрабатывать структуру для внутренней управленческой отчетности, что может быть выполнено с помощью стратегического учета. В этом случае появляется возможность выявления центров конкурентных преимуществ (недостатков) организаций через отчеты стратегического учета, а также принятия мер к ответственным лицам по устранению данных недостатков в обозримом будущем.

> Ներկայացվել է՝ 18.01.2021 թ. Ընդունվել է ւրպագրության՝ 15.03.2021 թ.

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## MANAGERIAL DECISION: SOME SOCIO-PHILOSOPHICAL PROBLEMS

Abstract. Making managerial decisions requires not only specific knowledge and experience but also possession of the patterns of making managerial decisions and their adequate use. Meanwhile, most managers do not trust theoretical, and even more so to philosophical reasoning on this topic and, in general, tend to make decisions only based on their experience, intuitively, and therefore consider any recommendations superfluous. This article analyzes some of the sociophilosophical problems of the management decision-making process, and in the light of such an analysis, the main causes of errors are clarified.

**Keywords**: managerial decision, principles of making managerial decisions, philosophical problems of making managerial decisions, intuitive approach, rationalistic approach, managerial mistakes

JEL classification: D 91, M 19, M 54

Research goals: show that making a managerial decision requires not only specific knowledge and experience of a manager but also his knowledge of the laws of making managerial decisions and their adequate use; it is necessary to simultaneously find out the main mistakes in making managerial decisions.

Research hypothesis: The main mistakes in making managerial decisions are the result of a manager's overestimation of his experience and intuition, and vice versa, underestimation of the importance of knowing the basic laws of making managerial decisions and their adequate use. The flexibility of thinking and improvement of communication skills will contribute to a more effective implementation of this function of the manager.

**Research novelty**: Based on the conducted sociophilosophical analysis, the article reveals some patterns of making managerial decisions and their adequate use, as well as the reasons for the main mistakes in making managerial decisions.

#### Introduction

In modern management theory, much attention is paid to the activities of a manager associated with making managerial decisions. And the performance of this function requires to him not only special knowledge and experience but also a sufficient understanding by him of the laws of making managerial decisions and their adequate use.

Decision making seems simple and easy because we all make decisions in our daily life. These decisions are not shielded from business life either in form or in their interpenetrating consequences. And since everyone, before taking on the role of "decision-maker", has already made many decisions "by eye", the same behavior transfers to the sphere of labor relations.

It is for this reason that most managers are suspicious of theoretical, and even more so philosophical, reasoning on this topic and, in general, tend to make decisions based solely on their experience, intuitively and therefore consider any advice and recommendations superfluous. Meanwhile, knowledge of the basic laws of making managerial decisions does not at all prejudice the originality of each type of activity and the subject of decision-making, but contributes to both a better understanding of the essence of the managerial problem and a more complete comparison of the existing options for choosing a decision and therefore making the most correct decision and its effective implementation. The philosophical analysis of the process of making and implementing managerial decisions contributes to more complete coverage of this phenomenon and the improvement of the methodology of cognition and changing reality.

## The managerial decision from a philosophical point of view

According to the definition adopted in the specialized literature, "a managerial decision" is the intellectual activity of a subject (individual or collective) aimed at providing a solution to a certain intrasystem problem and at the normal functioning and harmonious development of the system as a whole.

Making a decision means generalizing the analysis of the current moment of management work to overcome the cognitive dissonance of the previous state and create a certain picture of the necessary actions (in fact, a situational goal) and clarify the way to achieve it.

The managerial decision is aimed primarily at practical goals therefore managers are primarily interested in the quality of the managerial decision. The latter includes the validity of the decision, the correspondence of the situation and time, the potential for transformation, controllability, measurability, reporting, and finally, the total effectiveness of the decision's impact on the current state. [1, 2, 3] In addition to all this, financial management assumes a complete understanding of the direct and indirect financial results of the decision. [4, 5, 6] For the philosophy of management, the very essence of the decision-making process as a type of human intellectual activity is important first of all. [7]

Although the act of making decisions involves the use of a particular technology to achieve a goal, it cannot be boiled down to technology. Decision making is a purely human action: technique and technology are used obeying the mind and will of man. And the wider the scope of the goal of a given managerial decision, the more the importance of the human factor increases, and the role of technical issues in the very act of decision-making falls. Even the most advanced "artificial intelligence" cannot replace the immanently human ability to set goals. That is why, in the very act of decision-making, the manager personal characteristics are prominently manifested: "Considering its effects, the decision is a way of expression characteristic to managers, and the measure of the managers' "talent" and training quality level". [8, p. 111]

Of course, there are different problem situations and, accordingly, different levels of managerial decisions. If the

situation is ordinary, which means that an adequate solution is already known and has been tried more than once to resolve such a situation, then no special "talent" is required at all. You just need to apply the "right decision" to the "right situation" – considering the exact factor of time, material and financial resources, expected results, etc. True talent, creativity, thinking outside the box, decisiveness, and special organizational qualities are required of a manager in a new, unfamiliar or difficult situation.

From a philosophical point of view, it is very important that the manager adequately understands the place and role of managerial decisions in the entire management system. Among the variety of definitions of the management essence, the best and shortest is the following - the activity of "getting things done by other people". [9] Indeed, management is a type of interaction between the subject and the object of management: the latter are those who implement the decision made by the subject. Thus, the management process begins with setting a goal and ends with feedback - finding out the correspondence between the initial goal and the final result. To make a decision means to formulate a goal; this is the main responsibility of the manager, and the implementation of the decision made is the main task of executive labor. Consequently, we can say that management as an integral process is the unity of continuity and discreteness. The course of the process is constant and with necessity interrupted by management decisions, but at the same time, it is these decisions that ensure the integrity of management. It is the quality of the management decision taken

at each stage that determines the focus and efficiency of management.

There is always a need to make a choice. And the choice is always made, but how reasonable and correct is it? There is no doubt: to be able to make the right choice, we must understand the dialectical issues of certainty and uncertainty, necessity and chance, possibility and reality. Making a decision means choosing one perspective from a variety of prospects for the development of a given situation, that is, moving from uncertainty to certainty, or, figuratively speaking, drawing a bridge from possibility to reality.

In practice, the most common is the "classical model" (otherwise – the "rational choice" model) of making managerial decisions: clarification of the goal, analysis of alternatives and their assessment, the final choice of a course of action, implementation, and control – through providing feedback. Of course, this algorithm has its characteristics in different situations, with different types of managerial decisions: the individual decision and the jointly made decision differ significantly: the same should be said for long-term and short-term solutions, programmed and non-programmed decisions, strategic and tactical (current) decisions, decisions regarding the financial problems of the organization and problems of improving interpersonal relationships among staff members.

Goal-setting is a purely human quality: man is the only living being able to consciously set a certain goal before himself (another question is to what extent this goal adequately reflects the real logic of things). A clear goal, according to Stephen

Covey, is one of the seven important qualities of highly effective people: "Begin with the End in Mind". [10]

The ability to timely and accurately formulate the main goal of making managerial decisions depends on the flexibility of the manager's thinking, on his general philosophical culture. It is the adequate formulation of the goal that determines the further logic of actions of both the manager himself and the direct executors of the managerial decision. When people work together (both in formalized and non-formalized structures), the one who formulates the goal becomes the leader of the coordinated activity of this group (organization), and others already act as his followers. And since making decisions means taking on the responsibility of a leader, then one should agree with the criterion proposed by Peter Drucker, namely, a leader and a "misleader" differ in the ability to formulate the right goal. [11, p. 121]

For setting the right goal, the professional knowledge and experience of the manager are, of course, important, but the quality of his thinking is no less important. In this sense, the ability to formulate a goal that is adequate for the time and management situation depends on the manager's ability to work with objective facts and with the necessary information, analyze, navigate independently and find the only correct answer. Here, I think, a parallel with one comparison, which was made by Francis Bacon, when he expounded his vision of the difference between two extreme ways of perception, analysis, and use of knowledge is appropriate. One way, according to Bacon, is characteristic of a purely empiricist-experimenter, the opposite

way is for a dogmatist-theoretician. "The experimenters, like ants, merely collect and use particular facts; the theorists, like spiders, make webs out of themselves". [12, p. 33] Rejecting extremes, Bacon offers his solution to the "golden mean": "But the bee takes a middle course: it gathers its material from the flowers of the garden and the field, but uses its powers to transform and absorb this material". [12, p. 33] You should also do the same when formulating the goals of managerial decisions, taking into account that the situational tasks of the manager are no less diverse than the flowers in the meadow.

Moreover, the flexibility of a manager's thinking is of utmost importance both when analyzing the managerial situation and when making a final decision. Everything changes, everything is in motion, there are no and cannot be identical situations. And this is so primarily due to the human factor: even if in purely technological terms the managerial decision seems to be the same, but the implementation of this decision goes through the skills and will of different performers. Over time, people themselves change – not only those who make managerial decisions, but also the performers, and the nature of their relationships also changes. This is why the same solution cannot always be successful. Understanding this is an important condition for ensuring effective management in general: "Success does not guarantee continued success". [13, p. 280]

It is quite remarkable that in the system of training businessmen and managers, primary attention is paid to fostering flexibility of thinking. The importance of this has been aptly articulated by Paul Schoemaker, the founder and chairman of "Decision Strategies International" advisory center: "The traditional paradigm of business schools, with its strong focus on analytical models and reductionism, is not well suited to handle the ambiguity and high rate of change facing many industries today". [14, p. 119] And accordingly, the flexibility of thinking is one of the important elements that the new paradigm of business education needs to include. [14, p. 127–128]

The British Mike Woodcock and Dave Francis also insist on the importance of manager flexibility, while explaining the importance of this quality for the personal development of the manager: "Flexibility is closed related to openness. When individuals are open, they can be influenced by what is happening around them. They question their established views". [15, p. 105]

Thanks to the flexibility, the manager not only shows a creative approach to a problem situation but is also able to avoid two extremes when making management decisions. The first extreme is when the manager strives for complete, 100 percent information, and only after being sure of this makes a decision: meanwhile, the latter turns out to be belated and therefore obsolete. The second extreme is the manager's overconfidence in the correctness of a solution already tested in the past: this leads to dogmatic thinking, loss of flexibility in the perception of the changes that have occurred, and, consequently, to a decrease in the possibility of making an adequate decision. That's why, as Lee lacocca said, a manager

needs to take reasonable risks and make a decision based on 95 percent of the information. [16]

To ensure the behavioral flexibility of the manager already at the stage of implementing the solution, that is, when motivating performers and monitoring their activities, it is extremely important for him to understand the phenomenon that in psychology is called "the law of response uncertainty". The essence of the law is that the effectiveness of the same type of managerial influence changes over time: simply put, if a manager is accustomed to using exclusively economic methods of influence, then he must realize the inevitability of reducing their motivational potential, and therefore diversify the methods of influence.

Here, again, it should be noted that the flexibility, creativity, focus of the manager on constant personal self-improvement cannot be the result of just some kind of training. The worldview of the manager, his system of values, the ability to show a holistic approach to a problem situation, general communication skills, and especially the ability to make the most of the creative potential of all participants in the adoption and implementation of managerial decisions, are of decisive importance. The type of thinking of a manager and the peculiarities of his behavior in making managerial decisions are an important element of the managerial culture in general, and it, in turn, is closely linked to a broader reality: with the dominant ideology in a given society, prevailing value orientations, accepted standards of behavior, stereotypes of assessment person and his life success, etc. If the concept of

"homo economicus" dominates in the public consciousness, then usually the methods of making and implementing managerial decisions are limited by economic methods of influence, meanwhile, with a broader philosophical approach to a problem situation, the range of methods is much richer and more effective.

Thus, even a brief philosophical review of some aspects of the managerial decision-making process shows that there is great potential for improving the performance of this managerial function. Of course, an experienced manager can analyze a managerial situation, set an appropriate goal, evaluate alternatives, and perform all other actions. Nevertheless, there is no doubt that the manager who will be able to add knowledge of the patterns of managerial decision-making and a certain taste for philosophical reflections to his experience will be much more successful. Such a manager can be much more successful in avoiding mistakes when making those managerial decisions that are mainly related to the peculiarities of his thinking.

### **Error prevention**

Mistakes do happen. Mistakes (errors) can be very different – grammatical, cognitive, logical, speech, reading, memory, ideological, judicial, scientific, political, managerial, etc. The reasons for mistakes are very diverse: cognitive delusions, lack of knowledge, distorting influence of stereotypes of perception and behavior, haste, biased approach, political struggle, competitive pressure, incorrect financial calculations,

and others. The consequences of mistakes in their coverage are also very different – ranging from insignificant, concerning the individual, and ending with huge economic losses for organizations and public life in general.

In this regard, the formula "to success – through mistakes" is partially justified, as well as the successful use of random, and sometimes, it would seem, irrational phenomena. [17, 18, 19] But, of course, it is much more correct and profitable to anticipate the possibility of error or failure in advance: prevention is better than cure: prevention is better than cure.

To begin with, mistakes in making managerial decisions are mainly the result of some stereotypes in our way of thinking. As everyone knows, stereotypes play a dual role in our perception of reality. On the one hand, they, as a «frozen» knowledge of the past, including as a certain experience of decisions made, facilitate the cognition of new phenomena. But, on the other hand, stereotypes to a certain extent distort the correct picture of reality, since they often suggest ready-made solutions to us, although we have not yet understood the problem in full.

This statement is not news at all. Management theorists from the American University of Tennessee distinguish three types of distortion in managerial decision making: «simplification», when decisions about a complex problem are made based on only a few simple elements; «hindsight», when a decision is made based on the incomplete analogy with previous

decisions; «aggregation», when the decision is based on false associations between problems and information. [20, p. 16]

Of course, it would be wrong to reject both any simplification of the problem situation and the management decision taken on this basis. Moreover, sometimes we observe the opposite phenomenon, namely: the excessive complication of problems both in the analysis of the management situation and in the adoption of the final action.

Let's remember "Occam's Razor", one of the formulations says: "Plurality should not be posited without necessity". Some authors convincingly show the advantages of such an approach when making management decisions - more complex decisions are not rejected, but in some circumstances simple decisions are not only more effective but also the only possible ones. [21, 22] Some of the benefits are undeniable: "Simple rules enable people to make quick, reasonably accurate decisions that require less effort than more complicated approaches. When there is not much time or when information is at the minimum - in frontline triage, for example - these rules of thumb can save the day. Simple rules work because they focus on key aspects of a decision while ignoring peripheral considerations. By using simple rules, people can function without constantly stopping to rethink every aspect of a decision every time they make it". [21, p. 32]

This is all true. However, let's ask ourselves the question: what is the basis of making a simple decision? The answer is clear: it is intuition, as a generalized experience of the manager. But is it safe to say that intuition will never let us down?

Relying too much on intuitive decisions, don't we expose ourselves to the danger of making gross mistakes, primarily because we unwittingly underestimate rational methods of decision-making? According to Eliyahu M. Goldratt, an Israeli physicist, economist, and managerial theorist, the opposite is true, that is, we must rely even more on our intuition: "We grossly underestimate our intuition. Intuitively we do know the real problems, we even know the solutions. What is unfortunately not emphasized enough is the vast importance of verbalizing our own intuition. As long as we will not verbalize our intuition, as long as we do not learn to cast it clearly into words, not only will we be unable to convince others, we will not even be able to convince ourselves of what we already know to be right. If we don't bother to verbalize our intuition, we ourselves will do the opposite of what we believe in". [23, p. 4]

It is difficult to agree with the opinion that in life and professional activity we poorly use our intuition. We are not robots (fortunately, for now, and hopefully we will never), so in the depths of our even the most balanced decisions and rational actions, one can find the influence of our intuition, a certain inner and logically inexplicable conviction that we are right. At the same time, one cannot fail to notice those mental traps that intuition creates and into which we fall with surprising ease. Indeed, when making important decisions, our intuition can play an involuntary joke with us, simplifying a complex problem and suggesting a simple but wrong solution. This phenomenon is analyzed in detail in Daniel Kahneman's famous book "Thinking, Fast and Slow". [24]

How do we usually make decisions in the face of great uncertainty? To answer this question, Kahneman identifies two types of thinking, which he designates as "system 1" and "system 2". Their qualitative difference lies in the speed of the thinking process – the answer to the problematic task, i.e. in the speed of the proposed solution. System 1 is a type of "fast" thinking, since it is based on human intuition, thanks to which it instantly and ready-made presents the desired solution. Meanwhile, System 2 is based on research, analysis, calculations, and therefore is inferior to the first system in speed: and the author calls it a "slow" or "lazy" type of thinking.

It is not difficult to notice that System 1 is the same simple solution that, as I noted above, has important cognitive and practical significance. Kahneman does not at all deny the importance of simple decisions, but he sees their danger in the fact that they create an "illusion of control", which inevitably leads to erroneous conclusions when making managerial decisions. The point is that System 1 turns complex problems into simple ones, thereby setting the manager up for easy solutions. System 2, which, according to Kahneman's logic, is designed to control the first system, is pushed into the background. Because of this, it seems to the manager that he understands everything perfectly and that he makes the most correct decisions. "We focus on our goal, anchor on our plan, and neglect relevant base rates, exposing ourselves to the planning fallacy". [24, p. 259] Intellectual over-optimism does not allow us to see the whole picture and, above all, to correctly assess the risks associated with probable mistakes. "Because they misread the risks, optimistic entrepreneurs often believe they are prudent, even when they are not". [24, p. 256]

I would add the following point to Daniel Kahneman's reasoning. No one can argue that when making managerial decisions it is somehow possible to completely avoid mistakes. And, of course, the detection should be followed by an analysis of the causes of these errors. Let's agree that in this aspect there is a big difference between the two approaches. With the intuitive approach (System 1), we get the solution mostly in a finished form, almost like an insight. And this means that the knowledge we received (which turned out to be erroneous or led to errors) fundamentally does not lend itself to reverse analysis, i.e. it is difficult for us to figure out the causal relationship. Only System 2 allows us to seriously understand the reasons for making an erroneous decision and therefore creates opportunities for improving the performance of a manager both in making management decisions and in general.

In addition to errors associated with the overestimation of the cognitive ability of stereotypes and intuition when making a managerial decision, there is a group of organizational and behavioral mistakes, which are associated, in particular, with the manager's inability or unwillingness to use the entire intellectual and creative potential of all participants in making and implementing managerial decisions. At first glance, such a statement seems unconvincing. After all, the need to use the totality of the professional abilities of all personnel of the organization is not at all an abstract wish, but is dictated by the

very logic of the joint activities of people: even when the manager makes a purely individual decision, it concerns the interests of all members of the organization. That is why the idea of "coparticipation" is not by chance so widespread and attractive today. And I must say that both within the framework of modern "participatory management" and among economists, political scientists, sociologists, businessmen, and leaders of organizations, it is difficult to find those who openly and unconditionally oppose this idea. At the same time, it is no secret that the practical implementation of this idea is not at all easy. And it is important to understand that the obstacles here are mainly not objective, but subjective.

The paradox of the situation is as follows. On the one hand, everyone is, in principle, interested in making the best managerial decision and in its most effective implementation. Indeed, it is difficult to imagine that few people would be interested, for example, questions about improving the financial position of an organization or expanding its market segment. But on the other hand, if there are too many participants in the managerial decision-making, and their discussion and contribution is too significant, then it is obvious that the decision is the result of joint work. However, this is precisely the situation that many top managers dislike: it seems to them that they thereby lose their authority, their exclusive position in the hierarchy of the organization. At the same time, it is impossible to simply neglect the proposals made during the discussions, including critical remarks, since in this case, the very idea of participatory management loses its meaning,

moreover, normal business relationships with subordinates may deteriorate.

The paradox of manager rejection of a better solution than his own, correctly noted by Max Bazerman and Don Moore: "Plenty of good advice about making decisions is available, but most people do not follow it". [1, p. 5] And I completely agree with both their explanation and the conclusion: "Because they do not understand how they actually make decisions, they do not appreciate the need to improve their decision making. Indeed, some of the intuitions that lead us astray also undermine our willingness to implement good advice. An understanding of this fact is needed to motivate people to adopt better decision-making strategies". [1, p. 5]

Some managers would benefit from Lee lacocca's advice that a manager may be able to work for two, but cannot become two people at once. [16] Such advice is necessary within the framework of charismatic management, when a manager loses his sound self-esteem, as a result of which he inevitably overestimates his own opinion and, conversely, underestimates the opinions and suggestions of other participants in joint activities. The extreme state of these leaders is aptly characterized by Daniel Goleman as "unhealthy narcissism": "Such leaders avoid even constructive feedback, which they perceive as an attack. Their hypersensitivity to criticism in any form also means that narcissistic leaders don't seek out information widely; rather, they selectively seize on data that supports their views, ignoring disconfirming facts". [25, p. 120]

The inability to communicate normally, to listen to the opinions of others and, to effectively use the collective intelligence turns, thus, a narrowing of the intellectual possibilities for making the most correct managerial decision. Communicative incompetence inevitably leads to cognitive limitation and creative dementia.

That is why the principle of the impersonal nature of managerial decision-making is so important. This should be understood in two senses - both in terms of the content of the decision and its form. In both cases, the decision should not be purely strong-willed, that is, a manifestation of only the will or desire of the manager without objective grounds for making this decision. Recall that Hegel, speaking about the use of higher power, says that even a monarch, making decisions, cannot rely only on his own will, but must take into account both existing laws and specific conditions, moreover, he must be attentive to the opinion of his advisors, even if the final decision remains with him: "The objective side of decision including knowledge of the special content and circumstances, and the legal and other evidence, is alone responsible. It, that is to say, is alone able to furnish proof of objectivity. It must, therefore, come before a council other than the personal will of the monarch, as such. These councils, advising boards, or individual advisers, are alone answerable. The peculiar majesty of the monarch, as the final deciding subjectivity, is exalted above all responsibility for the acts of government". [26, p. 2331

As for the form of decision-making, it is important here that the executors of the decision perceive it as a derivative of the very logic of things, or adopted at a higher level of management, which means compulsory execution for both the executor and his immediate supervisor. The mutual perception of the parties is such that the executors of the decision are all the more predisposed to effective work, the more they are confident that both the content and the form of the decision made are equally dictated by both them and those who made the decision.

Another important principle both in making managerial decisions and in their implementation is to ensure a harmonious combination of control and trust in the relationship of the parties. To rely only on methods of strict control over personnel means, again, the actual deprivation of the majority of members of the organization of entrepreneurial spirit, turning them into thoughtless, robotic executors of someone else's will. Meanwhile, by showing them, as individuals and specialists, due respect and trust, the manager will get interested supporters in ensuring the successful functioning and development of the entire organization.

In general, for the most successful prevention of mistakes when making managerial mistakes and correcting mistakes that have already been made, it is necessary to radically change the entire philosophy of decision-making. Those responsible for the performance of this function should perceive it not as a means of power influence, that is, not as their exclusive right, but as

their duty, which is dictated by the very logic of joint activities of people.

Then it will be much easier for us to analyze the causes of the mistakes that have occurred. After all, if a manager believes that making a managerial decision is his exclusive right, then he will be inclined to blame others and, accordingly, think about their punishment. In this case, there is no guarantee that the same mistakes will not be repeated all the time. The feeling of power inevitably creates in a person the illusion of intellectual domination over subordinates, while the perception of his managerial function as a certain duty, on the contrary, psychologically equates him with others, thus creating favorable opportunities both for making the most correct managerial decision and for joint and comprehensive analysis of the admitted mistakes.

Mistakes are inevitable – mistakes are inherent in man: so the ancients said – "Errare humanum est". But after all, it is also natural for a person to learn from mistakes. There is a laconic German proverb – "Leiden sind Lehren", that is, "Mistakes are teachers". But this does not happen automatically. As mentioned, I agree with the formula "to success – through mistakes". But in reality, we see much more errors without success. The reason is to be able to learn from mistakes – our own and others' – a certain intellectual and socio-psychological attitude is important. This is what my article was about – firstly, how to avoid the traps of stereotypes and the temptation of "simple" (intuitive) decisions, and secondly, how to use the total social capital of the organization most fully and effectively.

#### Conclusions

Making managerial decisions, as one of the important functions of a manager, requires not only special knowledge and experience but also possession of the patterns of making managerial decisions and their adequate use. Unfortunately, most managers are suspicious of theoretical and, even more so, philosophical reasoning on this topic. However, there is no doubt that a manager who adds to his knowledge of the patterns of making managerial decisions a certain taste for philosophical reflections will be much more successful. It will also be much easier for him to avoid those mistakes in making managerial decisions that are associated with worldview problems. A certain philosophical culture is also needed to be able to comprehensively analyze the mistakes already made and draw the necessary conclusions to improve the entire process of making and implementing managerial decisions.

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**Վալերի Միրզոյան** փ.գ.դ., պրոֆեսոր

## ԿԱՌԱՎԱՐՉԱԿԱՆ ՈՐՈՇՈՒՄ. ՍՈՑԻԱԼ -ՓԻԼԻՍՈՓԱՅԱԿԱՆ ՄԻ ՔԱՆԻ ԽՆԴԻՐ

**Բանալի բառեր** – կառավարչական որոշում, կառավարչական որոշման կայացման սկզբունքներ, կառավարչական որոշման կայացման փիլիսոփայական հիմնախնդիրներ, ներըմբռնողական մոտեցում, ռացիոնալ մոտեցում, կառավարչական սխայներ

Կառավարչական որոշման կայացումը պահանջում է ոչ միայն մասնագիտական գիտելիք և փորձառություն, այլև որոշումների կայացման օրինաչափությունների իմացություն և համարժեք գործադրում։ Մինչդեռ ղեկավարների մեծ մասը թերահավատ է խնդրո առարկայի շուրջ տեսական, առավել ևս՝ փիլիսոփայական դատողությունների հանդեպ, հակված է վճիռ կայացնելու առավելապես ներհայեցողաբար, սեփական փորձից ելնելով, ուստի ամեն կարգի հանձնարարականներն ավելորդություն է համարում։ Հոդվածում կատարվում է կառավարչական որոշումների կայացման փիլիսոփայական հիմնախնդիրների վերլուծություն և վերջինիս

լույսով՝ կառավարչական որոշ սխալների պատճառների պարզաբանում։

Валерий Мирзоян д.ф.н., профессор

## УПРАВЛЕНЧЕСКОЕ РЕШЕНИЕ: НЕКОТОРЫЕ СОЦИАЛЬНО-ФИЛОСОФСКИЕ ПРОБЛЕМЫ

**Ключевые слова** – управленческое решение, принципы принятия управленческих решений, философские проблемы принятия управленческих решений, интуитивный подход, рационалистический подход, управленческие ошибки

Принятие управленческих решений требует не только специального знания и опыта, но и владения закономерностями принятия управленческих решений и их адекватного использования. Между тем большинство руководителей относится с недоверием к теоретическим, а тем более к философским рассуждениям данной темы, и в целом склонны к принятию решений на основе собственного опыта, интуитивно, и поэтому считают излишними всякие рекомендации. В статье проводится анализ философских проблем процесса принятия управленческих решений, и в свете подобного анализа выясняются причины некоторых ошибок.

Ներկայացվել է՝ 01.02.2021 թ. Ընդունվել է ւրպագրության՝ 15.03.2021 թ.

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## BEHAVIORAL FINANCE AND TRADITIONAL FINANCE: THEORY AND ANALYSIS IN PRACTICE

**Abstract:** In this paper historical evolution of behavioral finance was briefly introduced and summarized by comparing it with traditional finance theory. In spite of the skepticism about the academic foundations of the behavioral finance, it has cemented its place in academic literature especially during last 2 decades including in the papers published by Nobel prize winners. Since many academicians considered behavioral finance as a reciprocal of the traditional theory, this paper also referred to the traditional finance behavioral finance "battle". Comparative analyses between traditional theories and behavioral theories of finance have been conducted. Eventually, those theories were used in practical analysis of stock valuation of "P&G" company, based on which "ARGE Business" LLC in Armenia was suggested to go public; it would allow company to raise its reputation, attract more investors and become more visible and transparent.

**Keywords:** behavioral finance, traditional finance, CAPM model, PRAT model, discounted cash flow model

JEL classification: G40, G41

**Research aim:** this research aims to compare behavioral finance and traditional finance theories and show the usage of traditional finance theories in practical analysis.

**Research hypothesis:** P&G's stock is undervalued, i. e. its intrinsic price is higher than its market price.

**Research novelty:** In this research behavioral finance and traditional finance theories are compared and those theories are implemented in practical analysis, particularly in stock price valuation and are summarized in conclusions.

#### Introduction

Ideologic differences between traditional finance and behavioral finance entailed a competition among several eminent economists and psychologists, some of which are Nobel prize winners - Robert Lucas (1995), Daniel Kahneman (2002), Robert Shiller (2013), Eugen Fama (2013), Richard Thaler (2017) and others. Some proponents of traditional finance admitted that people might make mistakes, but those mistakes could be neglected since they did not impact the explanation of overall behavior. Behavioral finance considers behavioral economics from the perspective of finance and covers the latest developments. Multiple research papers and studies on market anomalies which perhaps pinpointed market inefficiency became the locomotive of the origin and evolution of behavioral finance. Proponents of traditional finance and behavioral finance have been in an intense race throughout last decade.

# Traditional Finance vs Behavioral Finance (Comparative Analysis)

Behavioral finance is an interdisciplinary approach that is not merely limited to finance and it covers material from other social sciences including psychology and sociology. Several books published during late 1800's and early 1900's evidenced the establishment of school of behavioral finance. In 19<sup>th</sup> century Charles MacKay best described the Tulip (1630's), South Sea and Mississippi (1710-1720's) bubbles and named them efficient market anomalies in "Extraordinary Popular Delusions and the Madness of Crowds". In his book on psychology of stock markets Selden (1912, p. 109) explained that extraordinary situations in speculative markets stemmed from distinct psychological conditions that were typical to such market. On the basis of data extracted from financial (1934)by pinpointing statements Graham and Dodd undervalued companies paved the way for value investing. Herbert Simon (1955, pp. 90-118) introduced the behavioral model of bounded rationality. Leon Festinger (1962) first published a book "A theory of cognitive dissonance", where he presented the concept of cognitive dissonance. In 1973, Burton Malkiel published the first edition of his well-known book which underscored that investors couldn't permanently benefit from financial indexes since stock prices were random. At the same time American psychologists Amos Tversky and Daniel Kahneman (1973) presented heuristic biases - availability, representativeness, anchoring and adjustment. Kahneman and Tversky (1979) put forward prospect theory.

The latter became one of the key foundations for behavioral finance. Richard Thaler (1985), the "founding father" of behavioral finance, introduced the concept of mental accounting bias. De Bondt and Thaler (1985) published an article about the overreaction in stock markets, which became the threshold where behavioral finance, as a discipline, was separated from finance per se. Tversky and Kahneman (1992) revised their theory and come up with new cumulative prospect theory. Thaler (1992) in his book described psychological biases that accompany investors in decision making processes and brought everyday life examples of irrationality. Hersh Shefrin and Meir Statman (1994) introduced behavioral capital asset pricing theory. Shleifer casted doubt on stock market efficiency by means of connecting efficient market hypothesis and behavioral finance. Statman [1] presented the second generation of behavioral finance, where he named peoples as normal and differentiated errors from normal wants. The latter Statman [2] considered a lacking tile in a mosaic called "behavioral finance".

Theory of behavioral finance is very interesting in terms of its realistic feature. It underlines that people are not rational agents, in other words a human is to err. Professor of behavioral finance at MIT Dan Ariely [3] mentioned that people made the same mistakes regardless of they are customers, investors, policymakers etc., at the same time underlining the importance of perception in the enhancement of decision-making effectiveness. Due to the systemic mistakes, he named people as predictably irrational. Consequently, proponents of

behavioral finance argued that theory trying to explain human behavior based on aforementioned systemic mistakes could not be correct. Melton Friedman (1953, pp. 157-203) one of the well-known supporters of rationality insisted that although people were not capable of doing calculations included in economic models they acted as if they could by bringing an example of a billiard master who took shots as if they used laws of physics and geometry while being unaware of them.

Another "apple of discord" between traditional finance and behavioral finance are anomalies. Thaler defined anomaly as a fact that contradicts theory. From his perspective theory making non-precise predictions and the facts contradicting those predictions are the 2 triggers of anomalies. Furthermore, Thaler (1992) explained that albeit there were plenty of theories in economic literature, it was too difficult to find errors by means of tests, on the other hand, the following rule was true for economics: if tests were run, there were anomalies.

Traditional finance is based on a few concepts: utility theory (Bernoulli 1738, Von Neumann and Morgenstern 1944), portfolio theory (Markowitz 1952, 1959), capital asset pricing model (CAPM) (Sharpe, 1964) and efficient market hypothesis (EMH) (Fama 1970).

Traditional finance as compared to behavioral finance discusses finance without erroneous people where only "homo economicus" makes absolutely rational decisions. [4] In traditional finance, investors make economic decisions based on utility theory where they maximize the utility of the decision. According to utility theory it is assumed that all investors make

decisions consistently and independent of other decisions. This theory is also called Von Neumann's and Morgenstern's utility theory.

In Markowitz portfolio theory statistics – variation, standard deviation, expected value are used to calculated asset/portfolio risks and expected return respectively. Modern portfolio theory provides mathematical methods to get optimal portfolio from different assets. The emphasis in modern portfolio theory is on the asset portfolio risk and its impact on portfolio return without stressing the risk and return of assets separately.

Further researches claimed that investors must be compensated for the non-diversifiable or systemic (market) risks, which became the premise for capital asset pricing model. This model shows the link between market risk (beta) and expected return which is applied for pricing risky assets. Since this model had only one factor, it could not have explained the link between returns of different stocks. [5] Later, Fama and French (1996, pp. 55-84) introduced 3-factor model, furthermore Carhart (1997, pp. 57-82) expanded it by injecting moment factor.

According to Fama's (1970, pp. 383-417) efficient market hypothesis asset market prices reflect all the available information, in the case of high level of market efficiency current asset prices reflect all the information including insider, middle level includes public information, eventually, the low level – market information including previous prices of assets. Nonetheless, Cochrane and Moskowitz, [6] proponents

of EMH, highlighted the fact that already 5 decades efficient markets remained a disputable question. Apologists of socionomic theory Prechter Jr. and Parker (2007, pp. 84-108) suggested that different behaviors triggered by contextual differences between economics and finance caused the slack of the law of supply and demand in finance, and EMH became useless.

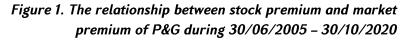
## Research results (A Case of "P&G" Company)

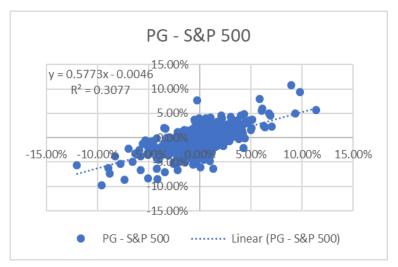
"P&G" is an S&P 500 company, has an official distributor in Armenia, "ARGE Business" LLC, which is not a listed company, but its detergent brands may become more demanded (due to Covid-19), so it is of interest to estimate the value of the "P&G" stock.

The calculation of intrinsic value: CAPM model

Based on the data of P&G stock price and S&P 500 index daily data during 30/06/2005 - 30/10/2020 the evaluation of CAPM model was done. The evaluation results of the  $E(R) = R_f + \beta^*(R_m - R_f) = 6.16\%$  model are summarized in the table 1 (rows 6-8). The interaction between P&G stock price and the market index is best showed by the scatterplot below.

Obviously, stock premium variations are 30.77% explained by the variations of the market premium. Next, the expected rate of return will be used in the calculation of the intrinsic value.





It's easy to find the market value of the company or its stock, on the other hand it's quite complicated to find the intrinsic value by fundamental analysis. To compute the present value of the stock, the discounted cash flow method was chosen.

In the aforementioned formula each unknown variable is computed, the calculations of free cash flows (FCF or FCFE<sub>0</sub>) and free cash flow growth (g) are summarized in Table 1 and Table 2.

In the PRAT model (g) was calculated as the product of the profit margin (P), the retention rate (R), the asset turnover (A) and financial leverage. In the table below the present value (PV) of the company was calculated.

Table 1. FCFE<sub>0</sub>, Required rate of return (RRR) calculation results

Nº	Name	Value, Mln \$
1	Free Cash Flow to Equity, FCFE <sub>0</sub>	19,209
2	Growth rate (Y1-5)	5.10%
3	Growth rate (Y6-10)	0.54%
4	Shares Outstanding	2,480
5	Number of Trading Days in a Year	252
6	$R_f$	0.47%
7	$R_m$ - $R_f$	9.85%
8	E(R)	6.16%
9	Market Capitalization, Equity Market Value <sub>0</sub>	343,698
10	Net L-t Debt	2,504
11	Net Current Debt	2,345
12	CF from operating activities	17,403
13	Capital Expenditures	3,043

To forecast the FCF growth rate, the PRAT model was chosen.

Table 2. Cash flow growth rate (g) forecasting for upcoming 4 years ( $g_1 = 2020$ )

	2016	2017	2018	2019	2020
Р	15.70%	23.18%	14.19%	5.37%	17.99%
R	0.27	0.52	0.23	(1.06)	0.39
A	0.51	0.54	0.56	0.59	0.59
Т	2.19	2.16	2.24	2.42	2.57
g	4.86%	14.06%	4.11%	-8.12%	10.61%
Average = g <sub>1</sub>					5.10%

FCFE growth rate (g) implied by single-stage model	gi	$\mathbf{g}_2$	$\mathbf{g}_3$	<b>g</b> 4	<b>g</b> 5
FCFE growth rate					
(g) forecast	5.10%	3.96%	2.82%	1.68%	0.54%

Table 3. P&G intrinsic value estimation by means of discounted cash flow model

Year	<b>Projected FCFE</b>	1+Discount rate	<b>Discounted FCFE</b>
1	2	3	4
1	20,190	106.16%	19,019
2	20,990	112.69%	18,626
3	21,582	119.63%	18,041
4	21,944	126.99%	17,280
5	22,062	134.81%	16,365
Sum	Mln\$		89,331
PV <sub>10</sub>	MIn\$		392,634
Discounted PV <sub>10</sub>	MIn\$		291,254
PV (business)	Mln\$		380,585

In result, it turns out that the market value of P&G company is 344 billion USD, meanwhile its intrinsic value is approximately 380 billion USD. [7] This means, that the company was undervalued by 9.69%, so traditional finance, would consider it as a common sense to invest in this company, since its stock market price was lower than its intrinsic value.

#### Conclusions

Behavioral finance and traditional finance provide different approaches to analyze finance in micro and macro levels. Behavioral finance is mostly considered the reciprocal of traditional finance, aggressively "attacks" on traditional finance theories, meanwhile suggesting new ideas and solutions to issues arisen in finance. Technical and fundamental analyses of P&G company showed that it is undervalued by 9.69%, so its stocks should be appealing for investors, since intrinsic value of the P&G stock is higher than its market value. Although the analysis was mainly conducted based on traditional finance theories, it showed that phenomena could be explained from both behavioral finance and traditional finance perspectives. Since P&G's distributor in Armenia is not a listed company, "ARGE Business" LLC is suggested to go public, which will enable it to benefit from the positive trends of "P&G" stock value, on top of that it will become more visible for local consumers and more crucially for investors. IPO (initial public offering) also enhances reputation and transparency of the company.

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> **Էրիկ Գրիգորյան** Ասպիրանտ, ՀՊՏՀ

## ՎԱՐՔԱԳԾԱՅԻՆ ՖԻՆԱՆՍՆԵՐ ԵՎ ԱՎԱՆԴԱԿԱՆ ՖԻՆԱՆՍՆԵՐ. ՏԵՍՈՒԹՅՈՒՆ ԵՎ ԳՈՐԾՆԱԿԱՆ ՎԵՐԼՈՒԾՈՒԹՅՈՒՆ

**Բանալի բառեր** – վարքագծային ֆինանսներ, ավանդական ֆինանսներ, CAPM մոդել, PRAT մոդել, դիսկոնտավորված դրամական հոսքերի մոդել

Հոդվածում ներկայացվել և ամփոփվել է վարքագծային ֆինանսների տեսության պատմական զարգացումը՝ այն համեմատելով ավանդական ֆինանսների տեսության հետ։ Չնայած վարքագծային ֆինանսների գիտամեթոդական հիմքերի նկատմամբ ոչ միանշանակ տեսակետերին՝ այն ամրապնդել է իր դիրքը մասնագիտական գրականությունում, հատկապես, վերջին 2 տասնամյակներում, այդ թվում՝ նոբելյան մրցանակակիրների աշխա-

տություններում։ Քանի որ մի շարք գիտնականներ վարքագծային ֆինանսները համարում են ավանդական ֆինանսների տեսության հակադարձ տեսությունը, անդրադարձ է կատարվել նաև ավանդական ֆինանսներ – վարքագծային ֆինանսներ «հակամարտությանը»՝ իրականացնելով ավանդական ֆինանսների և վարքագծային ֆինանսների տեսությունների համեմատական վերլուծություններ։ Արդյունքում, այդ տեսությունները օգտագործվել են բաժնետոմսերի արժեքի P&G րնկերության գնահատման գործնական վերլուծությունում, որի հիման վրա էլ հայաստանյան «ԱՐԳԵ Բիզնես» ՍՊԸ-ին առաջարկվել է դառնալ բաժնետիրական ընկերություն, ցուցակվել, ինչը հնարավորություն կընձեռի բարձրացնել հեղինակությունը, ներգրավել նոր ներդրումներ և դառնալ առավել տեսանելի ու թափանցիկ։

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## ПОВЕДЕНЧЕСКИЕ ФИНАНСЫ И ТРАДИЦИОННЫЕ ФИНАНСЫ: ТЕОРИЯ И ПРАКТИЧЕСКИЙ АНАЛИЗ

**Ключевые слова -** поведенческие финансы, традиционные финансы, модель САРМ, модель PRAT, модель дисконтированного денежного потока

В статье представлена и резюмирована историческая эволюция поведенческих финансов путем сравнения ее с традиционной теорией финансов. Несмотря на неоднозначные взгляды на научно-методологические основы поведенческих финансов, они укрепили свои позиции в академической литературе, особенно за

последние два десятилетия, в том числе в трудах нобелевских лауреатов. Поскольку ряд ученых рассматривают поведенческие финансы как противоположность традиционной теории финансов, в статье также упоминается о «битве» традиционных финансов с поведенческими, предлагается их сравнительный анализ.

В результате эти теории были использованы в практическом анализе оценки стоимости акций компании «Р&G», на основании которого армянскому «АРГЕ Бизнес» ООО было предложено стать акционерным обществом, пройти листинг, что даст возможность повысить его репутацию, привлечь новые инвестиции, стать более заметным и прозрачным.

> Ներկայացվել է՝ 22.02.2021 թ. Ընդունվել է փպագրության՝ 15.03.2021 թ.

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## GRADING OF ACCOUNTING PROGRAMS IN DISTANCE EDUCATION

**Abstract**: Gone are the times, when university students were graded only for their knowledge. Now, due to the demands of the labor market, the professional abilities and transferable skills that students acquire in universities are mostly evaluated. The article discusses the directions for improving the assessment system used in professional training programs for accountants in a distance learning environment, considering the different levels of education.

**Keywords:** learning outcomes, grading criteria, grading measurement, distance learning

JEL classification: 120

**Research aim:** Identify effective ways of grading students in distance learning accounting programs.

**Research hypothesis:** Distance learning has student grading features, that must be considered during the education process.

**Research novelty:** In process of teaching accounting by distance learning, students should be graded differently in the bachelor's - master's - doctoral program chains.

#### Introduction

The need and justification of the assessment process is not clearly understood in the university environment. In this regard, a number of questions arise, such as: is it necessary to grade students studying at the university, or to simply set a passing threshold to meet the requirements of each subject? These questions also arise due to the fact that there are often no positive correlations between high achieving university and their career success. Additionally, there are many cases, when students with excellent progress are not able to ensure career growth and vice versa. On the other hand, without assigning grades, there are difficulties in organizing scholarship competitions, awarding grants to the best, analyzing student progress, selecting deserving people, and so on. Therefore, interpretations of the appropriateness of the assessment, especially the effectiveness of the grading process, are considered relevant. Moreover, the problems of the effecttiveness of the student grading process are exacerbated in the case of distance learning, when there is no live student-faculty communication and intermediate-final examinations are carried out in a virtual environment. In this case, an additional question arises as to what learning outcomes will be mainly targeted by the grading system.

## Research results

Prior to graduates solely serving the needs of the employer and labor market, the education system served a humanitarian purpose, prioritizing and valuing human life and health, free and comprehensive development of the individual, the upbringing of civic consciousness, national dignity, patriotism, legitimacy and ecological worldview. [1] Due to this shift in values, the higher education system currently faces the problem of effective management of professional education programs, which are their urgent solutions when grading students. This raises the question of what are the qualitative characteristics of a university graduate and when is a capable specialist considered employable and valuable to the employer during his/her study at the university.

Studies show that often a student with a wealth of knowledge and a graduate with a degree of excellence is not able to skillfully meet the requirements of the employer, or, conversely, in practice there are many cases, when the employer conducts training among employees to impart new knowledge. It also happens, that when they start working, the graduates realize, that they have had "subject ballast" in their curricula, extra classes, instead of learning more up-to-date subjects, and professional skills. [2]

Therefore, in all levels of education, the challenge in the higher education system is to provide graduates with professional skills that will make students competitive in the labor market, effective in university years and also financially resourceful, bearing in our minds the fact that students also should pay for their tuition. [3] In this regard, the purpose of grading is to determine the degree to which the student achieves the intended learning outcomes. The professional literature states, that competency-based assessment must meet the criteria, listed below (see Table 1).

Table 1. Interpretation of Learning Outcome Evaluation Criteria [4]

Evaluation criteria	Demand content
Specificity	No ambiguous, clear wording, no
	doubts
Dimension	Regulated measures are used
Properness	Implementable within the time available
Relevance	Realistic, ability-based

For our part, the measurement of assessment suggests applying the "knowledge-ability-skill" on the basis of the academic framework. Moreover, depending on the educational module, in a 100-point system, the measurement scale is constructed according to the following scale:

- professional knowledge: 10-30 points,
- practical professional skills 30-70 points,
- general / transferable skills: 20-30 points.

However, in the case of distance learning, certain adjustments are made to the degree of assessment of learning outcomes, as there are certain academic specifics.

According to UNESCO forecasts, in the 21st century, learners will spend only 30-40% of their study time in the classroom. The remaining 60% -70% will be spent on distance learning, using modern means of communication through

technology and other media as well as devoting time to self-education. This means, that the use of information technology will increase in the online learning process in all areas of the school, university and training, i.e. at all stages of lifelong learning. It also became apparent that online learning differs significantly from traditional distance learning in the past in a number of ways. In the case of distance learning via the Internet, the learner:

- chooses the most convenient training time for him/ her
- can learn "at his own pace" convenient for him/her mode
- can focus on specific parts of the learning material
- can cooperate more with the teacher
- can get the information they need faster [5]

In addition, online learning is fundamentally different from traditional distance learning in that it creates a new educational information environment, where the learner is clearly aware of the knowledge, skills and abilities he or she needs. Learners have the opportunity to gain the necessary knowledge on their own, to use the developed information resources (databases, knowledge bases, computer, including multimedia, teachingtesting systems, e-exercises, videos, recordings, e-libraries, as well as e-textbooks and methodological manuals).

If the above issues were a bit slow for online college education, then the COVID-19 global existence simply forced universities to adopt distance learning practices, which identified a number of challenges presented by the following groups.

**Technical.** Both lecturers and students as well as the university administration, were not yet fully equipped to organize online education due to the sudden changes caused by the pandemic. There was a need to acquire additional computers, to strengthen the IT capabilities of the server, and to develop programs for the activities of electronic dean's offices. The pandemic forced education beneficiaries to make additional investments in the acquisition of information technology.

Social-psychological. University education beneficiaries were not psychologically ready to make the massive transition to online education in one day. Teaching outside of the traditional classroom seemed to dull the sensibility of learning since the on-line classroom felt artificial and inhumane, and even failed to stimulate both teachers and students. Student social isolation is considered to be one of the significant disadvantages of distance learning. If, from the beginning, the use of computers contained risks of personal health impairment (deterioration of vision, nervous tension, "electronic pressing"), the only problem was maintaining the hygiene of using the Internet (no more time to use the computer continuously). [6]

Traditionally, the university is accepted by students not only as an environment for the acquisition of knowledge, professional skills, but also as a social platform where friendships, youth entertainment, sports events, potential employment, faculty and staff are formed. In the case of online learning, there is no attractive environment for traditional learning, the student is at risk of social isolation, which not only has a

negative impact on an individual's academic performance, but also creates social and psychological deviations.

**Methodical**. In the case of distance learning, the main problem now is the formation of an "online student community" that comes with some replacement for traditional classroom student groups. Regardless of the fact that the individual involved in the distance learning system receives education in a "solo" way, he / she should feel the presence of his / her student group as much as possible, even in the virtual world. [7] The quality of education is almost unaffected by the implementation of distance learning accounting programs, as there is no laboratory experience and practical training is possible in the virtual domain as well. Moreover, the training of accounting skills is more effective by using various computer accounting packages in the virtual domain, which has its difficulties in teaching in the traditional classroom. Though, at the same time, universities should not use standard assessment approaches when organizing distance learning accounting.

Table 2. Measurement of evaluation of end results used in distance education accounting programs (points)

Educational	Learning Outcomes:			
level	Professional	Professional	Transferable	
	knowledge	skills	skills	
Undergraduate	40	50	10	
Master's Degree	30	40	30	
Doctorate	10	20	70	

In the case of implementing a professional accounting program with distance learning, we propose to apply a

differentiated approach to the measurement of learning assessment, depending on the higher education level (see Table 2). Moreover, if in the bachelor's degree the priority of grading is given to the professional ability (preparation of financial reports, analysis, controlling), the transferable skills are not paid significant attention (only 10 points). Then, the sharing of grading points in the master's degree is almost equally distributed "knowledge-ability-skill" equally. In the doctoral curriculum, the transferable skills (70 points) are most valued when conducting assessments, as the student does not accumulate professional knowledge or skills in research, but rather skills in group communication, professional ethics, creativity, self-organization, career advancement that are highly required in their field (see Table 3).

Table 3. Interpretation of transferable skills in distance learning accounting professional education programs

General /	Participate in various discussions in group		
transferable skills	communication, analyze existing problems,		
	evaluate the possibilities necessary for their		
	solution		
Creativity	Knowledge of applying creative and to develop		
	new ones		
Ensuring	to maintain the norms of professional ethics to		
professional	keeping the reputation of a specialist with higher		
ethics	education		
Self-organizing	effectively planning time and managing available		
	resources		
Ensuring career	identify personal skills growth reserves and plan		
growth	sales opportunities.		
Self performance	to use professional skills and abilities freely even		
	in a stressful environment		

#### Conclusions

In the case of assessment of learning outcomes when implementing vocational education programs with distance learning, it is necessary to demonstrate a differentiated distribution of grading in the "professional knowledge-professional ability-transferable skills" academic platform. Students at the undergraduate level are more likely to absorb professional knowledge than professional skills, and the focus of the grading of outcomes results is shifted to knowledge and skills. In the third level of higher professional education, we propose to apply the opposite approach, paying more attention to the process of assessing the acquisition of transferable skills.

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**Նոննա Խաչատրյան** տ.գ.թ., դոցենտ, ԵՊՀ

# Հասմիկ Սահակյան

«Հաշվապահության Ուսուցման Միջազգային Կենտրոն» կրթական հիմնադրամ, գործադիր տնօրեն

# ԳՆԱՀԱՏՄԱՆ ՀԻՄՆԱԽՆԴԻՐՆԵՐԸ ՀԱՇՎԱՊԱՀԱԿԱՆ ՀԵՌԱՎԱՐ ԿՐԹՈՒԹՅԱՆ ԾՐԱԳՐԵՐՈՒՄ

**Բանալի բառեր** – ուսումնառության վերջնարդյունքներ, գնահատման չափանիշներ, գնահատման չափայնություն, հեռա-ուսուցման առանձնահատկություններ

Անցել են արդեն այն ժամանակները, երբ համալսարանում սովորող ուսանողներին գնահատում են միայն ստացած գիտելիքների դիմաց։ <իմա արդեն, ելնելով աշխատաշուկայի պահանջներից, առավելապես գնահատվում են մասնագիտական կարողություններն ու փոխանցելի հմտությունները, որոնք ուսանողները ձեռք են բերում համալսարաններում։

Հոդվածում քննարկվում են հեռավար ուսուցման միջավայրում հաշվապահների մասնագիտական կրթական ծրագրերում կիրառվող գնահատման համակարգի բարելավման ուղղությունները՝ հաշվի առնելով նաև կրթական տարբեր աստիճանները։

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# ВОПРОСЫ ОЦЕНИВАНИЯ В ДИСТАНЦИОННЫХ ОБРАЗОВАТЕЛЬНЫХ ПРОГРАММАХ БУХГАЛТЕРСКОГО УЧЕТА

**Ключевые слова** - результаты обучения, критерии оценивания, измеряемость оценивания, особенности дистанционного обучения

Прошли те времена, когда студентов оценивали только за их знания. Теперь, исходя из требований рынка труда, в основном оцениваются профессиональные способности и передаваемые навыки, которые студенты приобретают в университетах.

В статье рассматриваются направления совершенствования системы оценивания, применяемой в программах профессиональной подготовки бухгалтеров в дистанционной среде обучения, с учетом различных уровней образовательных программ.

Ներկայացվել է՝ 29.01.2021 թ. Ընդունվել է ւրպագրության՝ 15.03.2021 թ.

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# KEY AUDIT MATTERS AT AUDIT REPORTS OF LISTED ENTITIES AT ARMENIA SECURITIES EXCHANGE

**Abstract:** Researched Key Audit Matters ("KAM") inclusion at audit reports of listed entities at Armenia Securities Exchange ("AMX") of the Republic of Armenia ("RoA"). Evaluated the main results, challenges of implementation of KAMs and compared those with international practices. Highlighted the importance of effective regulatory and institutional measures to improve KAM inclusions and their quality in audit reports.

**Keywords:** Key Audit Matters (KAMs), audit report, listed entities, Armenia Securities Exchange (AMX)

JEL classification: M 4 (M 41, M 42, M 48)

**Research aim:** Research implementation of KAM in audit reports of listed entities in Armenia and based on findings recommend measures to improve KAM inclusions at audit reports.

Research hypothesis: Currently there are no adequate implementation of KAM in audit reports in the RoA, and there are no effective regulatory and institutional arrangements enacted toward enhanced KAM disclosures at audit reports of listed entities at AMX which is vital for attracting foreign directed investments in those entities.

**Research novelty:** Based on researched statistics and international best practices, measures are proposed to ensure adequate KAM inclusion at audit reports, which is crucial for transparency and accountability of listed entities at RoA.

#### Introduction

Communication of Key Audit Matters ("KAM") in the auditor's report was introduced in International Standards on Auditing ("ISA") by International Auditing and Assurance Standards Board ("IAASB") under new standard: ISA 701, "Communicating key audit matters in the independent auditor's report", in 2015 and was effective for audit of financial statements for the periods ending on or after December 15, 2016. [1] That is, for most cases, KAM was effective for auditor's reports issued since year 2017.

The purpose of communicating KAM is to enhance the communicative value of the auditor's report by providing greater transparency about the audit that was performed. It is considered one of main developments in ISAs during last decade. The ISA 701 was translated in Armenian and issued by the Ministry of Finance of the Republic of Armenia on September 2017. [2] The KAM is required for listed entities as well as if regulation requires or the auditor otherwise considers communicating it in auditor's reports would be valuable.

ACCA researched implementation of KAM in year 2017 in 11 countries across 4 continents of 560 audit reports. The main benefits revealed related to: (a) good governance, (b)

audit process, and (c) financial reporting; as well as highlighted main challenges: [3]

- Smart regulation is needed to nurture innovation,
- Interactions between material uncertainty, emphasis of matter and KAMs are complex and subject to misinterpretation,
- Good practice in KAM disclosure,
- Considering the risk of fraud,
- Audit report contains more useful information, but reports are longer,
- Complexity of KAMs language,
- Many users do not understand the KAMs and its usefulness,
- How many KAMs considered to be effective, particularly, number of KAMs number is much higher than in other countries.

The implementation of the ISA 701 in Armenia during years 2017 and 2018 was researched, which revealed that implementation of ISA 701 was slow in RoA during those years, though there was some progress in 2018 over 2017: [4]

Table 1. KAM communication at audit reports in RoA [4]

	2017	2018
# of KAM communicated in auditor's reports of	4	10
listed entities		
# of KAM communicated in 50 other non-listed	1	2
entities auditor's reports		

The paper also highlighted some challenges regarding KAM in RoA, such as: [4]

- Lack of capability of some audit firms to comply with KAM requirements,
- Lack of regulation and control over audit reports, even those of listed entities at AMX.

In this paper, the progress of the ISA 701 implementation in Armenia during year 2020 was researched for listed entities at AMX.

## Research results

There were 23 listed entities at AMX with audit reports issued for year financial year ended 31 December 2019. [5] Majority of those listed entities are banks and credit organisations, while others consist of various industries: mining, telecommunication, production and transportation.

Table 2. Number and industry of listed entities at AMX [5]

Industry of AMX listed entities	#	Share
Financial sector	15	65%
Other business industries	8	35%
	23	100%

The summary of KAMs inclusion at audit reports issued and the audit firms per financial and business sector is summarized at below:

Table 3. Number and industry of listed entities at AMX [5]

Audit firms	#	Financial	KAMs	KAMs	Other	KAMs
	reports	sector	ECL	Other	business	Other
From list of						
top 7						
international						
audit network						
firms (5 firms)	17	15	15	1	2	6
Other audit						
firms (5 firms)	6	-	-	-	6	-
Totals	23	15	15	1	8	6

All KAMs were issued by 5 audit firms which representing top 7 international audit networks ("Top-7"). [6] The same time, there was no KAM issued in other 6 audit reports issued by local firms or firm representing networks below top 7, though ISA 701 requires KAM disclosure for listed entities.

All audit reports of listed entities of financial sector companies has just one KAM which related to assessment of expected credit loss ("ECL") related to provided loans portfolio which is complex requirement of International Financial Reporting Standard 9, Financial instruments, (IFRS 9), except to one that has also KAM on goodwill impairment assessment. The audit reports of non-financial sector entities audited by two Top-7 included 6 KAMs (4 and 2).

From the above research it is concluded, that:

- There was no substantial progress over KAM reporting at audit reports of listed entities at AMX since 2018.
- Audit firms below Top-7 have substantive challenge to comply with KAM requirements which requires extensive knowledge and know-how; though KAM requirements are

- effective already 4 years and translated in Armenian since September 2017.
- There is obvious lack of effective regulation and control over audit reports issued by the listed entities at AMX, and there were no actions regarding those reports issued without KAMs which is required by ISA 701. Even, there was audited report of a listed energy sector entity which stated on compliance with IFRS, while the issued financial statements were not in compliance with IFRS, but were prepared in the template which is not effective since 2011.

In total 22 KAMs were included in audit reports of 23 listed entities at AMX: in average 0.96; while the average number of KAMs reported per 11 countries research by ACCA is 2.5, ranging from 1.9 at Nigeria to 4.1 at UK. [3] Thus, average at AMX reports is about 3 times less than average and 2 times less than minimum concluded at ACCA research.

The nature and number of KAMs reported per nature were following: [5]

- ECL in all financial sector entities in total 15
- Impairment of goodwill 1
- Net realizable value ("NRV") of inventory 1
- Revenue recognition -1
- Measurement of Investment in Associate 1
- Related party transactions 1
- Measurement of debt 1
- Measurement of Asset retirement obligation ("ARO") -1.

Considering that the number of KAMs reported at audit reports issued at AMX listed entities is few and mainly relates to

ECL, then there is no meaning to compare it with international practice.

The audit reports of financial sector organizations are just including KAM on ECL which is standard and lengthy complex disclosure: repeating the same in each year, therefore it does not provide useful communication to users of the audit reports.

#### Conclusions

The purpose of including KAMs at audit reports effective from year 2017, still is not effectively applied at audit reports of listed entities at AMX. There is lack of effective regulation and control over audit reports issued by the listed entities at AMX. Some audit firms continue to show lack of capability to comply KAM requirements imposed by ISA 701 since year 2017.

It is recommended to design, implement and operate effective control over those reports issued at AMX. Particularity, the research results suggest that the audit of listed entities at AMX shall be allowed only to international recognized audit networks (e.g. Top-7), especially considering importance of attracting foreign direct investment in those listed entities at Armenia.

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# Գնել Խաչատրյան

MBA(US), ACCA (UK), Աուդիտի ղեկավար «Բի-Դի-Օ Արմենիա» ՓԲԸ

# ԱՌԱՆՑՔԱՅԻՆ ԱՈՒԴԻՏՈՐԱԿԱՆ ՀԱՐՑԵՐԻ ՆԵՐԱՌՈՒՄԸ ՀԱՅԱՍՏԱՆԻ ՖՈՆԴԱՅԻՆ ԲՈՐՍԱՅՈՒՄ ՑՈՒՑԱԿՎԱԾ ԿԱԶՄԱԿԵՐՊՈՒԹՅՈՒՆՆԵՐԻ ԱՈՒԴԻՏՈՐԱԿԱՆ ԵԶՐԱԿԱՑՈՒԹՅՈՒՆՆԵՐՈՒՄ

**Բանալի բառեր** – Առանցքային աուդիտորական հարցեր (ԱԱՀ-ներ), աուդիտորական եզրակացություն, ցուցակված կազմակերպություն, աուդիտ, Հայաստանի ֆոնդային բորսա (ՀՖԲ)

Ուսումնասիրվել են ՀՀ-ում Առանցքային աուդիտորական հարցերի (ԱԱՀ-ներ) ներառումը Հայաստանի ֆոնդային բորսա-յում (ՀՖԲ) ցուցակված կազմակերպությունների աուդիտորական եզրակացություններում։

Հետազոտությունը ցույց է տվել, որ ԱԱՀ-ները ներառվել են միայն միջազգային ցանցի անդամ ամենախոշոր 7 աուդիտորական կազմակերպությունների եզրակացություններում։ Դրանք հիմնականում վերաբերվել են ֆինանսական ոլորտի կազմակերպությունների վարկային պորտֆելի ակնկալվող վարկունակության կորստի գնահատմանը։

Հետազոտության արդյունքները համադրվել են միջազգային փորձի հետ, ներկայացվել է ՀՖԲ-ում ցուցակված կազմակերպությունների աուդիտի եզրակացություններում ԱԱՀ-ների կիրառման հետ կապված բացերը և մարտահրավերները, ինչպես նաև առաջարկվել են հնարավոր լուծումներ։

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# КЛЮЧЕВЫЕ ВОПРОСЫ АУДИТА В АУДИТОРСКИХ ОТЧЕТАХ ОРГАНИЗАЦИЙ, ПРЕДСТАВЛЕННЫХ НА АРМЯНСКОЙ ФОНДОВОЙ БИРЖЕ

**Ключевые слова** - Ключевые Вопросы Аудита (КВА), аудиторский отчет, котирующиеся организации, Армянская Фондовая Биржа (АРФ)

В статье рассматриваются ключевые вопросы аудита в аудиторских заключениях организаций, котирующихся на Армянской фондовой бирже.

Исследование показало, что КВА представлены только в заключениях аудиторских компаний, входящих в международную сеть Большой Семерки (Big 7), которые в основном относятся к оценке ожидаемых потерь кредитного портфеля организаций финансового сектора.

Результаты исследования были сопоставлены с международным опытом, были представлены недостатки и вызовы, а также возможные решения, связанные с использованием КВА в аудиторских отчетах организаций, котирующихся в АРФ.

Ներկայացվել է՝ 10.01.2021 թ. Ընդունվել է տպագրության՝ 15.03.2021 թ.

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# CONTROL OF EDUCATIONAL TUITION FEES FORMATION IN UNIVERSITIES

**Abstract:** Universities, in order to provide additional financial inflows, do not always set competitive tuition fees and often raise them artificially. The article analyzes the approaches to the tuition fees formations and makes suggestions for their improvement. In particular, a new approach for controlling on tuition fess formation processing is proposed based on beneficiaries' financial expectations.

**Keywords:** tuition fees, financial control, educational service market, universities ranking

JEL classification: A22, A24

**Research aim:** identify approaches to tuition fees formation in the higher education system.

**Research hypothesis:** universities do no not always set reasonable tuition fees that will satisfy beneficiaries.

**Research novelty:** a new approach to substantiating university tuition fees was proposed based on the financial expectation of the beneficiaries.

# Introduction

One of the most important functions of financial supervision of university activities is not only monitoring the tuition fees, but also the justification of the amount of those

fees collected from the private sector. Naturally, any university strives to increase tuition fees as much as possible to improve its financial stability. However, this process is counterbalanced by the risks of declining competitiveness in the education market due to high tuition fees.

#### Research results

International experience shows, that annual tuition fees, even in economically developed countries, range from 10 to 50 thousand US dollars within a year. Even in public universities, where there is a practice of private tuition, the tuition fees of a student in different countries are very different, significantly lower than the higher tuition fees of private universities (see Figure 1).

Figure 1. The average amount of tuition fees in state universities [1]

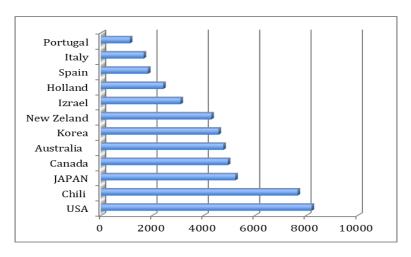
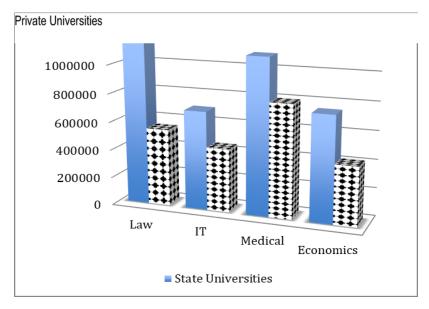


Figure 2. Bachelor's and Master's programs tuition fees of RA private and state universities (AMD)

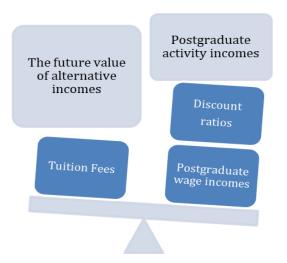


However, this does not mean, that universities with high tuition fees are not competitive in the education market. On the contrary, there are universities, that are extremely competitive even in the face of very extraordinary tuition fees and have an advanced demand for services in the education market. [2] As for the higher professional education system of the Republic of Armenia, it should be noted, that the opposite picture is registered here. [3] That is, tuition fees, set by state universities are significantly higher, than tuition fees, charged at private universities (see Figure 2). And the reason is not only the differences in the cost of educational services (as a rule, in private universities in Armenia they are much lower, than in

state universities), but also the relatively higher reputation of the state universities in the educational market.

The analytical function of financial control uses the justification of tuition fees in terms of graduate student's income expectations (see figure 3). At the beginning of admission to the university, as an applicant, the future graduate may willingly or unwillingly, make assessments of economic justification of tuition fees and make decisions of financial expectancy of applying to a concrete university.

Figure 3. Tuition fees justification assessment based on "lost earnings" and "postgraduate earning expectations" comparing



Thus, by paying tuition fees each year, an individual may view it as "lost financial income" if he or she did not study at the university during that time, simply depositing the money in a bank. On the other hand, such assessments are contradicted by the annual income expectation of the future

graduate after employment. Therefore, the equivalence of "lost incomes" in university study time and postgraduate employment earnings can be presented as a point of maturity for financially balanced tuition fees.

$$S * \Sigma(1 + r)^n = E * \Sigma dm$$

Where.

S - annual tuition fees,

r - percentage of annual deposit in the bank,

E – post graduate annual work income expectation,

dm - current value discount coefficients for m year

Based on the above-mentioned formula the reasonable annual tuition fee will be presented as;

$$S = E * \Sigma dn / (\Sigma (1 + r)^n)$$

## Conclusions

Thus, the analytical approach proposed by us for substantiating the tuition fees provides an opportunity. First of all, by balancing the undeclared "lost income" related to tuition fees during the applicant's university years with the expected post-graduate work income, the justification of the established tuition fees is substantiated in terms of the student-beneficiary's financial expectations. In addition, the proposed balanced tuition fee formula is based on a number of variables, such as the length of university tuition, the bank deposit rate, the current discount rate, and postgraduate earnings, each of which enables factual financial control over tuition changes. Finally, by linking the directions of financial factor influence in the process of assessing the validity of university tuition fees

within a single formula, control provides an opportunity to identify the causal links of tuition changes according to internal and external environmental influences, considering the university's reputation as well as competitiveness.

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**Աստղիկ Պողոսյան** Հայցորդ, Հյուսիսային համալսարան

# ԿՐԹԱՎՃԱՐՆԵՐԻ ՁԵՎԱՎՈՐՄԱՆ ՎԵՐԱՀՍԿՈՂՈՒԹՅԱՆ ՄՈՏԵՑՈՒՄՆԵՐԸ ՀԱՄԱԼՍԱՐԱՆՆԵՐՈՒՄ

**Բանալի բառեր** – կրթավճարներ, ֆինանսական վերահսկողություն, կրթական ծառայությունների մատուցման շուկա, համալսարանների վարկանիշավորում

Համալսարանները, ձգտելով ապահովել ֆինանսական լրացուցիչ ներհոսքեր, ոչ միշտ են սահմանում մրցակցային կրթավճարներ և հաճախ արհեստականորեն բարձրացնում են դրանք։ Հոդվածում վերլուծվում են համալսարանական կրթավճարների ձևավորման մոտեցումները և կատարվում են առաջարկներ՝ դրանց բարելավման ուղղութ-յամբ։ Մասնավորապես, առաջարկվում է կրթավճարների ձևավորման

գործընթացի վերահսկողության նոր մոտեցում՝ հիմնված սովորողների ֆինանսական սպասումների վրա։

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# ПОДХОДЫ К КОНТРОЛЮ ФОРМИРОВАНИЯ ПЛАТЫ ЗА ОБУЧЕНИЕ В УНИВЕРСИТЕТАХ

**Ключевые слова** – стоимость обучения, финансовый контроль, рынок образовательных услуг, рейтинг университетов

Университеты всегда стремятся к дополнительным финансовым потокам и не всегда устанавливают конкурентноспособную плату за обучение, безосновательно ее повышая. В статье анализируются подходы к формированию стоимости обучения и предлагаются пути их совершенствования. В частности, предлагается новый подход к установлению платы за учебу, основанный на финансовых ожиданиях бенефициаров.

Սերկայացվել է՝ 03.02.2021 թ. Ընդունվել է փպագրության՝ 15.03.2021 թ.

# ECONOMIC AND METHODICAL BASIS OF EMPLOYEE BENEFITS ACCOUNTING

**Abstract:** The object of research of the presented article was the compensation of employees. The theoretical, informational, methodological basis for the article was the international accounting standards, accounting regulations and legislative regulations of different countries, codes and a number of laws. In order to identify the issues of accounting for employee benefits, the accounting operations of employee benefits were examined, the issues were identified through reporting research, suggested their solutions and applied.

**Keywords**: employee benefits, salaries, short-term benefits, annual leave, IAS 19

JEL classification: Q14

**Research aim**: carry out comparative analysis of different accounting models used for employee benefits.

**Research hypothesis:** different approaches to employee benefits are applicable in tax, financial and administrative accounting systems.

**Research novelty:** distinctive features of employee benefit recording models in financial-management accounting systems revealed.

#### Introduction

The labor factor provides income through employee compensation. Employee benefits include a number of forms and schemes, the accounting of which has a number of issues. Employee benefits include long-term payments, and long-term payments have impairment risks. Although there is an International Accounting Standard (IAS) 19 Employee Benefits, a number of legal provisions relating to employee benefits, there is still a need to analyze how accurately reflect employee benefit accounting in financial statements. The aim of the research is to identify the problems of improving the accounting of employee benefits in the Republic of Armenia, as a result of their study, to develop and propose scientifically substantiated approaches to ways of improvement. Considering the fact, that the issues of employee compensation accounting in the Republic of Armenia have not been studied in sufficient depth to conduct a comprehensive revision, there is an objective need to evaluate the results of the at both scientific and methodological and practical levels.

# Research methodology

Employee benefit accounting generally tries to conform to international accounting standards in all countries, however, depending on the legislation of the countries, employee benefits and their accounting principles may differ slightly. There are two major types of employee benefit accounting: US, which is governed by ACCOUNTING STANDARDS UPDATE, and second is governed by International Financial Reporting

Standards (IFRSs). Respectively, accounting for employee benefits is dedicated to IAS 718 "Compensation - Stock Compensation", [1] IAS 715 "Compensation - Retirement Benefit", [2] IAS 19 Employee Benefits and IFRS 2 Share-Based Payment. Although there are international standards, depending on the regulations of the countries, each country has its own accounting characteristics.

The tax legislation of the Republic of Armenia stipulates that the registration of the object of taxation with income tax is carried out (the tax is calculated) in terms of the salary to be calculated, the payments equal to it, by the method of accrual. According to the current legislation of the Republic of Armenia, from the point of view of tax registration, regardless of the payment terms, the compensations (salary equivalent payments) are recorded as a liability at the time of their occurrence and not at the time of payment, but in the case of maternity benefits. [3]

In international accounting practice, payroll accounting is based on the application of generally accepted accounting principles standards, in which case this area of accounting has been developed in great detail. According to the Russian Accounting Regulations (RSBU), the compatibility of the accounting methodology of many Russian companies conducting parallel accounting with the IFRS is a very important issue. According to the Russian Accounting Regulation "Financial Statements of Organizations" (PBU 4/99), [4] the debt is reflected in the balance sheet as part of short-term liabilities. There is no long-term and short-term

compensation in the Russian classification. It should be noted, that from the point of view of Russian short-term compensation accounting regulations, employee allocations and their accounting is not fundamentally different from the rules set out in IAS 19, but there are differences. However, the accounting for employee benefits is generally governed by IAS 19 Employee Benefits International Standard.

## Research results

Employee Compensation provided by the organization for any service provided by the organization in any form. Employee benefits include:

- a) Short-term employee benefits, such as those listed below, if they are expected to be paid in full before the end of the twelve months following the end of the annual reporting period for the relevant services:
  - salaries, social security contributions,
  - Paid annual leave and paid sick leave,
  - profit distributions and bonuses,
  - Non-monetary benefits (such as medical care, housing, cars, free or partial payment of goods or services) for current employees.
    - b) Post-employment benefits, such as those listed below:
  - Pension benefits
  - Other post-employment benefits, such as postemployment life insurance and post-employment medical care. Benefits in this category are benefits that are payable upon termination of employment.

- c) Other long-term employee benefits, such as those listed below:
  - Long-term paid absences, such as long-term service leave or leave for scientific (creative) work,
  - other benefits for anniversaries or long service,
  - long-term disability benefits,
  - Other long-term employee benefits are employee benefits, that are generally not fully paid within twelve months of the termination of employment.
- d) Release allowances. These benefits are employee benefits that are payable as a consequence when an employee resigns either voluntarily or by an organization. [5]

Figure 1. Employee benefits structure



An example of short-term employee compensation is salary. Employment and old-age pensions are post-employment benefits. Examples of other long-term employee benefits include long-term paid leave. Employee Short-Term Benefits IAS 19 is recognized as a contingent liability. Employee benefits

under IAS 19 are recognized as: (a) an obligation when an employee has provided services in return for future employee benefits, and (b) expenses when the entity consumes the economic benefits arising from the services provided by the employee in return for employee benefits.

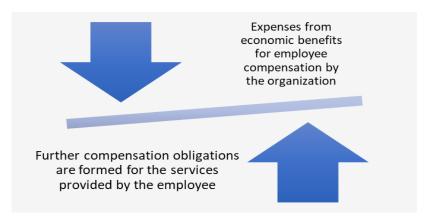


Figure 2. Recognition of employee benefits

For example, the salary of an accountant is an administrative expense, the salary of sales managers is a sales expense. At the same time, we are making a commitment on the mentioned salaries. One of the problems with employee accounting is understanding how to recognize benefits at the moment. Accumulated compensable absences are recognized when the employee is providing the service (working), not when the absence occurs (going on leave). Accountability is one of the principles of organizations. It provides synthetic accounting in terms of accounting. Guided by the current chart of accounts, let us demonstrate accountability with synthetic accounting with the following example.

In the company on 17.09.2019 was accepted as an accountant born on 05/04/1998. With a staff salary of 100,000 (one hundred thousand) AMD. For the above-mentioned employee of the company, on 31.12.2019, an expense-liability is recognized, with the calculation of the annual leave for 7 working days earned by the employee. Meanwhile, the employee will go on vacation from 01.06.2020 according to his application.

31.12.2019

DR 7131 Administrative expenses for payment of labor .... (100.000/25\*7day) = 28.000 CR 5435 Earned vacation reserve .... 28 000

3 days before the actual vacation on 28.05.2020 DR 5435 Earned vacation reserve...28 000

According to the current legislation of the Republic of Armenia, a mandatory funded pension in the amount of 2.5% of the calculated salary is withheld from the salary of persons born after 1974 from as a short-term employee benefit. [5] According to the current tax code of the Republic of Armenia, income tax in the amount of 23% of the calculated salary is withheld from the employee's income tax the estimated salary of the employee as another short-term compensations of the employees. [6] And according to the RA law on compensation for damages caused to the life or health of servicemen during the RA defense, 1000 (one thousand) AMD stamp duty is withheld from each employee. [7]

1. Income tax registration:

DR 5271 Debts on salaries for other short-term employee benefits ...... 100.000\*23/100=23.000

CR 5242 Short-term accounts payable on income tax ... 23.000

2. Funded pension mandatory contributions:

CR 5251 Short-term payables on compulsory social insurance ........ 2 500

3. Stamp duty payment:

4. Payment of salary:

CR 252 Cash .... 100.000-23 000- 2 500-1.000 = 73 500

Comparing the Russian legislation with the Russian accounting regulations, we can say that they are also guided by IFRS in terms of financial accounting, they build reserves. From the point of view of tax accounting, the interest rates of the allocations differ from the salaries and equal to the payments. There is no stamp duty, there are compulsory medical insurance contributions, the income tax rate is 13%. [8] Depending on the type of management accounting, each

country may choose the accounting method from the users of the management reports. Management reports are mainly used to effectively accomplish the organization to make the right management decisions, so it is not necessary to apply international standards in this case.

#### Conclusions

The problems of employee compensation accounting are related to the variety of employee compensation accounting models based on international standards, legislation in different countries of the world, accounting regulations, as well as employee compensation schemes.

From the point of view of financial accounting, the solution to the problem will be the creation of comparability, which can only happen when the principle of approaching the same international standards applies in all countries. From the point of view of tax accounting, it can be said, that depending on the specifics of the country, it is impossible to internationalize it due to statistical figures. From the point of view of managerial accounting, as the same principle applies to do everything to achieve maximum profit, similar models can be found in similar countries in different countries, but as there will be differences in terms of tax accounting, this also leads to differences in managerial accounting.

The variety of employee compensation schemes makes it possible to identify all types of compensation and develop different models for different compensation, to eliminate the problems and difficulties in accounting. Although IAS 19

Employee benefits presents accounting approaches separately for a number of compensations, it is still a general method of grouping types. In conclusion, we can clearly say, that these differences lead to a number of problems, both theoretically and can even affect employee allocations by changing them in quantitative terms.

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- 8. Tax Code of Russian Federation, https://bit.ly/397kwt2

## ԱՇԽԱՏԱԿԻՑՆԵՐԻ ՀԱՏՈՒՑՈՒՄՆԵՐԻ ՀԱՇՎԱՌՄԱՆ ՏՆՏԵՍԱՄԵԹՈԴԱԿԱՆ ՀԻՄՔԵՐԸ

**Բանալի բառեր** - աշխատողների հատուցումներ, աշխատավարձ, կարճաժամկետ հատուցումներ, ամենամյա արձակուրդ, ՀՀՄՍ 19

Ներկայացված հոդվածի հետազոտության օբյեկտ է ընտրվել աշխատակիցների հատուցումները։ Հոդվածի համար տեսական, տեղեկատվական, մեթոդաբանական հիմք են ծառայել հաշվապական հաշվառման միջազգային ստանդարտները, տարբեր երկրների հաշվապահական հաշվառման կանոնակարգերը ու օրենսդրական կարգավորումները՝ օրենսգրքերը ու մի շարք օրենքներ։

Աշխատակիցների հատուցումների հաշվառման հիմնախնդիրների բացահայտման համար հետազոտվել են աշխատակիցների հատուցումների հաշվապական գործառնությունները և հաշվետվողական հետազոտության ճանապարհով վեր են հանվել հիմնախնդիրները, մշակվել և առաջարկվել են դրանց լուծման և կիրառման ուղիները։

## ЭКОНОМИЧЕСКИЕ И МЕТОДИЧЕСКИЕ ОСНОВЫ УЧЕТА КОМПЕНСАЦИИ СОТРУДНИКОВ

Ключевые слова - вознаграждения работникам, заработная плата, краткосрочные выплаты, ежегодный отпуск, МСФО (IAS) 19

Объектом исследования представленной статьи является вознаграждение труда сотрудников организаций. Теоретической, информационной, методологической основой статьи явились положения бухгалтерского учета, международные стандарты бухгалтерского учета (IAS) 19 и законодательные акты разных стран, кодексы и ряд законов. Чтобы выявить проблемы учета вознаграждений сотрудников были изучены бухгалтерские записи, и на основе анализа отчетности выявлены существующие проблемы, разработаны решения и предложены способы их применения.

Ներկայացվել է՝ 10.02.2021 թ. Ընդունվել է տպագրության՝ 15.03.2021 թ.

## EXTERNAL RISKS IN THE POST-WAR ECONOMY OF THE REPUBLIC OF ARMENIA

Abstract: After the Second Artsakh War, there are tendencies of drastic changes in the foreign economic environment of the Republic of Armenia. On the one hand, the Armenia-Russia-Azerbaijan trilateral agreement signed on November 9, 2020 opens the southern gates of the republic, unblocks transport routes, activated railways to the Russian Federation, the Republic of Iran, on the other hand, the investment vacuum in Armenia. allows to create risks of foreign capital expansion and loss of economic independence of the country. The article discusses the directions of economic diplomacy, the application of which will create an opportunity to contain those risks in the post-war economy of the Republic of Armenia.

**Keywords**: economic diplomacy, foreign investment risks, external economic environment

JEL classification: F02, F18

**Research aim:** identify the external risks of economic security that are formed in the Republic of Armenia

**Research novelty:** the range of risks in the foreign economic relations related to the post-war period of Armenia has been determined

### Introduction

The post-war economic risks of the RA in the foreign sphere can be formed in a number of directions, such as sharp reductions in foreign direct investment, increase in foreign indirect investment, expansion of foreign capital, increase in foreign debt, increase in unemployment and increase in emigration. These risks can be mitigated to some extent if a balanced foreign economic policy is pursued in the country, with the aim of ensuring a sufficient degree of economic independence and macroeconomic stability.

#### Research results

After the end of the war, the range of external risks of the Republic of Armenia's economy will increase. Foreign investors, who were ready to operate in the country, will choose to take a waiting position, to follow further developments, to activate the economy. Naturally, in this case, many foreign investment programs will be frozen. In this case, the national capital will not prefer to take active initiatives, it will even try to leave the country. Therefore, the decline in the risks of decreasing investment attractiveness is inevitable in the postwar period, and investment vacuum will be formed in the economy of the Republic of Armenia.

In this case, it seems that new prospects for improving the situation open up when the communications on the southern borders of the republic are unblocked. However, we should not be encouraged to open the borders, to intensify trade with our neighbors, but to be careful in this matter, preventing unfavorable investment risks through legislation, and building national economic security and immunity. In this

case, the effective use of the preventive function of economic diplomacy can also play a significant role.

Thus, the analysis shows that in the case of foreign trade with Turkey, in particular, in 2019, \$ 268.1 million worth of products were imported from Turkey to Armenia, and only \$ 2.22 million worth of products were exported from Armenia to Turkey (jewelry, raw furs, passenger cars). cars  $\mu$  etc.), that is, we import about 120 times more from Turkey than we export. At the same time, it should be noted that the volume of imports from Turkey is increasing year by year. Thus, in 2019, imports from Turkey to Armenia increased by 6.1%, and exports to Turkey decreased by 12.3%. [1] In general, Turkey's share in the structure of Armenia's exports in 2020 It is almost 0% in the first half of the year, and 4.9% in the structure of imports.

In the last ten years, Armenia has imported products worth 137-268 million US dollars from Turkey, and the highest index was registered in 2019 - 268.1 million US dollars. Turkey's share in Armenia's exports in 2019 is 0.1% or \$ 2.22 million (jewelry, raw furs, cars, etc.), and in imports - 4.9%. [2]

It should be noted that the expansion of Turkish capital in Armenia may be counteracted by the inflow of Russian capital. The opening of the railway in the southern part of the country opens up great opportunities for foreign economic cooperation with the Russian Federation. And if Armenia conducts successful foreign economic diplomacy, based on joint ventures with the Russian Federation in the country, then there will be great opportunities for the inflow of Russian capital.

Already today, Russian capital is more than 60% of foreign investments in Armenia. [3]

One of the external risks of the Armenian economy is the increase of the state debt. In order to prevent the economic downturn and ensure macroeconomic balance, the volumes of the external debt of the Republic of Armenia are growing, already exceeding eight billion US dollars. In this case, foreign debt service risks are created if measures are not taken to activate the economy in the country.

### **Conclusions**

The range of external economic risks in post-war Armenia is expanding due to the expansion of foreign capital and increases in foreign state debt. The prevention of such risks may include the identification of some key counterbalances. In particular, the expansion of the external state debt can be counterbalanced by the expansion of the internal government debt, when the savings of the population will be directed not to bank deposits, but to the purchase of government bonds with higher interest rates. And unfavorable foreign capital expansion can be offset by foreign investment from allies' governments, which will complement the country's investment landscape.

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## Վիգեն Բոդոյան

մագիստրատուրալի ուսանող, ՀՊՏՀ

## ԱՐՏԱՔԻՆ ՌԻՍԿԵՐԸ ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ ՀԵՏՊԱՏԵՐԱԶՄՅԱՆ ՏՆՏԵՍՈՒԹՅՈՒՆՈՒՄ

**Բանալի բառեր** - տնտեսական դիվանագիտություն, օտարերկրյա ներդրումների ռիսկեր, արտաքին տնտեսական միջավայր

Արցախյան երկրորդ պատերազմից հետո Հայաստանի Հանրապետության արտաքին տնտեսական միջավայրում կտրուկ փոփոխությունների միտումներ են նկատվում։ Մի կողմից, 2020 թվականի նոյեմբերի 9-ին Հայաստան -Ռուսաստան-Ադրբեջան կնքած եռակողմ հանմաձայնագրով բացվում են ՀՀ հարավային դարպասները, տեղի է ունենում տրանսպորտային ուղիների ապաշրջափակում և երկաթուղային ճանապարհներ են բացվում դեպի ՌԴ և Իրանի Հանրապետություն, մյուս կողմից, ՀՀ-ում ձևավորված ներդրումային վակումը թույլ է տալիս ձևավորել օտարերկրյա կապիտալի էքսպանսիայի և երկրի տնտեսական անկախության կորստի ռիսկեր։ Հոդվածում քննարկվում են տնտեսական դիվանագիտական այն ուղղությունները, որոնց կիրառմամբ ՀՀ հետպատերազմյան տնտեսությունում հնարավորություն կստեղծվի զսպելու այդ ռիսկերը։

## ВНЕШНИЕ РИСКИ В ПОСЛЕВОЕННОЙ ЭКОНОМИКЕ РЕСПУБЛИКИ АРМЕНИЯ

**Ключевые слова** - экономическая дипломатия, риски иностранных инвестиций, внешняя экономическая среда

После Второй Арцахской войны во внешнеэкономической среде РА произошли кардинальные изменения. С одной стороны, трехстороннее соглашение Армения-Россия-Азербайджан, подписанное 9 ноября 2020 года, приведет к открытию южных ворот РА, разблокировке транспортных путей и открытию железных дорог в Республику Иран и Российскую Федерацию. С другой стороны, инвестиционный вакуум в Армении создат риски экспансии иностранного капитала и потери экономической независимости страны. В статье рассматриваются направления экономической дипломатии, применение которых позволит уменьшить риски в послевоенной экономике Республики Армения.

Ներկայացվել է՝ 15.02.2021 թ. Ընդունվել է տպագրության՝ 15.03.2021 թ.

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## IMPROVING OF CRYPTO CURRENCY TURNOVER FINANCIAL MANAGEMENT

Abstract: the process of crypto currency pricing or capitalization cannot be fully covered by financial regulation. However, all this does not mean that the regulation of tax consequences or changes in the money supply resulting from the use of these assets by the state should be completely uncontrollable; crypto currency risk management approaches should not be applied. The article analyzes how the crypto currency market, without having a common framework of legislative approaches, can nevertheless appear in the sphere of centralized control.

**Keywords:** payment system beneficiaries, e-money, digital transactions, e-money circulation

JEL classification: M 41, M 42

**Research aim:** to find out whether it is possible to regulate the circulation of crypto currency with centralized state levers.

**Research hypothesis:** The Central Bank may find opportunities for partially controlling on cryptocurrency turnover.

**Research novelty:** A new approach to financial management of cryptocurrency turnover was proposed by the Central Bank.

#### Introduction

Crypto currency transactions involve a number of stakeholders, such as currency holders, financial investors, payment agents, e-money miners, and blockchain providers, all of which can disrupt the alternative exchange rate. Naturally, in such a situation, it is not the rules of market competition, that prevail against each other, but the principles of mutual support of the above-mentioned beneficiaries aimed at the common goals of ensuring the stability of the ecosystem. On the contrary, experts believe, [1] that the financial management of crypto currency is already a necessity in the market. Therefore, if the activities of all the listed beneficiaries are considered within one system, which can be considered an ecosystem of crypto currency circulation, then conditions will be created not only for decentralized but also for centralized regulatory approaches to the activities of the given system.

### Research results

In reality, there are now two e-money circulation ecosystems, with traditional currencies and crypto currencies, the issue of which is becoming more and more urgent. That is, when, in theory, crypto currencies completely replace centrally managed e-money, the stability of the financial market ecosystem will be significantly disrupted, and new approaches to financial harmonization management will be required. [2] The same will happen, if central banks, by taking a negative stance on crypto currencies altogether, are deprived of the ability to use their management tools. We believe that the

availability and circulation of crypto currencies should be tolerable for government agencies, forcing them to develop the necessary means to better balance the country's ecosystems of crypto currencies used in the blockchain and the use of emoney issued by central banks.

Thus, the cryptocurrency ecosystem cannot function sustainably without the harmonization of cryptocurrencies, blockchain technologies, and mining. Cryptocurrency payment transactions will be disrupted if any component of the system inoperable (blockchain cryptocurrency, cryptocurrency e-wallets, cryptocurrency increases by miners, encryption insurance against hacker attacks). In turn, cryptocurrency transactions, whether payment or investment, with their sharp fluctuations in volume, significantly affect the circulation of traditional money, as cryptocurrencies to some extent attribute the volume of electronic money 2000ub reduce the traditional money supply by central banks. component of the each Consequently, cryptocurrency ecosystem may have some effect on the central bank-controlled money supply. This can be countered by changes in the payment and settlement ecosystem enacted by the central bank, which have the potential to affect cryptocurrency circulation. Thus, if the Central Bank of the Republic of Armenia perceives the circulation of cryptocurrency within its control h adopts a number of legislative regulations, which will recognize the then the volumes of cryptocurrency cryptocurrency, transactions will be registered, cryptocurrency transactions that will be taxed by the state will be decrypted. will be implemented in the cryptocurrency market, such as:

- centralized provision of cyber security,
- application of crypto currency insurance mechanism,
- maintenance of crypto currency registration register, both in terms of volume and quantity,
- adjustments to the money supply due to crypto currency.

We believe that in such a situation, the state will play a certain regulatory role in the ecosystem of crypto currency use, ensuring its stability and development. In this regard, a situation will be created when clear terms are formed in the field of harmonization of centralized, decentralized e-money circulation, where not prohibitive or negative policy will operate, but on the contrary, mutually agreed activities aimed at a stable financial environment. Therefore, we consider it necessary to find mutually agreed terms between centralized "decentralized approaches" management to e-money circulation. In this sense, the harmony of crypto currencies and traditional money circulation ecosystems is primarily correlated with the money supply. It is well known that the money supply tends to be equivalent to the sum of the values of the goods in circulation and the services offered. In the professional literature, the Fischer formula is mainly used, which establishes a connection between the trade turnover and money. [4]

$$MxV = PxT$$

where:

M - amount of money in circulation, V - unit of money rotation speed; P and T - respectively prices L commodity transactions and service volumes.

Monetary theory interprets the formation of money supply in different ways. In this sense, money supply is represented as a set of monetary aggregates. Monetary units are indicators that characterize the money supply, for the determination of which in practice we are guided by the following principle: Each subsequent unit is constructed at a larger size than the previous one or according to the degree of decrease in liquidity. The monetary units are:

- M0- Cash in circulation,
- M1 current account balances,
- M2 is the least liquid monetary unit, which includes all components of the M1 unit, plus time accounts of commercial banks, deposits of specialized financial institutions,
- M3 is a less liquid monetary unit that includes deposits, government bonds, and other securities of commercial banks in addition to M2.

In fact, crypto currencies can penetrate the financial market to some extent, structurally alter the latter. And in that sense, crypto currencies can be both a means of payment and savings or investment instruments originally reserved for traditional currencies. Consequently, crypto currency circulation – money -making interconnection management is currently underway, which should be aimed at increasing the manageability of crypto currency impact on the money supply. [5] In this regard, the professional literature attempts to make a

connection between the global economy (E), the global money supply (M) and global money circulation, using the following functional link:

$$E = M \times C^2$$

Moreover, in this case, the crypto currency is considered in the global money supply, as it does not have a specific country or "homeland" of issuance, and by its nature is considered world money. However, we believe, that from the point of view of financial management, it is almost impossible to regulate the circulation of crypto currency globally, to consider its correlation with the world economy. Therefore, we propose to monitor this issue not at the global level, but at the level of the national economy, proposing the following economic categories anew:

- "permissible crypto currency of money supply"
- "gross national mass of money".

In general, the "intervention" of crypto currencies in the field of traditional money circulation, in our opinion, should be limited, as the decentralized management of crypto currencies "from the bottom" of that currency carries many risks, that mass infiltration risks of ecosystem disruption due to sharp fluctuations in crypto currency prices, cyber security breaches, uncontrolled mining, etc. We therefore propose that the Central Bank set a permissible crypto currency rate (Z) to apply the Restriction Toolkit. Just as the central bank now monitors the level of dollarization of the economy, so we propose to use the same approach to monitor the degree of crypto currency in some respects using the CA / MC x 100 = Z formula (CA is the

value of crypto currencies in circulation, MC - gross national money supply). The "Gross National Money" (MC) category we offer includes the money supply units adopted by the central bank M - crypto currency (CA) estimated by the central bank register. If the central bank adopts and evaluates the crypto currency turnover in its register, the formula for the equivalence of money supply, turnover, and services will be as follows:  $(M + CA) = P \times T$ . Therefore, in the case of financial management of crypto currency, it will be possible to counterbalance the central bank's approaches to controlling the money supply, crypto currency circulation, using the following system of equations.

$$\int CA/(M+CA) = Z$$

$$M + CA = P \times T$$

In our opinion, the financial management of crypto currencies can already give tangible results in this case, as indicators such as the amount of money in circulation controlled by the central bank, the speed of unit currency, the cost of goods and services are implemented. Volumes. And if the amount of money defined by the central bank in the above system - the volume of crypto currencies circulating within the country - is unknown, then in the case of the remaining approved parameters, the following controllable correlation will be created between those two indicators.

$$CA = ZxM/(1-Z)$$
  $\longleftarrow$   $CA = PT-M$ 

#### Conclusions

Thus, the approaches we offer to manage the crypto currency and money supply exchange correlation will enable to:

- 1. Adjust the amount of money set by the Central Bank, considering the impact of crypto currency circulation on its formation.
- 2. Move some of the information components of crypto currency decentralized crypto currency management information to centralized management to mitigate the financial risks associated with the use of crypto currencies.
- 3. Create a system of systematic evaluation environment for the activities of the crypto currency ecosystem components L in the field of interactions of electronic payment and settlement functions by the central bank, thus solving the problems of increasing the efficiency of crypto currency use.

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## Հրաչյա Դանիելյան

TETCHANGE.com կազմակերպության տնօրեն

## ԿՐԻՊՏՈԱՐԺՈՒՅԹՆԵՐԻ ՇՐՋԱՆԱՌՈՒԹՅԱՆ ՖԻՆԱՆՍԱԿԱՆ ԿԱՌԱՎԱՐՄԱՆ ԲԱՐԵԼԱՎՈՒՄԸ

**Բանալի բառեր** - վճարհաշվարկային համակարգի շահառուներ, էլեկտրոնային փող, թվայնացված գործարքներ, էլեկտրոնային փողի շրջանառություն

Կրիպտոարժույթի գնագոյացման կամ կապիտալիզացիայի գործընթացը ֆինանսական կարգավորումների շրջանակում ամբողջությամբ չի կարող ընդգրկվել։ Սակայն դրանից ամենևին չի հետևում, որ պետության կողմից այդ ակտիվների օգտագործումից բխող հարկման հետևանքների կամ փողի զանգվածի փոփոխությունների կարգավորումները պետք է ամբողջապես լինեն անկառավարելի և չպետք է կիրառվեն կրիպտոարժույթի ռիսկ մենեջմենթի մոտեցումներ։ <ոդվածում վերլուծվում է, թե ինչպես կրիպտոարժույթի շուկան, դեռևս չունենալով օրենսդրական կարգավորման միասնական մոտեցումների շրջանակ, այնուամենայնիվ, որոշակիորեն կարող է հայտնվել կենտրոնացված վերահսկողության տիրույթում։

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## УЛУЧШЕНИЕ ФИНАНСОВОГО УПРАВЛЕНИЯ ОБОРОТОМ КРИПТОВАЛЮТЫ

**Ключевые слова** – бенефициарии платежной системы, электронные деньги, цифровые транзакции, электронное денежное обращение

Ценообразование и капитализация криптовалюты не могут полностью находиться под финансовым контролем государства. Однако это не означает, что налоговые последствия и изменение денежной массы в результате использования этих активов невозможно полностью контролировать государством. Тем не менее, на практике существуют определенные подходы к управлению рисками оборота криптовалют. В статье анализируются возможности централизованного управления рынка криптовалют при отсутствии единой системы законодательных норм в этой сфере.

Ներկայացվել է՝ 18.02.2021 թ. Ընդունվել է փպագրության՝ 15.03.2021 թ.

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## ACCOUNTING ISSUES OF FINANCIAL RESOURCES EFFICIENCY IN HIGHER EDUCATION INSTITUTIONS

Abstract: The process of measuring the efficiency of the use of financial resources in higher education institutions will be carried out in a more regulated manner, if it is coordinating on the relevant information flows, which can be presented by the accounting methodology. Double-entry accounting tools is creating the special information system, in individual financial which the components presented interconnected and balanced. In this case, there is an opportunity to create systematic information flows of efficiency use of financial resources in higher education institutions, to submit reports on the financial and economic results of the organizations.

**Keywords:** financial resources, efficiency, double entry, managerial accounting, reporting

JEL classification: A22, M40

**Research aim:** financial system for the formation and use of financial resources is established, which, unlike financial accounting, presents not only indicators in monetary terms.

Research hypothesis: it is possible for establishing accountability system, where feedback is provided between the

beneficiaries related to the efficient use of financial resources the administrative circles of the university.

**Research novelty:** a new managerial accounting methodology, which enables the implementation of sound management decisions to increase the financial, economic and social rewards of scientific and educational activities.

#### Introduction

Until now, the accounting of the efficiency of the financial resources of the universities has not found its application in practice; they have not received the flow of information related to the process, the existence of which would significantly increase the level of usefulness of the reporting of the finance usage. If the accounting of the efficiency of the use of financial resources finds its practical application in the universities, the beneficiaries will receive a clear report on the areas of scientific and educational activities: where the shortcomings in the effective use of financial resources have occurred, in which subdivisions they are responsible, and who are responsible for the negative results.

## Research results

We propose to solve the problem of information flow efficiency of financial resources by applying the management accounting methodology. The current accounting management used in universities solves only the problems of cost flow coordination, which is regulated by the 8<sup>th</sup> class of the accounting chart in the organizations. [1] In this case, the

integrated management and financial accounting system is used, as the accounts presented in class 8 are interconnected with other accounting groups of the chart of accounts. Naturally, this correlation is done on a monetary basis, as management accounting information is eventually transmitted to the financial statements published by the organizations. [2]

With this approach, it is not possible to record the flow of information on the efficiency of the use of financial resources, as the results of scientific and educational activities have different accounting metrics (person, day, money, etc.). [3] Therefore, we propose to use a localized system of management accounting for the efficiency of the use of financial resources, not an integrated one, where only the use of the financial resources of the university is counterbalanced, the different results of scientific and educational activities are brought to the same scale. In this case, the goals of using the financial resources to the actual results are consolidated within one local system (see Table 1). However, "financial recourses using - outcomes" combinations do not yet provide the preconditions for accounting management information flows, as they come in a variety of metrics. All tables are composed by the auther.

Therefore, before being included in the management accounting system, we propose to calculate the coefficient deviations of the compensation for the use of financial resources, according to separate scientific-educational directions (see Table 2).

Table 1. Financial resources using purposes of and actual results in the university

Finanial	Por-	Act-	Purposed of use	Inten-	Actual
resurses	posed	ual		det	
(mln AMD)					
Education	80	70	Number of students	250	240
fees					
Grants	45	60	Research results		
			comercialitaion	50	65
			(million AMD)		
Reserves	20	30	Average quality	70	80
for quality			assessment of		
improve-			students (points)		
ment					

In addition, in order to organize double-entry management accounting, we also propose to balance the cooperative deviations of the return on the use of financial resources in their directions, which will create an opportunity to coordinate the necessary information flows. [4]

Deviations from the actual results of the use of financial resources presented in Table 2 on the left are offset by the actual deviations of the expected return from the use of financial resources presented on the left, which is the object of management accounting for the effectiveness of the university's financial resources. Moreover, as a result of such comparisons of deviations, the "Balanced deviation" indicator is formed, which can be registered both on the right and on the left side of the table. In general, it does not find its record in the

management reports, but to some extent, it is an analytical indicator in assessing the efficiency of the use of financial resources.

Table 2. Coefficient deviations of the financial resources return by directions

Using of	Deviation	Retunrn of resourse	Deviation
resourses		using	
Education fees	0,875	Students number	0,96
Grants	1,333	Commercialization of	1,30
		research outcomes	
The quality	1.5	Average quality	1,14
assurance		assessment of students	
improvement			
reserves			
The balanced			0,308
deviation			
Total	3,708	Total	3,708

Naturally, the organization of localized management accounting of the efficiency of financial resources presupposes the use of special accounts and accounting correspondence. As a result, there is a need to develop a mechanism for regulating information flows in administrative accounting. Thus, based on the data in Table 2, we propose a number of new accounts for the management accounting of the financial resources of the university, such as "Deviations of tuition fees", "Deviations of grants", "Deviations of quality improvement reserves", "Deviations of the number of students", "Deviations in the commercialization of research results", "Deviations of the student numbers". The information recorded in the listed accounts is summarized in the "Deviations in the use of

financial resources" and "Deviations in the use of resources" accounts, which have no balance, as the information included in them is completely transferred, is balanced in a separate management account. As a result, the "Balance of Deviations" account is also closed at the beginning of the month, combining the deviations of the actual results of the use of financial resources and the resulting scientific and educational activities from the planned values.

In this case, in the management accounting system, on the principle of continuity, the necessary information flows are formed by double registration, which characterizes the efficiency of the use of financial resources in the universities, using the following accounting correspondences offered by us.

- 1. Deviations from the actual use of financial resources on grants have been established:
- 2. Deviations from the actual use of financial resources for tuition fees have been formalized:
  - DR Deviations in the use of financial resources .... 0,875 CR Tuition Deviations ....... 0,875
- 3. Deviations from the actual use of resources for quality improvement reserves have been recorded:
  - DR Deviations in the use of financial resources .... 1,5 CR Quality Improvement Reserves ..... 1,5
- 4. Deviations from the actual reimbursement of the use of financial resources for the provision of the number of students have been calculated:

- DR Deviations from the number of students .....0.96 CR Deviations from the cost of using inventories ...0.96
- 5. Deviations from the actual compensation for the use of financial resources for the provision of scientific research work have been established:
  - DR Deviations of derivation of the results ... 1,3 CR Deviations from the cost of using resources 1,3
- 6. Deviations from the actual reimbursement of the use of students' financial resources for the provision of GPA have been calculated:
- 7. The accounting correspondences of the recorded deviations have been prepared:

By registering our accounting records related to the use of financial resources provides an opportunity to coordinate efficiency-related information flows and submit an internal management report (see Table 3).

Table 3. Financial Resource Management Efficiency Accounting Report

Financial recourses	Responsibili ty centers	Deviation of	Outcomes deviations	Efficiency of recourses
recourses	ty centers	recourses	deviations	using
Education fess	Education department	0,875	0,96	1,079

Received grants	Research department	1,333	1,30	0,977
Improve-	Quality	1.5	1,14	0,76
ment	assurance			
reserves	department			

Table 3, which is an internal report on the efficiency of the use of financial resources of the university, is compiled with the information of the accounts u accounting new correspondences offered by us. And this makes it possible to present a report based not only on interconnected information, but also on a continuous basis. Thus, the operation of the proposed mechanism for streamlining the information flow of the management of financial resources efficiency is provided by accounting accounts, which constantly record in which circles the financial resources of the university's scientific-educational activity were formed, in what directions and in what portions their results were obtained. Thus, if the Department of Education nevertheless managed to prevent the decline of the corresponding student population (deviation 0.96) in the context of lower than expected tuition (deviation 0.875), then the utilization of financial resources in this regard should be considered effective. The same cannot be said for the use of grant resources, when the financial resources allocated to research work were oversupplied (deviation 1.33), but their compensation, ie the commercialization of the obtained scientific results, did not provide adequate progress (deviation 1.30). Naturally, such information from accounting accounts on a continuum basis can be used as a basis for timely, sound

management decisions to increase the efficiency of the use of financial resources.

### **Conclusions**

Thus, our proposed mechanism for managing the efficiency of financial resources allows us to solve a number of problems in universities.

First, a financial system for the formation and use of financial resources is established, which, unlike financial accounting, presents not only indicators in monetary terms, but also non-monetary information flows, which allows to monitor the efficiency of the financial resources according to the university. in different areas of activity. Second, an information system on the efficient use of financial resources is being developed according to the centers of responsibility. In this case, the information recorded in the accounting accounts regularly presents management reports, which reveal which areas of the university's activity have failed in the field of efficient use of financial resources, and who are responsible for them. Third, an accountability system is established, where feedback is provided between the beneficiaries related to the efficient use of financial resources the administrative circles of the university and, which enables the implementation of sound management decisions to increase the financial, economic and social rewards of scientific and educational activities.

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## Վահան Գևորգյան

Պրոռեկտոր, Հայաստանի ֆիզիկական կուլտուրայի և սպորտի պետական ինստիտուտ

## ՖԻՆԱՆՍԱԿԱՆ ՊԱՇԱՐՆԵՐԻ ԱՐԴՅՈՒՆԱՎԵՏՈՒԹՅԱՆ ՀԱՇՎԱՌՄԱՆ ՀԻՄՆԱԽՆԴԻՐՆԵՐԸ ԲՈՒՀԵՐՈՒՄ

**Բանալի բառեր** - ֆինանսական պաշարներ, արդյունավետություն, կրկնակի գրանցում, կառավարչական հաշվառում, հաշվետվություններ

Ֆինանսական պաշարների օգտագործման արդյունավետության չափման գործրնթագր բուհերում առավել կանոնակարգված կիրականացվի, եթե այն ընթանա համապատասխան տեղեկատվական հոսքերի համակարգմամբ, որն ինարավոր է իրականացնել օգտագործելով հաշվապահական հաշվառման մեթոդաբանությանը։ Կրկնակի գրանցմամբ վարվող հաշվապահական հաշվառումը ձևավորում է տեղեկատվական այնպիսի համակարգ, որում ներկայացվող առանձին ֆինանսական բաղադրիչները փոխկապված են և հաշվեկշոված։ Այս դեպքում, ինարավորություն է ստեղծվում ձևավորելու ֆինանսական պաշարների օգտագործման արդլունավետության համակարգված տեղեկատվական հոսքեր և ներկալացնելու հաշվետվություններ բուհերի գործունեության ֆինանսատնտեսական արդյունքների մասին։

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# ПРОБЛЕМЫ УЧЕТА ЭФФЕКТИВНОСТИ ФИНАНСОВЫХ РЕСУРСОВ В ВУЗАХ

**Ключевые слова** - финансовые ресурсы, эффективность, двойная запись, управленческий учет, отчетность

Процесс измерения эффективности использования финансовых ресурсов в высших учебных заведениях будет осуществляться более регламентированным образом, если он организуется путем согласования соответствующих информационных потоков, по методологии бухгалтерского учета. Бухгалтерский учет на основе двойной записи образует информационную систему, в которой отдельные представленные финансовые компоненты взаимосвязаны и сбалансированы. В этом случае, появляется возможность создавать системные информационные потоки эффективности использования финансовых ресурсов, составлять отчеты о финансово-экономических результатах деятельности вузов.

Ներկայացվել է՝ 20.02.2021 թ. Ընդունվել է փպագրության՝ 15.03.2021 թ.

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## SAMPLING RISK IN INTERNAL AUDIT

**Abstract:** Internal audit usually deals with large amounts of data as part of its research. With limited resources, it is often necessary to choose from a large database. The results of an internal audit study may vary depending on the quality of the sample. The size and quality of the sample can also affect the credibility of the assurance provided by the internal audit, which in turn affects the reputation of the internal audit and effectiveness of its activity.

**Keywords:** Internal audit, sampling risk, statistical sampling, non-statistical sampling, assurance, reputation

JEL classification: M 42, C 83

**Research aim:** The aim of the research is to present the impact of sampling risk on the efficiency and credibility of internal audit work, as well as providing comprehensive information on the most common and effective sampling methods and techniques.

Research hypothesis: The use of sampling methods in internal audit should be reasonable and well-chosen, considering all the advantages and disadvantages of the method, as it can have a major impact on the internal audit objectivity, the trustworthiness of the assurance provided, and consequently the reputation of the internal audit.

**Research novelty:** The novelty of the research is considering the impact of sampling risk on the objectivity and reputation of internal audit with a greater focus.

#### Introduction

Sampling is one of the most important components of an internal audit activity. As various modern professions, internal audit usually deals with large amounts of data, so there is a need to choose from the database, as the resources, including time, are very limited. Moreover, the choice must be justified and have clear objectives.

Sampling serves as a basis for further research, analysis, evaluation, and conclusions. The sampling process requires some mathematical and computer knowledge and skills, as well as logical thinking, to make proper judgments.

Internal audit, being an integral part of corporate governance, designed to add value and improve organization's operations by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes, [1, p. 120] should take sampling risk seriously, as the latter may affect the outcome of the internal audit activity through a chain reaction effect. As there are different sampling methods and techniques, internal audit has to choose between them to mitigate sampling risk, taking into account all the pros and cons.

#### Research results

To explore the role of sampling risk in internal audit, we need to understand what is sampling risk, what kind of sampling methods exist at all, what are the advantages and disadvantages of those methods, how can internal auditors choose the proper method to mitigate the sampling risk, how can the sampling risk affect the efficiency of the internal audit activity and its reputation.

Audit sampling is, by definition, the application of an audit procedure to less than 100 percent of the items in a population of audit interest for the purpose of drawing an inference about the entire population. It is used most commonly by internal auditors to test the operating effectiveness of controls. [2, p. 623] There are different sampling methods and techniques which can help internal auditors to determine the appropriate sample size for further study of data.

The internal audit sampling has two major branches: statistical and non-statistical. Statistical sampling is a mathematical-based method of selecting representative items that reflect the characteristics of the entire population. Using the results of audit tests on the statistically sampled items, an internal auditor can then express an opinion on the entire group. Non-statistical sampling, also called judgmental sampling, is not supported by mathematical theory and does not allow an internal auditor to express statistically precise opinions on the entire population. Non-statistical sampling is

the selection of a test group that is based on the examiner's judgment, rather than a formal statistical method.

Nevertheless, non-statistical or judgmental sampling is often a useful audit tool. [3, p. 254] Each of these methods has different approaches, which certainly have advantages and disadvantages.

The main advantages of statistical sampling compared to non-statistical sampling are:

- Results may be defended against bias,
- A defined sample size is provided,
- One may safely extrapolate the results and apply them to the wider population,
- The technique is repeatable and one would expect a similar result from any repetition,
- It forces on to define and consider the attributes of the population,
- Computers make it more convenient to use,
- The level of confidence may be predefined.

The reasons why statistical sampling may not be used and non-statistical sampling would be more appropriate are:

- Lack of training and staff awareness,
- Need for knowledge of the population and timeconsuming research,
- Not allowing the auditor to be guided by years of experience,
- Non-applicability to small and unusual populations. [4, pp. 910-912]

Techniques for audit sampling are varied. They include random sampling, monetary unit sampling, interval sampling, stratified sampling (cluster sampling and multi-stage sampling), attribute sampling, variable sampling, direct sampling, block sampling, haphazard sampling. [5, p. 4, 6] Each of these techniques requires specific knowledge and skills. To use them properly internal auditors should define clearly the sample plan, sample size and structure, consider the specific audit objectives and the nature of the population.

Internal audit has its own inherent risks, among which is the *sampling risk*. It is the risk that the internal auditor's conclusion based on sample testing may be different than the conclusion reached if the audit procedure was applied to all items in the population. It is a function of testing less than 100 percent of the items in the population because even an appropriately selected sample may not be representative of the population. Sampling risk varies inversely with sample size. If the internal auditor tests 100 percent of a population, and therefore is not sampling, there is no sampling risk. In performing tests of controls, the internal auditor is concerned with two aspects of sampling risk: the risk of assessing control risk too low (beta risk) and the risk of assessing control risk too high (alpha risk). [2, pp. 636-637]

As we have already learned, sampling risk is closely related to sample size. According to some general views, the optimal sample size is usually around 10 percent of the population. However, it cannot be generalized for all the situations, as there are several factors affecting sample size,

e.g., acceptable risk of assessing control risk, tolerable and expected deviation rates, correlation, the nature of population, engagement features, etc.

The effects produced by sampling risk generally can increase other risks inherent in internal audit. For example, poor sampling may lead to incomplete or wrong conclusions, which in turn affects the quality and objectivity of the assurance provided by internal auditors. False assurance can seriously damage the internal audit reputation, which is one of the most valuable assets for internal audit. One inaccurate audit report, an improper assurance is enough to severely harm the reputation of internal audit. In that case the concept of being the bastion of integrity and credibility within the organization for internal audit will already be in big question.

#### Conclusions

Sampling plays an important role in internal audit activity, as the latter usually deals with large amounts of data. When there is a sampling, some rate of sampling risk always exists. The task here for internal auditors is to mitigate the sampling risk to conduct its functions properly.

Exaggerating or underestimating the real picture of data by using poor sampling, internal auditors may reach to improper conclusions and false assurance, thus severely damaging internal audit reputation. To avoid such consequences, internal auditors should pay serious attention to the sampling plan, estimating acceptable level of sampling risk, following professional literature and relevant guides to use proper approaches and techniques, determining the appropriate sample size, examining the nature and features of each population, regularly developing mathematical, statistical, computer knowledge and skills and if necessary involving the appropriate specialists.

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**Հռիփսիմե Հովսեփյան** Ասպիրանտ, ԵՊՀ

## ԸՆՏՐԱՆՔԱՅԻՆ ՌԻՍԿԸ ՆԵՐՔԻՆ ԱՈՒԴԻՏՈՒՄ

**Բանալի բառեր** - ներքին աուդիտ, ընտրանքային ռիսկ, վիճակագրական ընտրանք, ոչ վիճակագրական ընտրանք, հավաստիացում, հեղինակություն Ներքին աուդիտն իր ուսումնասիրությունների շրջանակներում սովորաբար առնչվում է մեծածավալ տվյալների հետ։ Սահմանափակ ռեսուրսների պայմաններում հիմնականում հարկավոր է լինում ընտրություն կատարել տվյալների մեծածավալ բազայից։ Կախված նրանից, թե ինչպիսի որակ կունենա ընտրանքը՝ ներքին աուդիտի ուսումնասիրության արդյունքները կարող են տարբեր լինել։ Ընտրանքի ծավալն ու որակը կարող են ազդել նաև ներքին աուդիտի տրամադրած հավաստիացման արժանահավատության վրա, ինչն էլ իր հերթին ազդում է ներքին աուդիտի աշխատանքի արդյունավետության և հեղինակության վրա։

**Рипсиме Овсепян** Аспирант, ЕГУ

### РИСК ВЫБОРКИ ВО ВНУТРЕННЕМ АУДИТЕ

**Ключевые слова** - внутренний аудит, риск выборки, статистическая выборка, нестатистическая выборка, гарантия, репутация

Внутренний аудит в рамках своего исследования обычно имеет дело с большим объемом данных. При ограниченных ресурсах часто приходится выбирать из огромной базы данных. Результаты исследования внутреннего аудита могут отличаться в зависимости от качества выборки. Размер и качество выборки также могут повлиять на достоверность гарантий, предоставляемых внутренним аудитом, что, в свою очередь, влияет на репутацию внутреннего аудита и эффективность его деятельности.

Ներկայացվել է՝ 09.02.2021 թ. Ընդունվել է ւրպագրության՝ 15.03.2021 թ.

### Behnood Souri

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# ISSUES OF PAYMENT AND SETTLEMENT TRANSACTION EFFICIENCY MANAGAEMENT

**Abstract:** The implementation of macroeconomic assessment of payment and settlement activities primarily aims to identify the problems of improving the management of the payment system, which are mostly formed at the micro economy level. Therefore, it is possible to propose ways to effectively manage payment and settlement transactions, which are offered in different directions in the professional literature.

**Keywords:** payment settlement system, management, digital money, efficiency of the payment

IEL classification: G14

**Research aim:** to introduce the methodology of efficiency management of the payment and settlement system.

**Research hypotheses:** development of payment settlement efficiency assessment tools is interrelated with the evolution of management methods.

**Research novelty:** a new methodology for measuring and managing the efficiency of payment and settlement transactions has been developed

### Introduction

According to the concept approved by the Central Bank of Armenia, from the point of view of the efficiency of the payment and securities settlement systems, it is possible to what extent the system meets the requirements of the participants

and their customers expectations, how flexible the system is to respond to new technologies. Cost control is performed by the operator continuous efficiency analysis, including pricing. Therefore, inefficient operation of the system or non-targeted activities may negatively affect the financial market / or a certain segment of it, contributing to the emergence of risks, including for participants and users.

### Research results

One of the key factors in increasing efficiency is competition, which contributes to the introduction of innovations, the reduction of service delivery times and the reduction of prices. However, given the cost of setting up and operating payment systems, the scale effect factor, the existence of natural monopolies, and a number of other obstacles, presenting competition in this area is very low. In addition, operators can incur large costs to increase security in the system, which, however, are not always justified, while decision-making must be within cost-effectiveness. Therefore, in order to increase the efficiency of the system, the fixation of the efficiency by the central banks is used as a possible control goal.

The Central Bank of Armenia (CBA) should ensure that the system is able to meet market demands, including the introduction of new technologies, the provision of new services, the speed of operations, the costs incurred by the participants should be as low as possible, but should not affect the quality of services. on security. In addition to the above-mentioned main goals, the Central Bank of Armenia also seeks to strengthen public confidence in non-cash payments. This goal is connected with the global policy of the CBA to create traditions of using

non-cash payment instruments, services and creating trust in the national currency by a large segment of the population in Armenia. [1]

The study shows, that market and regulatory forces are driving demands for new payment products and services and providing an impetus for innovation in core payment systems around the world. The effectiveness of payment settlement system can be summarized in three broad categories: new technologies, evolving user demands and the emergence of a more stringent regulatory landscape.

Studies show that the theory proposes a procedure for evaluating and monitoring the effectiveness of the use of payment systems, which considers:

- cost compensation of payment and settlement organizations,
- financial stability of the payment and settlement system,
- satisfaction of beneficiaries using independent services,
- compensation for the introduction of innovative payment and settlement technologies,
- financial security of payment and settlement functions.

The degree of accessibility of each target indicator is a separate component of the measurement of the efficiency of the payment system Ei1 / Ei0, which can be monitored separately. And the total efficiency of the payment system (E) is proposed to be calculated with the following approach.

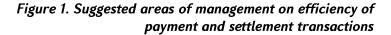
$$E = (\Sigma Ei1 / Ei0) / n$$
:

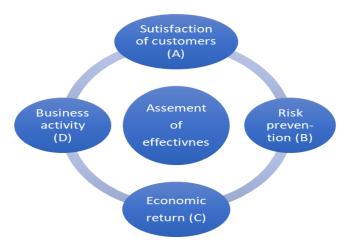
where n is the number of performance targets.

However, we believe that in practice it is difficult to assess the level of achievement of goals, especially in terms of indicators such as financial security of payment and settlement functions, the level of satisfaction of beneficiaries using independent services. Therefore, we recommend managing the efficiency of payment and settlement transactions in such areas (see Figure 1.) as customer satisfaction (A), payment risk prevention (B), transaction compensation (C), and operating activity (D).

The directions of our management of the efficiency of payment and settlement transactions have different dimensions of the results of the activity. Thus, the duration of transactions is measured in hours, the results of risk forecasting are presented in monetary terms, accountability in the number of feedbacks, the turnover of money in quantity, which creates difficulties in the comparability of efficiency indicators, management decisions. Therefore, in the first stage of the process of managing the efficiency of payment and settlement transactions, there is a need to apply a common management measure, i.e. usable indicators that can be measurable, comparable and presented with the same approach.

The way to apply the unified managerial dimension can be the application of coefficients, ie the representation of management entities in the form of coefficients.





We propose the presentation of managerial objects by the size of the coefficients in the chain of "definition of goalsformulation of goal-indicators - presentation by the measured indicators-comparative evaluation of indicators".

Thus, in determining the indicators of managerial measurement of the requirements of the parties to payment transactions, the scope of financial intermediaries and customer satisfaction goals (A) is first defined, then the indicators representing customer expectations are specified (speed of service a1, convenience of service a2). Finally, the measurement representations of the indicators are presented, which can be compared in different monitoring periods.

The second step in managing the efficiency of payment and settlement transactions after ensuring uniform managerial indicators, is the presentation of indicators with their specific assessments. In this regard, we propose to present the indicators characterizing the efficiency of payment and settlement transactions in four groups, which will have calculation and measurement features, related to the sectorial structures of the facility management.

The size of the indicators presented in Table 1, is derived from the objectives of managing the efficiency of payment and settlement transactions. Moreover, these objectives are different and are closely related to the sectorial characteristics of the functions to be managed. Thus, if the objectives of managing the economic return on transactions are to reduce costs or increase the profitability of remittances, then the objectives of managing payment transaction risks are to prevent the formation of financial and operational risk losses.

Risk management refers to all the processes used by payment systems and their participants to identify, assess and control risk. The most relevant types of risk for core payment systems are credit, liquidity, operational, legal and business risk. Each of the payment system attributes described above have implications for risk management. The following mechanism of final settlement is used to reduce financial risks in the payment settlement system of RA: [2]

• to ensure the final settlement for payments by cards between the system participants is performed, an issuer member of the system will freeze the amount of settlement limit (which consists of authorization limit and non-reducing balance) in the settlement bank (the CBA) through the Armenian Card CJSC. The freezing of the settlement

amount, the authorization of card transactions, the take-out of positions and final settlement are performed in accordance with trilateral contracts, rules, and rules and procedures of the clearing and take-out positions in the system;

 the authorization of card transactions is performed within an authorization limit for the system participant and payment limit for the cardholder. No authorization is performed when the authorization amount exceeds each of the above-noted limits.

The system has developed mandatory requirements on operational risk reduction, which generally concern security arrangements established in system rules; the principles of using different types of electronic keys; analysis aimed at discovering and preventing fraud; an emergency action plan; software testing; the use of UPS; regular supervision of hardware and software; backup copying of data on backup devices; recording and analyzing technical failures; and performing a number of other activities. [3]

The third stage of the implementation of the management of the efficiency of payment and settlement transactions is the generalization of the deviations of the coefficients of the reporting year compared to the previous year, and the management decisions based on it.

Table 1. Interpretations of payment transaction efficiency indicators

Indicators		Interpretations
Speed of		measured in hours and represent the speed
payments	a11	of payment transfers or clearing transactions
Availability of	a21	measured in percentages and shows
transfers		accuracy of payment targeting
		Measured as a percentage L shows the
Accounta-bility	a22	activity level of user feedback channels
		is measured in percentages; shows the
		liquidity of payment and settlement
Liquidity risk	b11	organizations
		is measured as a percentage and indicates
Cyber security	b21	the likelihood of a cyber security breach risk
Risk of		is measured as a percentage L indicates the
communication	b22	risk of channel failure
failure		
Cost compen-	c11	is measured in terms of value and shows the
sation		profit per cost of payment and settlement
Volume of		
transaction		is measured in terms of value and shows the
compensation	c21	net profit of one dram payment transaction
Operating		is measured in terms of value and shows the
profitability		net profit per dram of payment and
	c22	settlement transactions.
		is measured as a percentage and shows
System		timeliness of payments in accordance with
availability	d11	the established technical norms
Concentrat-ion		is measured as a percentage and indicates
of pay-ment		the maximum degree of hourly
distribution	d21	concentration of payments
System	d22	is measured by the maximum number of
bandwidth		payments made per hour

For this purpose, the efficiency indicators of payment and settlement transactions are grouped by years (see Table 2), their change indices are calculated by coefficient representtation, "then" the deviations of the coefficients from 1., 0 are determined. Naturally, the greater the positive deviation, the higher the efficiency of the payment transaction on the indicator of a specific component and vice versa.

Table 2. Database of assessment of the efficiency of payment and settlement transactions

Mar-	Indicators of				Coef-	Devia-
king	efficiency		2019	2020	ficient	tion
	Speed of					
a11	payments	hour	2,2	2,8	1,27	-0,27
	Availability of					
a21	transfers	%	80	87	1,09	0,09
a22	Accountability	%	95	92	0,97	-0,03
b11	Liquidity risk	%	0	0	0,00	1,00
b21	Cyber security	%	4	3	0,75	0,25
	Risk of					
	communication					
b22	failure	%	5	4,2	0,84	0,16
	Cost					
c11	compensation	AMD	0,11	0,12	1,09	0,09
	Volume of					
	transaction					
c21	compensation	AMD	0,03	0,04	1,33	0,33
	Operating					
c22	profitability	AMD	0,18	0,21	1,17	0,17
d11	System availability	%	99,9	99,8	1,00	0,00
	Concentration of					
	payment					
d21	distribution	%	24	25	1,04	-0,04

		System bandwidth					
	d22		hour	4996	5245	1,05	0,05
Ī	n=12	Mean deviation					0,15

With this approach, we propose to evaluate the efficiency of payment and settlement transactions during the analyzed period with the average deviation of all indicators (D).

 $D = \Sigma \Delta ki / n$ :

where:

 $\Sigma\Delta ki$  - is the sum of deviations from 1.0 of the coefficient indicators compared to the previous year,

n - is the number of efficiency indicators.

### Conclusions

Suggested by us mechanism for managing the efficiency of payment and settlement transactions provides an opportunities:

Firstly, using comprehensive approach to assessing the effectiveness of payment transactions, including indicators of customer satisfaction, economic risk mitigation, and operational activity of payment and settlement activities.

Second, to identify the positive and negative effects of the impact of various factors on changes in the efficiency of payment and settlement transactions, and thus to implement management decisions to increase efficiency. [4]

Third, to make comparative analyzes of the effective operation of the payment and settlement system for different periods, thus discoverhuq the potential for the development of the system based on it.

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- 1. Concept of Control of Payment and Settlement Systems by the Central Bank of the Republic of Armenia, 2018, p. 9.
- 2. www.cba.am
- 3. **Gasparyan L.,** Ways to increase the efficiency of clearing settlements in Ra, the abstract of the thesis for receiving the degree of Doctor of Economics in the specialty 08.00.03 «Finance, Accounting», 2019, p. 14.
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## **Բեհնուդ Սուրի**

Ասպիրանտ, Եվրոպական համալսարան

# ՎՃԱՐԱՀԱՇՎԱՐԿԱՅԻՆ ԳՈՐԾԱՐՔՆԵՐԻ ԱՐԴՅՈՒՆԱՎԵՏՈՒԹՅԱՆ ԿԱՌԱՎԱՐՄԱՆ ՀԻՄՆԱԽՆԴԻՐՆԵՐԸ

**Բանալի բառեր** – վճարահաշվարկային համակարգ, կառավարում, էլեկտրոնային փողեր, քլիրինգային գործընթացներ, վճարումների արդյունավետություն

Վճարահաշվարկային գործունեության մակրոտնտեսական գնահատման իրականացումն առաջին հերթին նպատակ է հետապնդում վերհանելու վճարային համակարգի կառավարման բարելավման խնդիրները, որոնք առավելապես ձևավորվում են միկրոմակարդակում։ Ուստի կարևորվում է վճարահաշվարկային գործարքների կառավարման արդյունավետության ուղիների առաջադրումը, որը մասնագիտական գրականությունում տարբեր ուղղություններով է առաջարկվում, իսկ հոդվածում, այդ առումով, ներկալազվում է նոր մոտեցում։

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# ВОПРОСЫ УПРАВЛЕНИЯ ЭФФЕКТИВНОСТЬЮ ПЛАТЕЖНЫХ И РАСЧЕТНЫХ ОПЕРАЦИЙ

**Ключевые слова** - платежная система, менеджмент, электронные деньги, эффективность платежей

Макроэкономическая оценка платежно-расчетной деятельности в первую очередь направлена на выявление проблем совершенствования управления платежной системы, которые в основном формируются на микроуровне. Тем самым можно предложить способы эффективного управления платежными и расчетными операциями, которые в специальной литературе имеют различные подходы. В статье представлен новый подход к решению этой проблемы.

Ներկայացվել է՝ 17.02.2021 թ. Ընդունվել է ւրպագրության՝ 15.03.2021 թ.

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# IMPROVING CASH FLOWS MANAGERIAL ACCOUNTING OF AGRICULTURAL INSURANCE

Abstract: One of the key factors in ensuring the effect-tiveness of agricultural insurance is the use of a flexible accountability system, as the range of beneficiaries in this area is quite wide. Accountability does not only mean reporting, it works effectively in the presence of feedback from users and organizations. At the same time, accountability requires the application of a financial flow accounting system, related to the insurance process, both in the micro and macro sectors. The article proposes a methodology for the consolidated managerial accounting of financial inflows and outflows of the agricultural insurance process.

**Keywords**: agricultural insurance, cash flow balance, insurance financial results, double entry

JEL classification: M40, M41

**Research aim:** consolidate financial inflows and outflows of agricultural insurance process and submit insurance effectiveness pointer.

**Research hypothesis:** consolidated reporting of agricultural insurance financial flows is possible by using special managerial accounting methodology.

**Research novelty:** proposed consolidated managerial accounting financial flow and presenting methodology in agricultural insurance cash flows efficiency assessment.

#### Introduction

The RA Law on Insurance already envisages the creation, service and information system on customers. [1] However, this legislative requirement mainly targets customer behavior, coverage of insurance partnership history, and nonbeneficiary feedback for effective management decision-making and implementation. At the same time, insurance companies compile and publish annual quarterly financial and other reports as required by law. The normative legal acts of the Central Bank of the Republic of Armenia define the reporting frequency. In addition, the forms of reports to be submitted to the Central Bank, the information included in them, the procedure for submission, and the deadlines shall determined by normative legal acts of the Central Bank. In fact, in this case, the legal requirement is targeted at the financial statements, when their users are more informed about the capital, financial situation of insurance companies, and the legal requirement to submit financial information outside the insurance companies is not presented in this case.

### Research results

The functions of the Armenian Motor Insurers' Bureau remarkable. The purpose of the Bureau is to protect the interests of citizens and ensure the development of insurance

system stability. The Bureau promotes the efficiency of the activity of its member insurance companies in the field of car insurance, regulates and supervises their activity in the field. [2]

However, the important thing is, that the Bureau provides feedback between car insurance beneficiaries through an online program. Moreover, the Armenian Motor Insurers' Bureau has a standard communication framework between "insurance companies", which, in addition to financial information, uses non-financial information, related to the rules for ensuring proper conditions for insurance companies to operate, to protect the interests of injured parties and policyholders. The results of cooperation with car insurance bureaus of other countries, guarantee funds, other compensation bodies, information systems (centers), insurance companies, measures aimed at preventing fraud (fraud) in the field. [3]

Considering the experience of the Armenian Motor Insurers' Bureau, we propose to establish a Bureau of Agricultural Insurers of Armenia, the scope of functions of which is considered to be a bit comprehensive, related to the peculiarities of the agricultural sector. In particular, we are introducing a reporting system in this structure, which should be aimed at making decisions aimed at increasing the efficiency of agricultural insurance. The financial mechanism of agricultural insurance is distinguished by the fact that both private and public resources are a source of replenishment of the financial resources of the process. Thus, the public sources of financial resources are the subsidy of insurance premiums

from the state budget. The state budget reserve funds for compensation of possible damages resulting from large-scale climatic and epidemic disasters, the replenishment of private insurance premiums from community budget resources. And the way to replenish the financial resources of the agricultural insurance process with private sources is the insurance premiums made by farmers. And in this regard, the question arises among the public-private beneficiaries financing the insurance process whether to what extent the formed financial resources are used.

Nevertheless, the financial accountability of agricultural insurance is largely limited to accident compensation indices. However, different insurance beneficiaries always ask what the financial inflows and outflows of the insurance process were like, the outflows, the share of the collected insurance premiums, and finally, what was the financial balance of the insurance premiums, the loss ratio. We consider such be extremely important in assessing the auestions to effectiveness of agricultural insurance, as their answers simply play a guiding role in building the level of trust in the system among insurance beneficiaries. Thus, if farmers are convinced, that insurance premiums are not just a source of profit for insurance companies, but, on the contrary, fully compensate for the losses of insurance accidents, then their motivation for insurance increases. To this end, we propose to introduce a system of insurance financial flow reporting in the functions of the Bureau of Agricultural Insurers of Armenia, which will provide the beneficiaries with a balance of insurance premiums

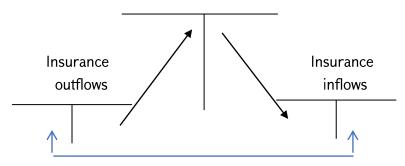
(insurance claims, which can be achieved through agricultural insurance financial inflows and outflows).

However, there is a need for a similar financial information flow coordination mechanism, which we propose to implement through managerial accounting. In this regard, we consider it necessary to establish a special structure in the proposed Bureau of Agricultural Insurers of Armenia, which will record the financial inflows and outflows in the agricultural insurance process. The task of this accounting mechanism is to coordinate the financial information flows related to the insurance process collected in the Bureau and to present a positive or negative balance on an annual basis. Naturally, in the case of a positive balance of financial flows, there will be a "surplus" of collected premiums, the opposite of which, in our opinion, will play a significant role in improving accountability among agricultural insurance beneficiaries and decision-making by policyholders on the continuation of insurance contracts.

In order to coordinate the presented reporting information flows, we offer a number of accounts and accounting reports that will balance the financial inflows and outflows of the agricultural insurance process (see Figure 1), thereby informing the beneficiaries of the amount of insurance to be collected on the efficiency of the process. In this regard, we consider it expedient to use the Comprehensive Account for Rural Insurance Financial Outcome, which records the cost of compensation for agricultural insurance losses in its debit part and the resource inflows for insurance financing in the credit part (see Figure 1).

Figure 1. Proposed Scheme of Managerial Accounts, Coordinating Agriculture Insurance Financial Flows

Financial flows of rural insurance



Thus, using the data in Figure 1, we illustrate the information flow system of financial flows in the field of agricultural insurance through the proposed accounts.

1.	ln	the	reporting	period,	the	state	fully	reimbursed		
	agricultural insurance premiums - 430 billion drams:									
	DR "Insurance inflows" 430									
	CR "Financial flows of rural insurance" 430									
2.	The	e state	e subsidized	a premit	um of	70 bill	ion dr	ams:		

3. Rural communities provided 20 billion drams in assistance to policyholders:

4. During the reporting period, farmers made insurance premiums of 650 billion drams:

 5. In the reporting period, 490 billion drams of agricultural products were compensated as a result of accidents:

DR "Financial flows of rural insurance"... 490 CR "Insurance outflows" ....... 490

6. In the reporting period, 110 billion drams of agricultural expenses were reimbursed as a result of accidents:

DR "Financial flows of rural insurance"... 110
CR "Insurance outflows" ........... 110

7. During the reporting period, farmers reimbursed 50 billion drams for insurance risk mitigation measures:

DR "Financial flows of rural insurance"... 50
CR "Insurance outflows" ...... 50

The accounts we offer and their correlated accounts correspond to the information on the financial flows generated in the agricultural sector, summarizing it in the Comprehensive Account of Financial Flows of Rural Insurance (see Figure 1). Therefore, this combination interprets both the financial potential of agricultural insurance and the degree of its use. Moreover, if the "Insurance inflows" and "Insurance outflows" accounts are closed, the "Rural Insurance Financial Flows" account is left with a balance if the financial inflows and outflows are not equivalent to each other during the reporting period. Thus, if the debit turnover of the "Financial Flows of Rural Insurance" account exceeds the credit turnover, the misuse of financial resources accumulated in the insurance process (negative balance) is recorded, and vice versa (see Table 1). Table 1 is composed on the above mentioned 1-7 accounting transactions.

Based on the above statement, we propose a ratio of rural insurance financing efficiency, which is calculated by relating the sum of financial inflows in the reporting period to the sum of outflows ( $\Sigma F$  /  $\Sigma E$ ). The necessity of using such a coefficient is substantiated by the fact that if it is greater than one, it substantiates the misuse of financial resources collected in the insurance process, and vice versa.

Consequently, the data in Table 1 show, that the inflows of financial resources in the field of agricultural insurance in the reporting period exceeded the outflows ( $\Sigma F / \Sigma E = 1.23$ ). And if this trend continues for several years, the value of this ratio increases, from the point of view of insurers, the insurance process will not be considered effective, as it will be reflected an unnecessary financial burden for the latter, will be painstaking a disgraceful waste of money on farms.

Table 1. Annual Report of the Bureau of Financial Inflows and Outflows of the Agricultural Insurance Sector

	Sources of	Amount		Sources of	Amount
	financial	(billion		financial outflows	(billion
	inflows	drams)			drams)
F1	State	430	E1	Compensation	490
	insurance			for agricultural	
	premium			losses from the	
				accident	
F2	State	70	E2	Reimbursement	410
	subsidy of			of agricultural	
	insurance			expenses from	
	premiums			the accident	
F3	Community	20	E3	Reimbursement	50
	insurance			of costs of	

	premium subsidy		insurance risk mitigation measures	
F4	Private insurance premiums	650		
	Negative balance	(220)		
	Total	950		950

### Conclusions

Thus, the financial accountability mechanism proposed by us provides an opportunity. First, to group and then present to the public the consolidated information on the flow of financial resources related to the agricultural insurance process. Second, to organize the financial information of the insurance process in such a way, as to enable the preparation of financial flow reports in the field of agricultural insurance, to make decisions regarding the continuity of the processes by the beneficiaries. Third, to apply ratios for the use of rural insurance financial resources, thereby assessing the degree of utilization of insurance processes' financing potential and trends in insurance effectiveness change over the period under review.

### References:

- 1. RA Law on Insurance and Insurance activity, 2007, art. 79, point 11. 2.
- 2. Charter of the Armenian Motor Insurers' Bureau, 2019, point 3.
- 3. Official website of Armenian Motor Insurers' Bureau, https://www.appa.am/index.php?al=abcfinanceam.

### Արտակ Մարտիրոսյան

ասպիրանտ, Գավառի պետական համալսարան, Գյուղատնտեսության ապահովագրության փորձագետ, Հայաստանի գլուղատնտեսական դաշինք

## ԳՅՈՒՂԱՏՆՏԵՍԱԿԱՆ ԱՊԱՀՈՎԱԳՐՈՒԹՅԱՆ ԴՐԱՄԱԿԱՆ ՀՈՍՔԵՐԻ ԿԱՌԱՎԱՐՉԱԿԱՆ ՀԱՇՎԱՌՄԱՆ ԲԱՐԵԼԱՎՈՒՄԸ

**Բանալի բառեր** – գյուղատնտեսության ապահովագրություն, ֆինանսական հոսքերի հաշվեկշռում, ապահովագրության ֆինանսական արդյունք, կրկնակի գրանցում

Գյուղատնտեսական ապահովագրության արդյունավետության ապահովման առանցքային գործոններից է հաշվետվողական ճկուն համակարգի կիրառումը, քանի որ այս ոլորտում բավականին ընդգրկուն է շահառուների շրջանակը։ Հաշվետվողականությունը չի ենթադրում սոսկ հաշվետվության ներկայացում և գործում է արդյունավետ այն ներկայացնողների և օգտագործողների հետադարձ կապի առկայության դեպքում։ Դրան զուգահեռ, հաշվետվողականությունը պահանջում է նաև ապահովագրական գործընթացին առնչվող ֆինանսական հոսքերի հաշվառման համակարգի կիրառում, ինչպես միկրո, այնպես էլ մակրոտնտեսական ոլորտում։ Հոդվածում առաջարկվում է գյուղատնտեսական ապահովագրական գործընթացի ֆինանսական ներիոսքերի և արտահոսքերի համախմբված կառավարչական հաշվառման մեթոդաբանություն։

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# УЛУЧШЕНИЕ УПРАВЛЕНЧЕСКОГО УЧЕТА ДЕНЕЖНЫХ ПОТОКОВ СЕЛЬСКОХОЗЯЙСТВЕННОГО СТРАХОВАНИЯ

**Ключевые слова** - агрострахование, остаток денежных средств, финансовый результат страхования, двойная запись

Одним из ключевых факторов обеспечения эффективности агрострахования является использование гибкой системы отчетности, поскольку круг бенефициаров в этой сфере достаточно широк. Подотчетность означает не только отчетность. Она эффективно работает при наличии обратной связи между пользователями и организацией. В то же время подотчетность требует применения системы учета финансовых потоков, связанных с процессом страхования, как в микро, так и в макро-секторах. В статье предлагается методика консолидированного управленческого учета финансовых поступлений и оттоков в процессе агрострахования.

Ներկայացվել է՝ 15.02.2021 թ. Ընդունվել է ւրպագրության՝ 15.03.2021 թ.

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# METHODOLOGY OF ASSESSMENT OF FINANCIAL STABILITY OF THE ORGANIZATION

Abstract: This article discusses the methodology for analyzing an organization's financial stability. As in the case of solvency analysis, there are many methods of analyzing the financial stability of an organization, but all of them, one way or another, lead to the methodology of estimating the two groups of indicators, absolutely  $\mathfrak u$  relative. The organization's financial stability analysis methodology should consist of an assessment of the financial stability indicators as well as the type of financial stability of the entity based on that assessment.

**Keywords:** financial stability analysis, indicators, financial condition of the enterprise, method of determining financial stability

JEL classification: G33

**Research aim:** analyze the existing methodologies for assessing the financial stability of organizations.

**Research hypothesis:** Indicators for assessing the financial stability of organizations do not provide a detailed picture of the organization, so it is necessary to conduct a dynamic analysis of these indicators with the help of new analytical sympathies and make an effective decision based on it:

**Research novelty:** an assessment of the financial stability indicators of the previously operating organization was carried out and it was proposed to compare them with the currently available computer analytical programs that can provide more effective and detailed information on the topic under study.

### Introduction

Currently, an important aspect of ensuring the stable development of the organization is the protection of its economic interests, implemented within the framework of the general concept of economic security of the business entity. In the conditions of the modern market, it is especially important to regularly analyze the financial stability of the enterprise. The fact is that it makes it possible to objectively assess the availability of available funds, resources, and at the same time the state of affairs, as well as to plan further work. Results of the analysis of financial stability of any business entity is an important characteristic of its operations and the financial and economic well-being characterized by the result of his current, investment and financial development, contain the necessary information to investors, as well as reflect the company's ability to meet its debts and liabilities and develop their economic potential in the interests of the founders and the other coowners. In the domestic theory and practice of economic of financial condition and investment potential analysis estimated level of liquidity and solvency, profitability and business activity, financial stability, etc. The most important characteristic is the level of organization of its financial stability.

In this paper, we consider two main approaches, which, in our opinion, adequately reflect modern methods of analysis of the financial stability of the enterprise.

### Research results

The financial stability of the organization is a key condition for its continuous and effective operation. To achieve this, it is necessary to ensure the entity's constant solvency, high liquidity of its balance sheet, financial independence, high efficiency of business. Financial stability analysis is one of the most important components of analyzing the financial condition of an organization. [1] In the current economic literature, different approaches to assessing the financial stability of an organization can be found in current practice.

In connection with the transition to a market economy and the reform of the accounting and reporting system, the financial stability of organizations should be assessed on the basis of the adequacy of equity, measured by the amount of its excess on the short-term and long-term debt obligations of the organization. [2] Indicators of financial stability that characterrize the permanent solvency of an organization are closely related to indicators of solvency (liquidity). The essence of financial stability is to provide the organization's assets with the appropriate sources of their formation, and solvency is an external manifestation of financial stability. Assessment of the degree of financial stability is a necessary element of management in the financial management system, a stage of the management process, in the decision-making process of all

business stakeholders-owners, managers, investors, creditors. [3] We propose to assess financial stability using absolute and relative indicators, such as the availability of own working capital, the availability of own and long-term sources of inventory financing, the size of the main sources of inventory formation, the excess or lack of own current assets, the excess or lack of sources of formation of own and long-term debt funds, the coefficient of financial independence, the coefficient of financial stability, the coefficient of financing. Relative indicators play a very important role in analyzing the financial stability of an organization, as they smooth out the inflationary impact on all reports. They make it possible to compare disproportionate indicators with the absolute value and are more stable over time. To assess the financial condition of an organization, relative indicators should form a system of indicators, and not just be a series. This means that they should not copy each other, not contradict each other, and not leave undisclosed elements. The effectiveness of assessing and analyzing the financial stability of an organization depends on the quality of its information base. The information base for assessing the financial stability coefficients is the assets and liabilities of the balance sheet, management accounting indicators, and the accounting policy of the organization.

Most often, when assessing the financial stability of an organization, the following indicators of the capital structure are used:

- financial independence ratio,
- financial dependency ratio,

- funding ratio,
- the ratio of investments in different areas.

In our opinion, these methods allow us to assess and analyze the financial stability of the organization with sufficient depth. It is impossible to say which of the above methods is the most important, since all of them together allow you to get a complete picture of the financial situation of the organization.

Based on the formulated theoretical provisions, it is important to note that the analysis of the financial stability and solvency of the organization becomes especially relevant in the context of the financial crisis, since the main condition for ensuring the stability of the organization is to ensure the sufficiency of its financial resources necessary to maintain competitive production, timely fulfillment of obligations to employees, creditors, tax authorities, etc. This means that in modern conditions, it is necessary to develop and improve analytical tools for diagnosing the state of an organization that can adequately assess its current and future stability.

To ensure the "survival" of an enterprise in a market environment, management personnel need to assess the possible and feasible pace of its development from the standpoint of financial support, identify available sources of funds, thereby contributing to the stable position and development of economic entities. Determining the sustainability of the development of commercial relations is necessary not only for the organizations themselves, but also for their partners, who rightly want to have information about the stability, financial well-being and reliability of their

customer or client. Therefore, an increasing number of counterparties are beginning to be involved in research and assessment of the sustainability of a particular organization. [4] Currently, the analysis of financial stability, being a practically formed direction of financial analysis, remains insufficiently methodically developed. The issues of improving financial the for sustainable development instruments organization, including the development of innovative methods for assessing financial stability, are becoming a priority. If an organization is financially stable, it has a number of advantages over other organizations that carry out similar activities: obtaining loans, attracting investment, selecting suppliers and collecting high-quality personnel. The higher the stability of the organization, the more independent it is from unexpected changes in market conditions and, therefore, there is not enough risk to be on the verge of bankruptcy. Improving the methodological framework for assessing and managing the financial stability of an organization is an important economic task.

For a more detailed understanding of the essence of the coefficient, it is necessary to compare the values of the coefficients with the base values. In our opinion, the analysis of the presented methods allowed us to identify the most significant shortcomings of the approaches to the coefficients:

• The dynamics of changes in the state of financial stability is ignored, that is, in the analyzed period, the organization may be in a state of temporary (conditional) instability. In this regard, the analysis should consider the

financial condition of the periods adjacent to the current period.

- Determining the importance of indicators in most methods and calculating the final estimate is subjective or completely unsupported by explanations.
- The standardized values used in the evaluation of the coefficients do not consider the scope of activity of the analyzed organization, since the standard value of the indicator set for this field of activity may differ radically from the standards of indicators of other non-related fields of activity.

The analysis of the existing methodological approaches to the assessment of the financial stability of the organization showed that there is no single approach. The differences are manifested not only in the quantity, sequence and structure of the analysis of the indicators used, but also in the absolute and relative indicators that characterize liquidity, solvency, financial stability, etc. In this regard, it is advisable to improve the existing models for assessing the financial condition.

In our opinion, as normal values, we can use the average indicators of the industry, the average values of the previous period, the financially favorable periods of the indicators of this organization, as well as the values of the indicators can be obtained from competing organizations. These indicators play the role of standards for financial stability coefficients.

In our opinion, for an accurate and complete description of the financial position of the organization and its

trends, a small number of financial coefficients is sufficient. It is only important that each of these indicators reflects the most important aspects of the financial situation.

The most commonly used indicators for assessing financial stability in various methods are liquidity, capital structure, profitability and current activities (business activity). However, in our opinion, it would be more effective and appropriate not only to expand the range of indicators used, for example, the critical liquidity ratio-a financial ratio equal to the ratio of highly liquid current assets and short-term liabilities (current liabilities), but also to use more actively the methods of mathematical analysis, modeling and forecasting. This thesis is explained by the emergence of a sufficient number of tools for multidisciplinary analysis. Such Statistica, SPSS, in addition, the common MSExcel package has a rich toolkit for data analysis.

The current stage of solving a wide range of problems of managing complex socio-economic systems, which include modern organizations, is characterized by a significant increase in the complexity and volume of the processed masses, the ambiguity of rich data that characterizes the state and activity of distributed, structurally complex managed objects and systems for various purposes. Systems under conditions of structural and parametric uncertainty are of the greatest interest, which is typical for most economic processes, especially from the point of view of the cyclical nature of crisis influences.

In this regard, rational organization and automation of management decision-making tasks in the activities of real-level systems of complexity is possible only on the basis of decision support systems containing appropriate mathematical models that comprehensively consider the structural, probable, and qualitative properties of elementary managed objects (subsystems) and provide the necessary LPR solutions and their evaluation.

#### **Conclusions**

The current stage of creating financial analysis and monitoring systems for business management should be based on methods that use the principles of artificial intelligence. Smart analytical systems are characterized by the accumulation of experience, adaptation of changes and the ability to learn. They not only allow qualified and experienced personnel to make decisions with acceptable reliability, but also help experienced professionals to analyze the situation in depth and in detail and improve the effectiveness of their decisions. Such systems help managers to make correct and effective, balanced management decisions in conditions of time scarcity, as well as in conditions of inferiority and uncertainty of information reflecting the problem situation. The organization of forecasting of financial stability is necessary first of all for linking the sources of income and the directions of using own funds.

Thus, the assessment of financial stability is not only part of the analysis of the financial condition, but also clarifies the problems of the status, liquidity, solvency, creditworthiness and profitability of the organization. In addition, the analysis of financial stability identifies existing shortcomings and allows you to determine how to eliminate them.

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**Գևորգ Մարտիրոսյան** Մագիստրոս, ՀՊՏՀ

# ԿԱԶՄԱԿԵՐՊՈՒԹՅԱՆ ՖԻՆԱՆՍԱԿԱՆ ԿԱՅՈՒՆՈՒԹՅԱՆ ԳՆԱՀԱՏՄԱՆ ՄԵԹՈԴԱԲԱՆՈՒԹՅՈՒՆԸ

**Բանալի բառեր** - ֆինանսական կայունության վերլուծություն, ցուցանիշներ, ձեռնարկության ֆինանսական վիճակ, ֆինանսական կայունության որոշման մեթոդիկա

Հոդվածում քննարկվում է կազմակերպության ֆինանսական կայունությունը վերլուծելու մեթոդաբանությունը։ Ինչպես և վճարունակության վերլուծության ժամանակ, այնպես էլ կազմակերպության ֆինանսական կայունության վերլուծության մեթոդները շատ են, բայց դրանք բոլորը, այսպես թե այնպես, հանգում են

ցուցանիշների երկու խմբերի գնահատման մեթոդաբանությանը՝ բացարձակ և հարաբերական։ Կազմակերպության ֆինանսական կայունության վերլուծության մեթոդիկան պետք է բաղկացած լինի ֆինանսական կայունության ցուցանիշների գնահատումից, ինչպես նաև, այդ գնահատման հիման վրա, կազմակերպության ֆինանսական կայունության տեսակից։

**Геворг Мартиросян** Магистрант, АГЭУ

# МЕТОДОЛОГИЯ ОЦЕНКИ ФИНАНСОВОЙ СТАБИЛЬНОСТИ ОРГАНИЗАЦИИ

**Ключевые слова** - анализ финансовой стабильности, показатели, финансовое положение предприятия, методика определения финансовой стабильности

В статье обсуждается методология анализа финансовой устойчивости организации. Как и при анализе платежеспособности, методов анализа финансовой устойчивости предприятия очень много, но все они, так или иначе, сводятся к методике оценки двух групп показателей: абсолютных и относительных. Сама методика анализа финансовой устойчивости предприятия должна состоять из оценки показателей финансовой устойчивости, а также определения на основе этой оценки вида финансовой устойчивости предприятия.

Ներկայացվել է՝ 25.02.2021 թ. Ընդունվել է տպագրության՝ 15.03.2021 թ.

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# ISSUES OF STATE DEBT EFFICIENCY ASSESSMENT IN THE RA

Abstract: In recent years, the state debt of the Republic of Armenia has increased significantly, which was not perceived unilaterally by the public. If the government correlates increasing state debt with ensuring the macroeconomic balance of the country, then theorists and the part of the population thinks, that state debt in Armenia is not used effectively - is just a financial burden for generations. The article discusses the approaches to assessing the effectiveness of public debt, and makes suggestions for their improvement.

**Keywords:** government debt, financial risks, debt adequacy, debt burden, borrowing efficiency

JEL classification: G38

**Research aim:** describe the range of positive and negative aspects of the external debt of the state; describe the ways of assessing the efficiency of the debt based on it.

**Research novelty:** proposals were submitted to assess the effectiveness of public debt in Armenia.

#### Introduction

The expediency of increasing public debt is not unequivocally accepted by theorists. Some of them think, that the state debt is not only a financial burden for future generations, but also incurs additional expenses in the budget in the process of its maintenance. Moreover, it is noted, that the growth of public debt hinders foreign investment, reduces the country's investment attractiveness. [1] However, at the same time, there is an opinion, that the prudent use of public debt can be a serious lever for the country's economic growth. In this regard, it is decided to what extent the country will take a state loan, in what directions it will use them, for how long the debts will be repaid. [2] Therefore, it is important to assess the effectiveness of public debt.

### Research results

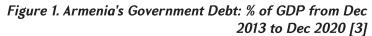
The growing debt burden raises borrowing costs, slowing the growth of the economy and national income, and it increases the risk of a fiscal crisis or a gradual decline in the value of Treasury securities. A high debt-to-GDP ratio is undesirable for a country, as a higher ratio indicates a higher risk of default. In a study conducted by the World Bank, a ratio that exceeds 77% for an extended period of time may result in an adverse impact on economic growth.

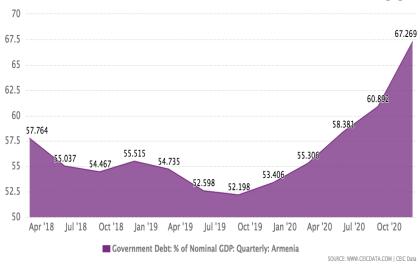
Armenia Government debt accounted for 67.3 % of the country's Nominal GDP in Dec 2020, compared with the ratio of 60.9 % in the previous quarter. Armenia government debt to GDP ratio data is updated quarterly, available from Dec 2013

to Dec 2020. The data reached an all-time high of 67.3 % in Dec 2020 and a record low of 38.5 % in Sep 2014. CEIC calculates quarterly Government Debt as % of Nominal GDP from quarterly Government Debt and rolling sum of quarterly Nominal GDP. The Ministry of Finance provides Government Debt in local currency. The National Statistical Service of the Republic of Armenia provides Nominal GDP in local currency. Government Debt covers Central Government and Central Bank Debt.

In the latest reports, Armenia National Government Debt reached 8.0 USD bn in Dec 2020. The country's Nominal GDP reached 3.8 USD bn in Dec 2020 [see Figure 1].

However, at present the state debt in Armenia is mainly formed not for economic development, but solves social problems, mainly serving to cover the budget deficit, so that macroeconomic shocks do not occur. In this sense, public debt can not be considered effective, as it does not directly contribute to economic growth. And experience shows, that even in developed countries, the public debt / GDP ratio is many times higher than the homonymous index of Armenia, and those countries are constantly increasing the amount of foreign debt, as it stimulates economic progress (see Table 1).



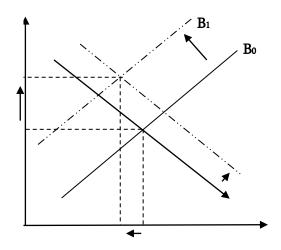


We present a graphic analysis of the efficiency of the public debt (see Figure 2), with budget deficit (E), and debt / GDP ratio (R) correlation. When the government reduces the government debt  $(D_0)$ , by reducing the budget deficit (E), the debt-to-GDP ratio (R) also decreases. It is desirable, that at the same time increase public spending on economic development  $(B_0)$ . And when the public debt increases from  $D_0$  to  $D_1$  position, it is desirable, that the development costs increase from  $B_0$  to  $B_1$ . In this case, the R and E values also change. And if the rate of decline of the R index becomes ahead of the rate of increase of the budget deficit, then the public debt is considered effective, and vice versa.

Table 1. Country List Government Debt to GDP (%) [4]

Country	2020	2019
Japan	237	238
Greece	177	181
Lebanon	172	174
Italy	156	135
Singapore	131	126

Figure 2. Correlation between budget deficiency and state debtto-GDP ratios



#### Conclusions

Thus, in the short run, it is appropriate for us to assess the effectiveness of public debt by comparing the rates of budget deficit and debt / GDP change. And if the growth rate of the budget deficit in the medium term does not exceed the rate of debt / GDP growth, then such a trend characterizes the effectiveness of public debt.

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**Արմեն Ճուղուրյան** տ.գ.դ., պրոֆեսոր, ՀՊՏՀ

**Վիգեն Բոդոյան** մագիստրատուրալի ուսանող, ՀՊՏՀ

## ՊԵՏԱԿԱՆ ՊԱՐՏՔԻ ԱՐԴՅՈՒՆԱՎԵՏՈՒԹՅԱՆ ԳՆԱՀԱՏՄԱՆ ՀԻՄՆԱԽՆԴԻՐՆԵՐԸ ՀՀ-ՈՒՄ

**Բանալի բառեր -** պետական պարտք, ֆինանսական ռիսկեր, պարտքի նպատակահարմարություն, պարտքային բեռ, փոխառության արդյունավետություն

Վերջին տարիներին ՀՀ պետական պարտքը էական աճ արձանագրեց, որը միակողմանի չընկալվեց հանրության կողմից։ Եթե կառավարությունը պետական պարտքի չափաբաժնի մեծացումը փոխկապակցում է երկրի մակրոտնտեսական հավասարակշռության ապահովման հետ, ապա տեսաբանները և հանրության մի մասը գտնում են, որ պետական պարտքը <<-ում արդյունավետ չի օգտագործվում և պարզապես ֆինանսական բեռ է սերունդների համար։ <ոդվածում քննարկվում են պետական պարտքի արդյունավետության գնահատման մոտեցումները և կատարվում առաջարկներ դրանց բարելավման ուղղությամբ։

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# ПРОБЛЕМЫ ОЦЕНКИ ЭФФЕКТИВНОСТИ ГОСУДАРСТВЕННОГО ДОЛГА

**Ключевые слова** - государственный долг, финансовые риски, целесообразность долга, долговая нагрузка, эффективность заимствования

В последние годы государственный долг РА значительно увеличился, что не было воспринято общественностью в одностороннем порядке. Если правительство соотносит увеличение доли государственного долга с обеспечением макроэкономического баланса страны, то теоретики и часть населения считают, что государственный долг в Армении используется неэффективно, а также, что это просто финансовое бремя для будущих поколений. В статье рассматриваются подходы к оценке эффективности государственного долга и вносятся предложения по их совершенствованию.

Ներկայացվել է՝ 01.03.2021 թ. Ընդունվել է ւրպագրության՝ 15.03.2021 թ. Հրատարակության է երաշխավորել «Հաշվապահության Ուսուցման Միջազգային Կենտրոն» կրթական հիմնադրամի Գիտական Խորհուրդը

Գիտական հանդեսի էլեկտրոնային տարբերակը տեղադրված է «Հաշվապահության Ուսուցման Միջազգային Կենտրոն» կրթական հիմնադրամի պաշտոնական կայքում՝ www.iatc.am:

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