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ENTERPRISE FINANCIAL SECURITY AS A COMPONENT OF THE ECONOMIC SECURITY OF THE STATE

Abstract

The article deals with problems of economic and financial security ensuring both in companies and state. The Corruption Perceptions Index has been analyzed as one of the most important indicators in this sphere. The following research methods have been used: generalizing theoretical knowledge, comparison method, method of analysis and synthesis, statistical analysis, factual analysis. The authors give their own definitions to such concepts as "security", "financial security of the enterprise", "economic security of the enterprise". There have been also systemized the threats to the economic security of the enterprise, as well as means of its strengthening. The rating of Ukraine according to the Corruption Perceptions Index has been identified. Also, the perspectives of future research have been defined.

Keywords

enterprise, security, economic and financial security,
corruption, bribery rating, factors for doing business,
cases of swindling

JEL Classification D73, O17

INTRODUCTION

Nowadays, in conditions of financial and economic crisis, Ukrainian enterprises operate in the circumstances of uncertain and unclear changes on the competitive market, as well as under imperfect financial and economic and organizational and legal mechanisms for ensuring financial security. The economic entities interact with numerous counteragents, which pursue their own interests and create obstacles and threats to external environment. The ways to ensure financial security of the enterprises should be formed and realized by solving the complex tasks, which are connected with difficulties to control and outlook modern environment in the system of the financial security of the enterprise, by comparing the changing dynamics, assessing the state, rapidly making the managerial decisions depending on the field of the activity.

To achieve a high level of financial security as the element of the state economic security is to counteract fraud and abuse of the official duties. To provide financial security of a separate company is to promote the strengthening of the economic security in the state in general, as well as to counteract different kinds of economic fraud.

According to ACFE data, approximately 5% of company income is lost as a result of fraud cases, in Ukraine, according to Kreston GCG, this figure makes up 5-15%.

According to the KPMG research data, Ukraine occupies the 6th place in the field of robbery and fraud operations committed by the company employees. The annual loss of the income because of illegal action

may constitute 7%. Almost 80 % of the losses in Ukrainian companies are the deliberate actions or those neglecting the official duties by a certain number of the employees. In the course of the research, it was found that 56% of the companies pointed to the fact that they don't have a legal system to counteract economic and financial fraud, 37% of the companies recognize the formal scheme to counteract the fraud.

About 80% of the losses are done by the staff of the company themselves. Only 20% of the computer hacking comes from outside. All in all, these problems may cost the company from 6 to 9% of the income.

1. LITERATURE REVIEW

The profound analysis of financial security as the element of the state economic security was made in different fields by the following scientists.

Kovbel and Yefremov (2016) defines the place of Ukraine according to illegal financial operations and fraud to have been committed by the employees, also, annual loss percentage because of neglecting the duties by certain employees. There have also been identified the number of companies, which do not have legal system to counteract economic and financial swindling.

Kulish et al. (2018) investigate the economic and legal factors of security at the macroeconomic level and assessed the corruption level in some countries of the world.

Sytnyk (2017) analyzes the socio-economic situation in Ukraine in order to assess the implementation process of economic part of the National Security Strategy of Ukraine.

Orlova (2011) defines security as all-sided threat analysis, estimation of their long-term influence and forming measures to enable the company to successfully operate under the unstable conditions of the internal and external environment.

Kartuzov (2012) defines the notion of security as such state of the company, which is able to keep the development path under the destructive conditions of the internal and external influences.

Lawrence (2013) gave a definition of "security" as prevention – this approach seeks to prevent threats from arising in the first place by addressing the underlying causes that generate them before they

emerge; security as control (protection) – this approach seeks to control, protect from, or eliminate a manifested threat; security as resilience when threats cannot be controlled or eliminated, security as resilience focuses on the ability of social systems to "bounce back" and recover from shocks. It concerns the flexibility and adaptability of societies, their rigidities, and how they can reduce their vulnerability to disruption and collapse.

Ackroyd and Marsden (2006) gave a definition of "security" as defining priorities for action and the distribution of resources increasingly demanding the environment.

Nusinova (2011) believes that to provide the proper level of financial security of the company, it is necessary to count the level of compensation of the loss of the value of the capital by means of paying the interest to the investors.

According to Biloshkurska's (2011) point of view, financial economic security is the entire system and she suggests estimating it on the basis of the integral index.

Kovalchuk and Bilomistna (2014) state that estimation of the financial security is a complex process, which includes not only the indicators to make the analysis, but also the range of the boundaries in the limits of which the certain indicator has to be.

Kopytko (2015) defines the notion "economic security of the company" as the complex of means in the system of economic activity aimed at adapting the subjects of the socio-economic relationships towards to changeable external environment, protecting the enterprise benefits, preventing internal and external threats and to using the possibilities with maximum results.

Alkema (2011) gives the definition of the notion of economic security, which reflects a lot of aspects of certain states and possibilities of the object under conditions of globalization.

Ostapiuk et al. (2017) investigate economic security in investment projects management, which is based on convergence of accounting mechanisms, such as budgeting, management, financial accounting etc.

Menggang Li (2013) states that the economic security of the company depends on the development of the country and is also a national issue caused by a change in economic relations.

Raczkowski and Schneider (2013) remark that the economic security of the enterprise is risk management, which can be the driver of strategic decisions, the reason for uncertainty in the organization, or it may just be embedded in the system activity of the organization.

Blank (2004) gives grounds to strengthen of the economic security of the company.

Bolbotenko I. V (2012) analyzes the current condition of audit activity entities protectability and examines approaches toward audit activity entities economic security system formation with consideration of aninstitutional factor.

Varnalii (2009) investigates the negative reasons, which affect economic security of the company.

Wei Bu (2015) investigates inner and outer threats of the economic security of the enterprise.

Liutak and Kravchuk (2013) remark that it is necessary to treat economic security according to separate elements of the whole system.

Kovbel (2017) investigated the corruption rate in Ukraine in different spheres.

2. METHODS

Method of generalization of theoretical knowledge is used in order to form an authors' approach to the definition of terms "security" and "economic securi-

ty of the company". Comparison method is utilized to counteract internal and external threats against economic security of the enterprise and to show favorable and unfavorable grounds for strengthening economic security of the enterprise. The methods of analysis and synthesis were also used in the article in order to investigate the cases of swindling at Ukrainian enterprises, to define the tendencies in development of global and Ukrainian economies, etc.

3. AIM

The aim of the article is to investigate theoretical aspects of such concepts as "security", "economic security of the enterprise" and "financial security of the enterprise", as well as to analyze the most important problems concerning corruption in Ukrainian companies.

4. RESULTS

Maintaining security, economic and financial security of the enterprise are its core functions in order to avoid the destructive processes.

Since the term "security" per se is poly-functional and polymorphic, it gives the possibility of its decomposition, in other words, selection of individual levels and areas. Economic security is the core function of the enterprise activity to avoid the destructive processes. One of the main parts of the economic security is financial security of the enterprise. Financial security of the enterprise plays the main role in ensuring its operation, increasing the activity.

The authors' approaches to the definition of terms "security", "financial security of the enterprise" and "economic security of the enterprise" are given in Table 1.

In the process of assessing the current level of economic and financial security of the enterprise, the following parameters should be analyzed:

- financial reports and indicators of the enterprise's performance – creditworthiness, financial independence, structure and usage of the capital and income;

Table 1. The authors' approaches to the definition of "security" and relevant terms

Source: Developed by the authors.

Term	Definition
1. Security	Such state of the object under the influences of internal and external factors, which makes it possible to prevent risks by means of identification, management, diversification and minding the rapid adaptation in the time space and avoiding hurting internal and external environment and follow legal way of business operations
2. Economic security of the enterprise	A complex of economic relations in order to provide constant well-balanced interests of the enterprise and the state considering internal and external factors of influence and time
3. Financial security of the enterprise	A constituent part of economic security of the enterprise, which defines the process of development of the enterprise on the basis of certain financial resources, sufficient structure of the capital, which is used by the company, compliance with the targets and missions on the basis of the level of the internal and external threats, certain factorial influence in the changeable current and future periods of development

- competitive position of the enterprise at the market – the market share, which is occupied by the enterprise;
- the level of new technologies implementation;
- financial and investment performance of the enterprise;
- the level of management, etc.

Favorable and unfavorable factors in order to strengthen the economic and financial security of the enterprise were investigated in the article (Table 2).

The intensification of the negative impact of the abovementioned factors on the economic and financial security of the enterprise leads to negative socio-economic consequences (the shortage in goods and/or services, worsening of the competitive environment, high inflation rate, growth of unemployment, weak social protection, the shortage of the taxes income to the budgets, the falling rate of democratization in society, etc.

Besides the theoretical aspect of the financial and economic security of the enterprise, it is very important to investigate the practical part of the issue. It is especially reasonable to do this under conditions of European integration of Ukraine. First of all, it is necessary to identify the place of Ukraine among the leading countries of the world according to the level of economic security of the enterprise. Important factor to provide financial security as a part of economic security is overcoming the corruption, bribery and swindling.

One of the most important indicators in this sphere is Corruption Perceptions Index. This Index, which ranks 180 countries and territories by their perceived levels of public sector corruption according to experts and businesspeople, uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean.

The results of year 2017 are shown in Table 3.

Last year, the index found that more than two-thirds of countries score below 50, with an average score of 43.

Table 2. Aspects of the economic and financial security strengthening of the enterprise

Source: Developed by the authors on the basis of Blank (2004).

Favorable	Unfavorable
<ul style="list-style-type: none"> • development of entrepreneurship in the society; • enlarging middle class and raising the democracy level in the society; • development programming and enterprise support by the all level state management bodies; • eliminating the administrative barriers on the ways of starting the entrepreneurship; • high level of the development of the infrastructure in maintaining and providing economic security of the enterprise; • the developed network of self-organized companies or ventures. 	<ul style="list-style-type: none"> • considerable negative tendencies in enterprise development and effective resource usage, low investment activity; • lack of effectiveness and declarative nature of the state and law regulation and support of the enterprise; • financial and resource limits of the local government bodies; • system problems of the development of the enterprise; • imperfectness of the competitive environment, cases of the monopoly at goods markets, "client" relationships and corruption between business entities; • imperfectness of the law protecting the entrepreneurship.

Table 3. Corruption Perceptions Index, 2017Source: https://www.transparency.org/news/feature/corruption_perceptions_index_2017#table.

2017 rank	Country	2017 score	2016 score	2015 score	2014 score	2013 score	2012 score	Region
1	New Zealand	89	90	91	91	91	90	Asia Pacific
2	Denmark	88	90	91	92	91	90	Europe and Central Asia
3	Finland	85	89	90	89	89	90	Europe and Central Asia
3	Norway	85	85	88	86	86	85	Europe and Central Asia
3	Switzerland	85	86	86	86	85	86	Europe and Central Asia
6	Singapore	84	84	85	84	86	87	Asia Pacific
6	Sweden	84	88	89	87	89	88	Europe and Central Asia
8	Canada	82	82	83	81	81	84	Americas
8	Luxembourg	82	81	85	82	80	80	Europe and Central Asia
8	Netherlands	82	83	84	83	83	84	Europe and Central Asia
8	United Kingdom	82	81	81	78	76	74	Europe and Central Asia
130	Ukraine	30	29	27	26	25	26	Europe and Central Asia
171	Equatorial Guinea	17	N/A	N/A	N/A	N/A	N/A	Sub Saharan Africa
171	Guinea-Bissau	17	16	17	19	19	25	Sub Saharan Africa
171	Korea, North	17	12	8	8	8	8	Asia Pacific
171	Libya	17	14	16	18	15	21	Middle East and North Africa
175	Sudan	16	14	12	11	11	13	Middle East and North Africa
175	Yemen	16	14	18	19	18	23	Middle East and North Africa
177	Afghanistan	15	15	11	12	8	8	Asia Pacific
178	Syria	14	13	18	20	17	26	Middle East and North Africa
179	South Sudan	12	11	15	15	14	N/A	Sub Saharan Africa
180	Somalia	9	10	8	8	8	8	Sub Saharan Africa

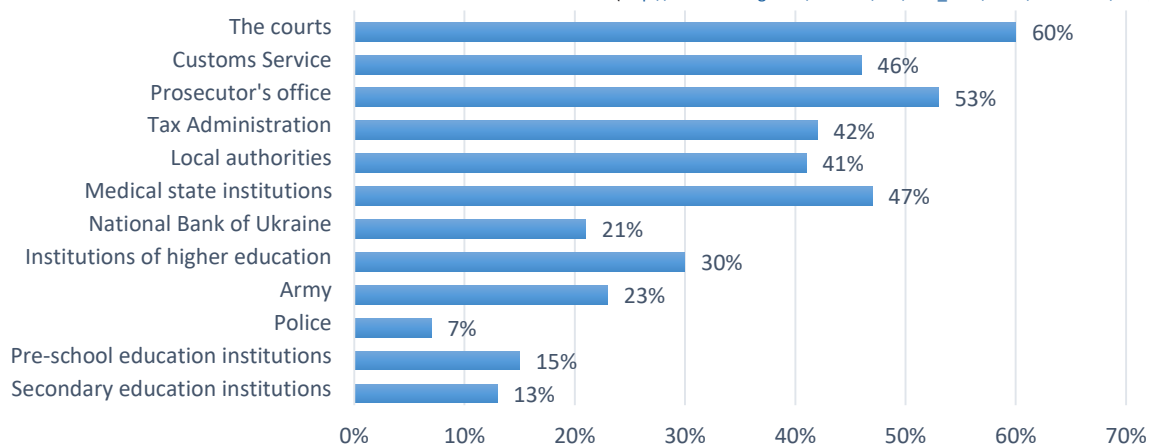
New Zealand and Denmark ranked highest with scores of 89 and 88, respectively. And Syria, South Sudan and Somalia ranked lowest with scores of 14, 12 and 9, respectively. The best performing region was Western Europe with an average score of 66. The worst performing regions are Sub-Saharan Africa (average score 32), Eastern Europe and Central Asia (average score 34).

According to the Table 3, Ukraine holds 130 rank from 180 countries with 30 points from 100. In accordance with monitoring data about reforms in

Ukraine, which were done by the TNS Company together with National Reform Council of Ukraine, the least corrupted structures in Ukraine are primary educational establishments (kindergartens and secondary schools), police, and the highest level of corruption is in the courts, customs, prosecutors' offices (Figure 1).

According to social surveys, more than 1/3 of the Ukrainian respondents faced the cases of corruption. More than half (54%) of the respondents realized that it would be almost im-

Source: Developed by the authors on the basis of State Financial Monitoring Service of Ukraine (2016) (http://www.sdfm.gov.ua/content/file/Site_docs/2016/20161013/zvit.pdf).

**Figure 1.** Corruption level in various spheres and institutions in Ukraine, 2016

Source: Developed by the authors on the basis of Kovbel, Yefremov (n.d.) (<http://docplayer.ru/55332096-Moshennichestvo-kompaniyah-v-ukrainskih-otchet-po-rezultatam-issledovaniya-130-kompaniy-v-ukraine-tekushchaya-situaciya-mehanizmy-protivodeystviya.html>).

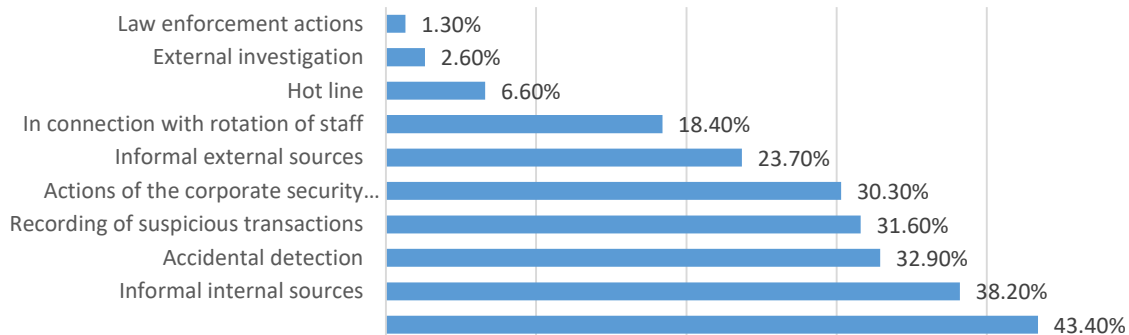


Figure 2. Cases of swindling disclosures at Ukrainian enterprises, 2016

possible to solve their matter without bribery, 26% claimed that officials demanded money. In comparison with the situation of 2016, the number of people who denied the cases of bribery grew up and they tried to solve their matters legally. Unfortunately, the respondents didn't notice the drastic changes in getting rid of corruption.

In Ukraine, there were investigated 130 companies for swindling. More than a half (60.5%) had the cases of swindling during last 3 years, whereas about 40% of companies claimed that they didn't have any cases of swindling. The highest level of swindling is traced in industrial sector, trade, food industry and agriculture.

Identifying the cases of swindling has some peculiarities:

- 1) the staff number – in the big companies, the facts of espionage are recorded more often. If the company had 100 employees, 25% cases of swindling were recorded. In companies with 500 employees, such cases grew up to 40%;
- 2) international, national or regional status. The cases of swindling prevail in the national companies. The 1/3 of the respondents stated the fact that such cases were not seen in the international companies, and 42% – in the regional companies.

According to Figure 2, it is seen that internal audit and non-official sources are the most frequent ways to trace swindling in the Ukrainian companies. Only 1/3 of the total cases of swindling were revealed quite by chance. The meth-

Source: Developed by the authors on the basis of Kovbel, Yefremov (n.d.) (<http://docplayer.ru/55332096-Moshennichestvo-kompaniyah-v-ukrainskih-otchet-po-rezultatam-issledovaniya-130-kompaniy-v-ukraine-tekushchaya-situaciya-mehanizmy-protivodeystviya.html>).



Figure 3. The factors promoting swindling at Ukrainian enterprises, 2016

ods of identifying fraud and swindling don't depend on certain peculiarities of the companies (the number of the personnel, international, national or regional status). The cases of swindling are more usual in industrial sector and trade. Non-official sources of information very often help to reveal illegal actions in agriculture, transport, logistics and technologies.

The factors promoting swindling are shown in Figure 7, according to which the smallest threat to the emergence of fraud is the absence of the

system to report the fraud (9.3%), and the biggest threat – the employee's unfairness (51.2%).

So, according to the authors' opinion, fraud in Ukrainian companies is almost impossible to ban, but it is possible to minimize it with the help of the procedure of forensic investigations. Also, it is necessary to implement preventive measures in the Ukrainian companies. This will promote economic and financial security of the enterprise and strengthen the economic security of the country as a whole.

CONCLUSION

The outcomes of the research allow the authors to find appropriate approaches to solve the scientific task of ensuring economic and financial security of the enterprise as a component of the financial security of the state.

The authors give their own approaches to such terms as "security", "economic security of the enterprise", "financial security of the enterprise". There have been systematized threats to economic and financial security of the enterprise, preconditions of its strengthening. Also, there has been investigated the rating of Ukraine according to the Corruption Perceptions Index. The authors presented the results according to the level of corruption in Ukraine, fraud operations, companies and other institutions prone to be corrupted and the factors promoting the corruption in the Ukrainian companies.

On the basis of Transparency International recommendations, the authors proposed the following methods to fight corruption in Ukraine:

1. Governments and business entities must do more to encourage free speech, independent media, political dissent and an open and engaged civil society.
2. Governments should promote and implement laws that focus on access to information. This access will help to enhance transparency and accountability of company's financial reports.
3. Governments and business entities should take advantage of the momentum generated by the United Nations Sustainable Development Goals (SDGs) to advocate and push for reforms at the national and global level.
4. Governments and businesses should proactively disclose relevant public interest information in open data formats, including disclosure of government budgets, company ownership, public procurement, etc.

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REFERENCES

1. Ackroyd, P., & Marsden, S. (2006). *Enhancing security culture – simple, effective approaches to making improvement*. Greenstreet Berman. Retrieved from https://www.icheme.org/communities/subject_groups/security%20and%20loss%20prevention/resources/hazards%20archive/~-/media/Documents/Subject%20Groups/Security_Loss_Prevention/Hazards%20Archive/XIX/XIX-Paper-32.pdf
2. Alkema, V. H. (n.d.). *Теоретико-методологічні засади розвитку системи економічної безпеки логістичних утворень [Teoretyko-metodolohichni zasady rozvytku systemy ekonomichnoi bezpeky lohistychnykh utvoreny]*. Retrieved from <http://ea.dgtu.donetsk.ua>
3. Biloshkurska, N. V. (2011). The resource component index formation of the economical organizational mechanism of the economical safety of the enterprise in Cherkassy Region, Ukraine. *Notes of Chernivtsi Trade and Economy University. Economical Sciences*, 4(44), 154-158.
4. Blank, I. A. (2004). *Управление финансовой безопасностью предприятия [Upravlenie finansovoi bezopasnostyu predriyatiya]* (784 p.). Kiev: Elga. Nika-Tsentr.
5. Volbotenko, I. V. (2012). Системоутворюючі чинники економічної безпеки суб'єктів аудиторської діяльності [Systemoutvoruiuchi chynnyky ekonomichnoi bezpeky subiektiv audytorskoï diialnosti]. *Vcheni zapysky Universytetu "KROK"*, 2(32), 170-180.
6. European Commission (2018, April). *Countries and regions*. Retrieved from <http://ec.europa.eu/trade/policy/countries-and-regions/countries/ukraine/>
7. Glavkom (2017). *Україна посіла перше місце за рівнем корупції – рейтинг Ernst&Young [Ukraina posila pershe mistse za rivnem koruptsii – reitynh Ernst&Young]*. Retrieved from <http://glavcom.ua/news/ukrajina-posila-pershe-misce-za-rivnem-korupcii-reyting-ernst-young-408349.html>
8. Kartuzov, Ye. P. (2012). Вплив ризиків і загроз на стан фінансової безпеки підприємств [Vplyv ryzykiv i zahroz na stan finansovoi bezpeky pidpriemstva]. *Aktualni problem ekonomiky*, 9(135), 115-124.
9. Kinakh, A. K., Krutov, V. V., Laptev, S. M. et al. (2009). *Концепція економічної безпеки антикризового управління економікою України. Науково-аналітична доповідь [Konseptsiia ekonomichnoi bezpeky antykrizovoho upravlinnia ekonomikoïu Ukrainy. Naukovo-analitychna dopovid]* (64 p.). Kyiv: "Dorado-Druk".
10. Корутко, М. І. (2015). Комплексне забезпечення економічної безпеки підприємств [Kompleksne zabezpechennia ekonomichnoi bezpeky pidpriemstv] (478 p.) (Doctoral dissertation). Kyiv.
11. Kovalchuk, A. V., Bilomistna, I. I. (2014). Estimation of the financial safety state on the basis of economy-mathematical modelling. *Science notes of Kherson State University*, 4, 28-32.
12. Kovbel, A., Yefremov, S. (n.d.). *Отчёт по результатам исследования 130 компаний в Украине [Otchet po rezul'tatam issledovaniya 130 kompaniy v Ukraine]*. Retrieved from <http://docplayer.ru/55332096-Moshennichestvo-kompaniyah-v-ukrainskih-otchet-po-rezultatam-issledovaniya-130-kompaniy-v-ukraine-tekushchaya-situaciya-mehanizmy-protivodeystviya.html>
13. Kulish, A., Petrusenko, M., Reznik, O., & Kiselyova, E. (2018). The relations unshadowing in business activities: the economic and legal factors of security at the macroeconomic level. *Problems and Perspectives in Management*, 16(1), 428-436. [https://doi.org/10.21511/ppm.16\(1\).2018.40](https://doi.org/10.21511/ppm.16(1).2018.40)
14. Lawrence, M. (2013). *Three approaches to security: prevention, protection and resilience*. Retrieved from <http://secgovcentre.org/2013/02/three-approaches-to-security-prevention-protection-and-resilience/>
15. Liutak, O., Kravchuk, O. (2013). *Economic security of enterprises in the context of national security of the state*. Retrieved from http://www.rocznikbezpieczenia.dsw.edu.pl/fileadmin/user_upload/wydawnictwo/RBM/RBM_artykuly/2013_3.pdf
16. Menggang, Li (2013). *Research on Industrial Security Theory* (442 p.). Springer Heidelberg. New York Dordrecht London.
17. Nusinova, O. V. (2011). Estimation of the financial safety of the enterprise on the basis of owners' interests. *Academic Review*, 2(35), 60-64.
18. Orlova, V. V. (2011). Ідентифікація загроз фінансовій безпеці підприємства [Identifikatsiia zahroz finansovii bezpetsi pidpriemstva]. *Naukovyi visnyk Natsionalnoho lisotekhnichnoho universytetu*, 21.13, 267-272.
19. Ostapiuk, N., Karmaza, O., Kurylo, M., & Timchenko, G. (2017). Economic security in investment projects management: convergence of accounting mechanisms. *Investment Management and Financial Innovations*, 14(3), 353-360. [https://doi.org/10.21511/imfi.14\(3-2\).2017.06](https://doi.org/10.21511/imfi.14(3-2).2017.06)
20. PrivatBank (n.d.). *Кадрова безпека [Kadrova bezpeka]*. Retrieved from <http://privatbank.ua/ua/business/srednemu-i-krupnomubiznesu/kadrovaja-bezopasnost/>
21. PwC (n.d.). *Forensic services – Investigations*. Retrieved from <https://www.pwc.co.uk/services/forensic-services/forensic-investigations.html>
22. Raczkowski, K., Schneider, F. (2013). *The economic Security of Business Transactions. Management in business* (448 p.). Oxford: Chartridge books.
23. State Financial Monitoring Service of Ukraine (2016). *Звіт про проведення національної оцінки ризиків за 2016 рік [Zvit pro provedennia natsionalnoi otsinky ryzykiv za 2016 rik]*. Retrieved from http://www.sdfm.gov.ua/content/file/Site_docs/2016/20161013/zvit.pdf

24. Sytnyk, H. (2017). Preliminary assessment of implementing the economic part of the National Security Strategy of Ukraine. *Problems and Perspectives in Management*, 15(4), 24-37. [https://doi.org/10.21511/ppm.15\(4\).2017.03](https://doi.org/10.21511/ppm.15(4).2017.03)
25. Transparency International Ukraine (n.d.). *Індекс сприйняття корупції у світі [Indeks spryiniattia koruptsii u sviti]*. Retrieved from <https://ti-ukraine.org/research/index-koruptsiyi-cpi-2016/>
26. Varnalii, Z. S. (Ed.) (2009). *Економічна безпека: навч. посіб. [Ekonomichna bezpeka: navch. posib.]* (647 p.). Kyiv: Znannia.
27. Wei Bu (2015). *Research on China Industrial Security Early Warning Based on BP Neural Network*. Retrieved from https://link.springer.com/chapter/10.1007/978-3-662-44085-8_28
28. World Economic Forum (n.d.). *Global Competitiveness Report 2017-2018*. Retrieved from <http://reports.weforum.org/global-competitiveness-index-2017-2018/infographics/>