

Analysis of approaches to assessing effectiveness of the system of internal control of the military organization as the element of Public Internal Financial Control of Ukraine

Análisis de los enfoques para evaluar la efectividad del sistema de control interno de la organización militar como elemento del Control Financiero Interno Público de Ucrania

MIRNENKO, Volodymyr I. 1; TKACH, Ivan M. 2; POTETIUIEVA, Maryna V. 3; MECHETENKO, Mykhaylo Yu. 4; TKACH, Mykola Ya. 5 & HOLOTA, Olena 6

Received: 06/09/2019 • Approved: 26/02/2020 • Published 12/03/2020

Contents

- 1. Introduction
- 2. Methodology
- 3. Results
- 4. Conclusions
- Bibliographic references

ABSTRACT:

The article may be interesting to the experts and managers of all levels that are engaged in arrangement and operation of the system of internal control in establishments of all forms of ownership. This article aims to analyze the existing foreign and domestic approaches to assessing effectiveness of the system of internal control the military organization. The analyzed approaches allowed determining three basic methods for assessing the effectiveness of the system of internal control.

Keywords: Public Internal Financial Control, system of internal control of the military organization, assessment of internal control system

RESUMEN:

El artículo puede ser interesante para los expertos y gerentes de todos los niveles que participan en el arreglo y operación del sistema de control interno en establecimientos de todas las formas de propiedad. Este artículo tiene como objetivo analizar los enfoques nacionales y extranjeros existentes para evaluar la efectividad del sistema de control interno de la organización militar. Los enfoques analizados permitieron determinar tres métodos básicos para evaluar la efectividad del sistema de control interno.

Palabras clave: Control Financiero Interno Público, sistema de control interno de la organización militar, evaluación del sistema de control interno

1. Introduction

Statement of the scientific task for the research envisages clear understanding of the internal control role in the general system of public control.

Military organizations are guided by the laws of Ukraine in their financial activities, as are any other organizations in Ukraine. The internal control system is one of the three elements of state of Public Internal Financial Control (hereinafter 'PIFC').

PIFC system of Ukraine is being reformed in accordance with the European model of PIFC, in particular, the Concept of Public Internal Financial Control "Orange Book" (Ministry of Finance of Ukraine. Guidelines on Public Internal Financial Control).

Up-to-date PIFC is a combination of three interrelated elements:

- Internal control (management reporting – financial management and control);
- Functionally independent internal audit;
- Central harmonization unit (Harmonization unit within the Ministry of Finance of Ukraine).

According to the Budget Code of Ukraine, budget managers, in the person of their managers, organize internal control and internal audit and ensure their implementation in their institutions and enterprises, institutions and organizations that are within the scope of management of such budget managers.

Internal control system - policies, rules and measures implemented by the head of the institution that ensure the functioning, interconnection and support of all elements of internal control and aimed at achieving the specified goals (mission), strategic and other goals, objectives, plans and requirements of the institution's activities.

The Ministry of Defense of Ukraine and the Armed Forces of Ukraine are accomplishing the task of the national significance, which aims to implement the system of internal control.

Thus, according to the decision of the National Security and Defense Council of Ukraine dated May 20, 2016 'On Strategic Defense Bulletin of Ukraine' approved by the Decree of the President of Ukraine No. 240/2016 (2016), the operative goal

was determined on establishment of an integrated system of risk management as a component of the defense planning system.

Implementation of internal control in the system of the Ministry of Defense of Ukraine (hereinafter 'MoD') and the Armed Forces of Ukraine (hereinafter 'AFU') is stipulated with a range of the nationwide measures to be taken in the framework of implementation of:

The Strategy for Reforming the System of Public Finance Management for 2017-2020 approved with the resolution of the Cabinet of Ministers of Ukraine No. 142-p (2017) dated February 8, 2017;

The Plan of Action approved with the resolution of the Cabinet of Ministers of Ukraine No. 415-p (2017) dated May 24, 2017.

The National Standards of Internal Audit (2011) envisage that the audit service assesses the establishment's performance in terms of its system of internal control during the performance audit.

Moreover, the Decree of the Cabinet of Ministers of Ukraine No. 1001 dated 28.09.2011 'Formation Procedure for the Structural Units of Internal Audit and Conductance of Audit in the Ministries, Other Central Bodies of Executive Power, Their Territorial Bodies and Budget-Financed Institutions Subordinated to the Ministries and Other Central Bodies of Executive Power' (2011) sets forth that an audit unit – pursuant to its roles and responsibilities – assesses performance of the system of internal control.

However, the methods for assessment of performance of the system of internal control (hereinafter SIC) in PIFC system in the context of the defined elements of internal control are not outlined in the relevant regulations.

So, today we can assert absence of a concrete methodology for assessment of internal control effectiveness taking into consideration the contemporary experience of study of the mentioned process not only in the system of the national defense, but nationwide.

1.1. Novelty of research

The novelty of research in this area is not in doubt, as evidenced by the relevant PIFC reforms both throughout the country and in the Defense Ministry and Armed Forces. It should also be added that, according to Government Decision No. 1001, audit units must evaluate the effectiveness of the SIC. But today, the methodology for assessing the effectiveness of the SIC in the internal audit system of Ukraine is absent. Therefore, to develop an assessment methodology, it is necessary to analyze the existing approaches to this assessment.

1.2. Setting objective

The objective of this article is to study and analyze the existing approaches to assessment of internal control effectiveness, to analyze and further substantiate the criteria and indicators that will be used for development of the relevant assessment method for MoD and AFU systems.

The above-mentioned objective is intended to be achieved through systemic analysis of the studied problems and determination of the components (elements) of the prospective model of the method for assessing the internal control effectiveness.

2. Methodology

To ensure achievement of the article's purpose, it is recommended to decompose the objective of the scientific research and perform individually:

Firstly, for understanding of the problem of assessing the effectiveness of the SIC, it is primarily necessary to define the term 'effectiveness';

Secondly, for the structured presentation of the material and conduction of the research, it is primarily recommended to review the existing foreign and domestic approaches to assessment of internal control effectiveness.

During the research, the following methods of scientific cognition: systemic approach, analysis, synthesis, and grouping, it were applied.

3. Results

3.1. Definition of the word combination 'effectiveness of internal control (system of internal control)'

According to Mochernyi S.V. (2002), effectiveness means the ability to bring effect, outcomes of the process, project etc., which are determined as the ratio of the effect, outcomes to the expenses that ensured such outcome.

Raizberg B.A., Lozovskiy L.Sh., Starodubtseva E.B. (2011) interpret effectiveness as 'the relative effect, resulting character of the process, project, which is determined as the ratio of expenses to the result obtained'.

Having defined the term 'effectiveness', we focus our attention to definition of the word combination 'effectiveness of internal control (system of internal control)', and the definitions are represented in the table below (Table 1).

3.2. Approaches to assessment of effectiveness of internal control

In the course of analysis of approaches to assessment of effectiveness of the system of internal control (hereinafter 'AESIC'), a large number of scientific researches was revealed in the field of concern, which enabled to conduct a substantial analysis and determine the opinions about AESIC amid both the domestic and foreign scientists, governmental and non-governmental organizations. The major opinions about AESIC are given below.

Tykhomyrov A., Horlo I.V., Ambarnova O. Yu. and Varkulevych T.V. (2017) give preference to mathematically calculated material effect while assessing effectiveness of internal control.

Thus, Tykhomyrov A. (2002) reckons that the effectiveness of internal control is determined based on the ratio of the corporate profit received as a result of the measures stipulated with internal control to the expenses related to SIC operation.

Horlo I.V. (2007) notes that the effectiveness of the system of internal control is determined with the cost-cutting indicators resulting from the operation of the control system, and offers to apply the mathematical models for assessing effectiveness of internal control. To implement the mentioned above, Horlo I.V. offers to estimate the following parameters: SIC maintenance quality, SIC maintenance costs, SIC introduction loss.

Rakhmankulov I.Sh., Tarasova T.M., Bosalko D.S., Maksymova H.V. and Karetnykov K.A., Dorosh N.I., Fesai M.O., Daudov S.A. and Kovalova O.N. apply the five-element approach to assessment of effectiveness of internal control.

Tarasova T.M. (2013) also assesses effectiveness of internal control by assessment of each SIC element tested in the appropriate manner.

Thus, in opinion of Bosalko D.S. (2011), the system of internal control may not be analyzed beyond the analysis of the corporate goals; if the goals are not clearly outlined, the system of internal control loses its effectiveness since it fails to control everything. He offers to perform AESIC broken down by all elements of internal control in the integrated model of The Committee of Sponsoring Organizations of the Treadway Commission (hereinafter 'COSO') – control medium, risk assessment, control procedures, information collection and analysis, monitoring. The Committee of Sponsoring Organizations of the Treadway Commission is a joint initiative of private sector organizations and dedicated to providing thoughtful leadership through the development of frameworks and recommendations for enterprise risk management, internal control and fraud prevention.

The five components of COSO – control environment, risk assessment, information and communication, monitoring activities, and existing control activities – are often referred to by the acronym (hereinafter 'C.R.I.M.E.')

Bosalko D.S. offers to perform AESIC by each element of internal control for its design, implementation and completion, which – in their turn – are assessed in terms of accuracy, evidentially and repeatability. In the course of assessment, each sign is given a certain value, which is determined using the method of expert evaluations. The author emphasizes that the ability to apply other methods is not studied currently and offers to consider the arithmetic mean assessment of its design, implementation and completion as the general assessment of effectiveness of internal control.

In study of audit of internal control effectiveness, Dorosh N.I., and Fesai M.O. (2018) determine assessment of adequacy and effectiveness of internal control by means of assessing the major business processes, which includes the following processes: understanding of the process, application of control tests, essential procedures, summarization of evidence and making conclusions. In their study of this issue, the authors are guided with the international standards on auditing (Audit Chamber of Ukraine, n./d.) and COSO integrated model.

In addition to the above, Maksymova H.V. and Karetnylov K.A. (2017) also support the opinions on SIC assessment broken down by the elements of internal control in the integrated model of COSO. In their research, the authors distinguish functional, operative, systemic and normative approaches to SIC assessment and note on absence of the unified approach to solution of the mentioned task.

In accordance to the opinion of Daudov S.D., Kovalov O.N. (2017), the system of internal control may be assessed through study of the previously analyzed, separate business process. All components of the system of internal control are subject to assessment (The Committee of Sponsoring Organizations of the Treadway Commission (COSO)).

As for the approach to assessment of effectiveness of internal control, Serebriakova T.Yu. (2013) and Yevtushevska O.A. (2015) note that the control effectiveness may be assessed with the system of indicators. The latter author stresses that the indicators signal of a failure to achieve the managerial decision being realized, from both qualitative and quantitative point of view. The quantitative indicators are determined with the relevant coefficients, which characterize the processes taking place in SIC. The qualitative characteristics may be determined through logical assessment of changes in the system of control, which is carried out through analytical summarization of the results of the control impacts from the position of mitigation of various corporate risks. The scientist states that it is not completely correct to think that effectiveness of internal control may be measured with the ratio of expenses related to the control measures to the received quantitative data from the control impact – effect.

Further, Filipiev D.Yu. (2016) in his research determines that the notion of 'effect' is currently not clearly defined, since it differs for each system and depends on numerous factors; and in relation to SIC, it is more efficient to focus on productivity rather than the resulting character. Productivity may be determined through: activity of the subjects of internal control, sufficiency of the control procedures, systematicity of control exercised. The author states that SIC should be viewed as a subsystem of the management function, therefore its effectiveness will depend on the internal and external factors that have an impact on the management system in general.

Bardash S.V., Osadcha T.S. (2011) state that the effectiveness is assessed through determination of qualitative properties of internal control and correlation between the internal control quality and the effect gained.

Bezverkhy K. (2011) and Kostirko RO (Kostirko RO, n.d.) In their studies of internal control and business activity, they focus on a comprehensive approach to AESIC. This approach consists of three steps:

generating information on the achievement of the objectives set at the individual stages of internal control;

definition of criteria for effectiveness of internal control;

Choice of method, development of test tasks, questionnaire.

Kostyrko R.O. notes on the necessity to focus primarily on the quantitative characteristics of AESIC criteria.

In opinion of Makarenko S.A. and Shapovalova A.A. (2018), assessment of effectiveness of internal control consists of two elements: assessment of effectiveness of the control procedure design and assessment of operating effectiveness of SIC.

Makarenko S.A. (2017) states that assessment of effectiveness of SIC operation requires ceaseless monitoring of the control procedures, which are performed for all elements of internal control.

In addition, Makarenko S.A. (2016) notes that, in the context of AESIC study, it is necessary to take into consideration not only the resulting character of SIC (number of identified deviations), but the efficiency as well, i.e. the degree of activity of the subjects of internal control, the required number of the control measures, the degree of control continuity.

Patramanska L.Yu. (2016) offers to use for AESIC the values of qualitative characteristics of the control system through application of the method of expert assessment to determine the score of control parameters.

Yakimova V.A. (2016) notes that the auditors, for the purposes of assessing the reliability and operation of SIC, may apply the relevant test procedures for the controls, which aim at qualitative and quantitative assessment of SIC.

It is necessary to note that, during AESIC, assessment of internal control was taken into consideration. Analysis of researches by Honchar V. (2016), Korol V.V. (2013) witnesses of the preference given to the methods of expert evaluations, and Korol V.V. offers to apply two methods for assessment of internal control effectiveness: qualitative (or expert assessment) and statistical (or quantitative assessment).

For illustrative purposes and clarity of the provided material, the relevant table was developed, which summarizes the opinions on SIC effectiveness and analyzes the evolution of approaches to AESIC formulation and definition. The mentioned is done for the purposes of understanding the tendency of changes in opinions (Table 2).

Moreover, it is necessary to add that the analysis of approaches to AESIC took into consideration the major examples of West European and American experience of regulation of the mentioned issue.

Thus, according to the Standards of Internal Control in the Federal Government ('Green Book') (2019) that are applied in the United States of America, it was established that the effective SIC ensures reasonable confidence that the business will achieve the determined goals, and each of five SIC elements is developed, implemented and operates in the general integrated way.

While AESIC, the design, implementation and effectiveness of SIC is analyzed. Moreover, compliance with the SIC principles is also subject to assessment. In the mentioned document, the SIC structure complies with the COSO integrated system, in particular, it has 5 elements and 17 principles. In case it is revealed that any of the components or principles does not operate properly, SIC may not be effective.

Furthermore, it is necessary to pay attention to the fact that in 2017 the COSO concept was revised to COSO 2017, which offers five elements of the integrated system of risk management: management and culture; strategy and goal setting; performance; monitoring and implementation of changes; information, communication and reporting, and 20 principles of effective operation of SIC (Table 3).

It should be added that the Committee on Sponsors of the Treadway Commission has developed its own approach to AESIC - Internal Control - Integrated Framework: Illustrative tools for evaluating the effectiveness of the internal control system (2013). This approach involves testing procedures to evaluate the performance of all available elements and principles of an integrated system.

Moreover, the Comprehensive Assessment Model (CAM) of AESIC (2019) was analyzed, which was proposed by the American Institute of Internal Auditors Research Foundation (IIARF). Approach to AESIC relies upon determination of effectiveness of two fields:

SIC architecture or construction (design) that encompass the internal characteristics of the process and establish the connection with other processes;

the level of actual productiveness or the system performance.

It is necessary to add that the approach proposed by IIARF is based on compatibility with the integrated model COSO.

The research by Kumuthinidevi S. (2016) also relies upon AESIC broken down by its five elements (C.R.I.M.E.) using the testing procedures through assessment of the established indicators and further designation of the relevant scores calculated using the method of expert assessment.

In accordance with the International Standard on Auditing 315 'Identification and Assessment of Risks of Material Misstatement through Understanding the Entity and Its Environment' (Audit Chamber of Ukraine, n./d.), effectiveness of SIC performance is assessed based on five elements of SIC and carried out using the analytical methods and testing procedures in order to determine accuracy of the financial (accounting) reporting, effectiveness and resulting character of operation, compliance.

Review of the Guidelines of the U.S. Department of Defense dated 30.05.2013 No. 5010.40 (2013), which is applied to all components of the U.S. Department of Defense (Office of the Secretary of Defense, military department, Joint Chiefs of Staff, Forces Etc.) established that the SIC gaps should be identified through testing, first of all. SIC dysfunction may occur when operation of SIC element fails to ensure achievement of the set goals by the management.

The approaches analyzed above allowed for distinguishing three major methods of AESIC: application of the testing procedures, use of simple mathematical models and analytical methods of assessment (audit). For the purposes of comparison of the mentioned methods, the relevant table is developed (Table 4).

In view of the table above and analysis of the approaches to AESIC and understanding of the SIC essence in general, it is possible to state that, in case of application of the mathematical models, it is unreasonable to use only 'effect/expenses' approach.

It is related to the fact that it is impossible to assess the positive effect of SIC operation in the quantitative (monetary) terms. The major result of positive arrangement and operation of SIC is achievement of the set goals by the entity, which will be achieved through prevention of ineffective managerial decisions, losses and shortcomings in the process of property and resources management.

4. Conclusions

Analyzing the dynamics of changes in opinions in the analyzed references, it is possible to make a conclusion on evolution of opinions on approach to AESIC. Within the period from 2002 to 2018, the majority of scientists arrive at the conclusion that AESIC is possible only after the complete SIC analysis, i.e. its components, using the qualitative and quantitative indicators. Thus, the integrated model COSO is commonly believed to be one of the widely applied SIC models in the world. This is primarily confirmed with the presence of the integrated model COSO in the nationwide documents, both domestic and foreign, that regulate the operation of entity and operation of internal control and internal audit.

It should be added that the performed analysis of approaches to AESIC based on the documents applied both in the U.S. governmental and defense organizations, the approaches proposed by the Committee of Sponsoring Organizations of the Treadway Commission, the Institute of Internal Auditors, international Standards on Auditing allows to declare on adopting good foreign experience by the national and neighboring scientists and interpretation of approaches applied by the mentioned organizations for study of SIC in operation of the business and public entities, institutions and organizations with the consideration of the national peculiarities.

It was found out that the modern methods of AESIC that are applied by the foreign and domestic scientists and managers broken down by all elements of internal control are targeted mostly at the final testing of the qualitative characteristics of

the system.

The performed analysis pointed to the necessity to take into consideration the quantitative characteristics of SIC due to their objectiveness and immediate efficiency of the control procedure.

The prospects of further research lie in determination of the key indicators of effectiveness of the system of internal control, which – coupled with the relevant mathematical apparatus applied – may be the starting point for development of a method for assessing the effectiveness of internal control.

Bibliographic references

- Ambarnova O. Yu., Varkulevych T.V. (2017). The system of internal control and its integral assessment – as a tool for better performance of insurance companies. *ANI: Economy and Management*, 2(19), 15-19.
- Bardash S.V., Osadcha T.S. (2011). Some aspects of qualitative and quantitative assessment of the effect and effectiveness of internal control. *Economy and state*, 11/201116, 16-19.
- Bezverkhyi K. (2011). Effectiveness or effect from implementation of internal control of indirect expenses in the industrial businesses. *Accounting and audit*, 2, 36-47
- Bosalko D.S. (2011). How to assess effectiveness of internal control. *Management in Russia and abroad*, 4 (2011) Retrieved July 12, 2019 from <https://dis.ru/library/688/33735/>
- Daudov S.D., Kovalov O.N. (2017). Assessment of the system of internal control through internal audit as a method for higher effectiveness of corporate business processes. *Newsletter of NGIEI*, 7 (74), 132-147.
- Dorosh N.I., Fesai M.O. (2018). Methodological aspects of auditor's assessment of corporate internal control. *Scientific gazette of the National Academy of Statistics, Accounting and Audit: collection of scientific works* 2018, 1-2, 68-76.
- Filipiev D.Yu. (2016). Effectiveness of internal control: issues and assessment criteria. *Audit News*, 9, 69-82.
- Internal Control – Integrated Framework. (2013). Retrieved July 18, 2019 from <https://www.coso.org/Pages/ic.aspx>
- Internal Control—Integrated Framework: Illustrative Tools for Assessing Effectiveness of the system of internal control. (2013). Retrieved July 18, 2019 from <https://www.coso.org/Pages/default.aspx>
- Guidelines of the U.S. Department of Defense No. 5010.40 dated May 30, 2013. (2013). Procedure for implementation of the program of internal control for the managers. Retrieved July 21, 2019 from https://comptroller.defense.gov/Portals/45/documents/micp_docs/Authoritative_Laws_and_Regulations/DoD_Instruction_5010-40.pdf
- Korol V.V. (2013). Approaches to assessment of effectiveness of internal control in production management and sale of sugar beet. *Effective economy*, 9. Retrieved July 21, 2019 from: http://nbuv.gov.ua/UJRN/efek_2013_9_48
- Kostyrko R.O. (n/d). Assessment of effectiveness of internal control in management of business expenditure. Retrieved July 14, 2019 from <http://stattionline.org.ua/ekonom/60/8028-ocinka-efektivnosti-vnutrishnogo-kontrolyu-v-upravlinni-vitratami-pidpriemstva.html>
- Maksimova V.F. (2005). Formalization of systemic study of internal economic control. *Development of accounting and control in the context of European integration*. Zhytomyr; Kramatorsk: Ruta, 2005, 339-349.
- Maksymova H.V. (2017). Assessment of the system of internal control. *Newsletter of Baikal State University*, 3, 372–379. doi: 10.17150/2500-2759.2017.27.(3).372-379.
- Makarenko S.A., Shapovalova A.A. (2018). Assessment of effectiveness of the system of internal control. *Business and design review*, 4 (12), 8.
- Makarenko S.A. (2017). Theoretical basis for establishment of the system of internal control in commercial entities. *Economy and business*, 1 (78), 1113-1117
- Makarenko S.A. (2016). The conceptual basis for implementation of internal control into the management system in small and medium businesses. *Innovative development of economy*, 6 (36), 132-137.
- Mochernyi S.V. (2002). Economic encyclopedia in 3 volumes. Publishing house: 'Akademia' center. Kyiv, 2002, 950 p.
- Ministry of Finance of Ukraine. (n./d.). Guidelines on Public Financial Internal Control. Retrieved July 20, 2019 from <https://www.minfin.gov.ua/> <https://www.minfin.gov.ua/news/view/metodychni-posibnyky-shchodo-dvfk?category=State+internal+financial+control&subcategory=metodychni-posibnyky-shchodo-dvfk>
- Order of the Ministry of Finance of Ukraine dated 04.10.2011 No. 1247 (2011). Standards of Internal Audit. Retrieved July 2, 2019 from <https://zakon.rada.gov.ua/laws/show/z1219-11>.
- Patramanska L. Yu. (2016). Improvement of approaches to assessment of effectiveness of internal control at e-commerce businesses. *Effective economy*, 10. Retrieved July 16, 2019 from http://nbuv.gov.ua/UJRN/efek_2016_10_48
- Rakhmankulov I. Sh. (2007). Testing of effectiveness of the system of internal control. *Gazette of Economy, Law and Sociology*, 1(2007), 37-42.
- Raizberg B.A., Lozovskiy L. Sh., Starodubtseva E.B. (2011). *Contemporary economic dictionary*, edition 6, Moscow. INFRA-M, 2011.
- Resolution of the National Security and Defense Council of Ukraine dated May 20, 2016 approved with the Decree of the President of Ukraine No.240/2016 dated June 6, 2016 No. 240/2016. (2016). *On Strategic Defense Bulletin of Ukraine*. Retrieved July 20, 2019 from <http://www.president.gov.ua/documents/2402016-20137>
- Resolution of the Cabinet of Ministers of Ukraine dated February 8, 2017 No. 142-p (2017). *On Approval of the Strategy for Reforming the Public Finance Management System for 2017-2020*. Retrieved July 20, 2019 from <https://zakon.rada.gov.ua/laws/show/142-2017-%D1%80>
- Resolution of the Cabinet of Ministers of Ukraine dated May 24, 2017 No. 415-p (2017). *On Approval of the Plan of Action to Implement the Strategy for Reforming the Public Finance Management System for 2017-2020*. Retrieved June 20, 2019 from <https://zakon.rada.gov.ua/laws/show/415-2017-%D1%80>
- Resolution of the Cabinet of Ministers of Ukraine dated 28.09.2011 No. 1001. (2011). *Formation Procedure for the Structural Units of Internal Audit and Conductance of Audit in the Ministries, Other Central Bodies of Executive Power, Their Territorial*

Bodies and Budget-Financed Institutions Subordinated to the Ministries and Other Central Bodies of Executive Power.
Retrieved June 2, 2019 from <http://zakon.rada.gov.ua/laws/show/1001-2011-n>

Serebriakova T. Yu. (2013). On assessment of effectiveness of internal control in the consumer society. Modern problems of science and education, 5. Retrieved May 2, 2019 from <https://www.science-education.ru/ru/article/view?id=10720>

S. Kumuthinidevi. A Study on Effectiveness of the Internal Control System in the Private Banks of Trincomalee. *International Journal of Scientific and Research Publications*, Volume 6, Issue 6, June 2016 600 ISSN 2250-3153.

Standards for Internal Control in the Federal Government. (2014). Retrieved July 8, 2019 from <https://www.gao.gov/products/GAO-14-704G>

Shevchuk V.O. (1998). Control of business systems in the society with the economy in transition (the issues of theory, organization, methodology). Monography. Kyiv: KDTEU. 1998, 371 p.

Honchar V. (2016). Formation of effective system of internal control at the farming businesses. *Institute of accounting, control and analysis under the conditions of globalization. International scientific journal*, 2, 136-142.

Horlo I.V. (2007). Application of mathematical models for assessment of effectiveness of the system of internal control. *Economic and mathematical simulation*, 4 (85), 57-61.

Tarasova T.M (2013). Assessment of the system of internal control in a haulage business. *Concept. Special edition* No. 04. Retrieved July 2, 2019 from <http://e-koncept.ru/2013/13536.htm>

The Constitution of Ukraine. (1996). Bulletin of the Parliament of Ukraine No. 30 (1996), article 141.

Tykhomyrov A.Yu. (2002). About the system of internal control in companies. *Money and Credit*, 3. 56-62.

The Chamber of Auditor of Ukraine (n/d). International Standards of Quality Control, Audit, Inspection, Other Assurance and Related Services. Edition of 2015. Part 1. (2015). Retrieved May 2, 2019 from <http://apu.com.ua/msa>

The Chamber of Auditors of Ukraine (n/d). Retrieved March 1, 2019 from <http://apu.com.ua/msa>

Vyhovska N.H. (2008). Economic control in Ukraine: theory, methodology, organization. Monography. Zhytomyr: ZhDTU, 2008, 532 p.

Yevtushevska O.A. (2015). Assessment of effectiveness of the system of internal control in the water transport business. *External trade: economy, finance, law. Scientific journal. Series: Economic sciences*, 3 (80). Retrieved May 4, 2019 from [http://zt.knteu.kiev.ua/files/2015/3\(80\)/uazt_2015_3_24.pdf](http://zt.knteu.kiev.ua/files/2015/3(80)/uazt_2015_3_24.pdf).

Yakimova V.A. (2016). Assessment of internal control of payroll under the conditions of automated informational system applied by the audited entity. *International accounting*, 22, 27-43.

www.theiia.org. Retrieved March 8, 2019 from <https://www.theiia.org/research>

www.coso.org. Retrieved May 2, 2019 from: <https://www.coso.org/Pages/ic.aspx>

1. Prof., Dr. of Sciences, Chief of the Department, Ivan Cherniakhovskyi National Defense University of Ukraine, Ukraine , Contact e-mail: aloishyn@gmail.com

2. Prof., Dr. of Sciences, Chief of the Center, Ivan Cherniakhovskyi National Defense University of Ukraine, Kyiv, Ukraine, Contact e-mail: tkachivan9@gmail.com

3. PhD, Chief of the Department, Public joint stock company "Ukrainian railway", Kyiv, Ukraine, Contact e-mail: marina11176@ukr.net

4. PhD student, Ivan Cherniakhovskyi National Defense University of Ukraine, Ukraine , Contact e-mail: zakonZSU@ukr.net

5. PhD, Chief of the Department, Ivan Cherniakhovskyi National Defense University of Ukraine, Ukraine , Contact e-mail: nyck1985@ukr.net

6. PhD, Associate Professor, Doctoral student of Department of economic and financial support, The National Defense University of Ukraine named Ivan Cherniakhovskyi. e-mail: golota_l@ukr.net

Revista ESPACIOS. ISSN 0798 1015
Vol. 41 (Nº 08) Year 2020

[Index]

[In case you find any errors on this site, please send e-mail to webmaster]

revistaESPACIOS.com



This work is under a Creative Commons Attribution-
NonCommercial 4.0 International License