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ANALYSIS OF THE HEDGE FUND INDUSTRY FOR THE PURPOSE OF IMPLEMENTATION IN THE FINANCIAL SYSTEM OF UKRAINE

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Ukraine's integration into the global environment helps to attract progressive investment products, mechanisms and technologies into domestic practice. The purpose of the article is to analyze the hedge fund industry at the present stage of operation and identify ways to implement them in the Ukrainian financial system. To achieve this goal, a set of generally accepted methods was used, in particular: analysis, synthesis, statistical methods of information collection, expert assessments, comparative analysis, system approach. The article provides an analytical overview of the hedge fund industry worldwide. The existing problems and successes of the industry are considered. the hedge fund industry under the jurisdiction of Ukraine is proposed. To this end, it is necessary to first take such steps as: investigation of the investment attractiveness of Ukraine, proper assessment of the stock market of Ukraine; analysis of the regulatory framework for regulating the activities of investment funds; study of the investment opportunities of potential individual and institutional investors of Ukraine; assessment of the psychological readiness of Ukrainian individual investors to invest their free funds; development of existing and adjustment or development of the necessary regulations for cooperation of institutional investors with alternative investment funds; study of the availability of specialists who have relevant experience and are able to work successfully in the hedge fund industry. The introduction of the alternative investment industry under the jurisdiction of Ukraine will increase Ukraine's economic potential and expand its investment opportunities, as it requires thorough training in various industries and also at the state level and dynamic activities during operation. The direction of further research is to develop a model of a hedge fund with Ukrainian investments under the jurisdictions of Ukraine on the basis of mathematical methods and the latest management technologies.

Keywords: hedge funds, investments, strategies, management, alternative investing.

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Formulation of the problem

Ukraine's integration into the global environment helps to attract progressive investment products, mechanisms and technologies into domestic practice. The most attractive modern investment product is hedge funds. This growing segment of the investment market is the most objective indicator of the development of the global financial system.

Hedge funds are constantly evolving and adapting to the changing environment, thus providing topics for further research. Some problems of hedge funds still remain out of the attention of researchers, in particular the peculiarity of their creation and functioning in national economies. Hedge funds are widely known to the global financial community, but in the Ukrainian financial market this specific class of alternative investment funds is not yet widespread. Thus, the study of the effectiveness of hedge funds in order to implement this type of alternative investment in Ukraine is a very important issue.

> *Analysis of recent research and publications* Hedge funds are the subject of research by many

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foreign scientists and analysts, including Wong, D. McCarthy, A. Halam, K. Hillpold., F. Smirnov [1–4], but foreign experts do not consider the problem introduction of alternative investment in the practice of the Ukrainian financial system. Domestic specialists are also engaged in the study of hedge funds: O. Vinichenko, M. Hrybkova, I. Shkura and others [5–7]. However, some issues of hedge fund development under the jurisdiction of Ukraine are not sufficiently covered, but are quite relevant and require careful study.

Formulation of the purpose of the article

The purpose of the article is to analyze the hedge fund industry at the present stage of operation and identify ways to implement them in the Ukrainian financial system.

Presentation of the main research material

In order to understand the need to introduce the hedge fund industry in modern Ukraine, it is necessary to make a brief digression into the history of hedge funds and analyze the current state of the industry worldwide.

In the modern financial literature there is still a controversial question about the primacy of the invention of the system that led to the emergence of hedge funds. The essence of this system is to simultaneously carry out transactions of purchase and sale of assets using various financial instruments.

According to some authors, the author of the 1949 stock market Bible («Smart Investor»), Benjamin Graham, was the first to develop and implement the system, which is the classic basis for the successful operation of hedge funds. He was the first to invent and test such a system in the 1920s. But at that time it did not receive the support of contemporaries, did not become widespread in the financial world and, as a consequence, did not lead to such a large-scale phenomenon as hedge funds [8-9].

According to other authors, the first invention of the system belongs to the American sociologist Alfred Winslow Jones, who not only invented the system, but also on its basis launched in 1949 the first hedge fund A. W. Jones & Co. with a start-up capital of 100 thousand dollars. USA. The investors of A. W. Jones & Co. were A. W. Jones and several of his friends [8–9].

The idea to invest came to him while writing a financial article for an American publishing house. The concept was to buy up stocks that were undervalued and sell overvalued stocks. AW Jones pointed out that there are two types of risk in the stock market: poor stock selection and a general market crash. A. W. Jones combined several investment methods (positions «long» and «short» and leverage) [8–9].

Short and leverage positions have always been

risky. At the same time using the positions «long» (for undervalued securities), which bring a profit in case of market growth, and «short» (for overvalued securities), which bring a profit in case of market decline, A. W. Jones reduced the risks. Under such conditions, his fund became hedged, hence the name hedge fund. And the used strategy of investment portfolio formation was called «Equity long-short» (combination of long and short positions on shares) [8–9].

The experience of AV Jones in using his innovative idea was very successful. During the period from 1960 to 1965 A.W. Jones & Co. grew by 325%. For ten years the profit of his fund made 670%. For the management of the fund and the rights of its founder A.U. Jones took commissions of 20% of profits, the rest was distributed among investors [8–9].

Successful experience of A.U. Jones pushed others to create hedge funds, and in 1968 there were already 140 companies engaged in this type of activity.

Given that most attractive, in terms of profitability, commodities on the stock exchange are unattainable for most investors, and prices for such commodities are quite high, transactions with such assets are possible only in the case of pooling capital through funds.

Today, investing in successful hedge funds is one of the most profitable types of investing. Statistics show that the profits of hedge funds are much higher than the profits of well-known companies that manufacture a variety of goods and provide a variety of services. This is due to the fact that hedge funds do not have such high costs as companies that manufacture products or provide services.

Thus, the largest, as of early 2021, the hedge fund Bridgewater Associates, based in Connecticut (USA), since its inception has earned its investors \$ 46.5 billion. USA (Fig. 1). The number of staff is currently 1,700 people [10-12].

The D. Soros Quantum Foundation also earned \$ 43.9 billion for its investors. USA with a staff of up to 300 people (Fig. 1). This is much more than earned by the world-famous company Apple, which employs tens of thousands of people [8;11–12].

According to Hedge Fund Research for the period from 1990 to 2016, the average return of hedge funds was 10.47%, and the return of the S&P 500 (SPX) for the same period was - 8.46% [13].

The study of the Credit Suisse – LAB and HF Indices divisions presents the disappointing dynamics of the Credit Suisse AllHedge Index. During the period from 2008 to 2018, the hedge fund industry lagged behind the US stock market (S & P500) by 6.4 times, from the global (MSCI World) by 2.8 times. Credit Suisse AllHedge Index on August 01, 2018, was equal to 35.



Fig. 1. Net gains since start, billion dollars USA [11-12]



Fig. 2. Hedge Fund Aggregete Indexes and S&P 500 [17-18]

According to Eurekahedge, the average growth rate of hedge funds in 2019 was 6.96%, which is less than the average of the stock market as a whole. Positions based on the use of strategy (Long-Short Equity) grew the most – simultaneous use of the "long" position and the "short" position in shares – 8.64%. Over the same period, the Dow Jones Industrial Average grew by 22.3%, the S & P500 by 28.9%, and the Nasdaq Composite by 35.2%. In 2019, investors took 131.8 billion from hedge funds US dollars, of which 59 billion dollars. The United States withdrew North American investors and, conversely, invested 660.8 billion dollars in traditional funds. USA (98% in passive investment instruments) [14].

Despite the global stock market crash in 2020 due to the coronavirus pandemic, the overall growth in hedge fund assets is driven by technology, currency and health strategies. In the first half of 2020, almost half of hedge funds showed positive dynamics. Thus, the upper quartile of funds – earned + 14.8%, the

lower - lost - 19.7%, the Upper decile - yield + 25%, the lower decile - yield - 27.9% [15].

In accordance with existing strategies, we present the dynamics of hedge funds for the first half of 2020 [15]:

- Equity Hedge (EH) - the best results in the field of hedge funds (HFRI Equity Hedge (Total) Index ended the second quarter of 2020 with a yield of +13.6%, and June +3%;

- Event-Driven (ED) - good indicators HFRI Equity Hedge (Total) Index in June yield +1.9%;

- strategy of arbitrage of relative value of securities with fixed yield (HFRI Relative Value Index Index in June yield +1.8%, due to corporate loans and traditional risks of convertible arbitrage);

- Global macro - ambiguous dynamics (HFRI Macro (Total) Index in June is -0.5%, yield for the first half of the year -1.1%, due to currency and fundamental discretionary strategies, the losses of HUNDRED and commodity strategies were equalized).

According to the information provided by Hedge Fund Research, the return on hedge funds in 2020 was in average 11.6%. This is 16% less than the growth of the S&P 500 index over the same period [16].

According to the Nasdaq Platform (Figure 2), as of March 2021, the aggregate Hedge Fund was 0.83, which is five times lower than the S&P 500. The average performance of hedge funds is the overall performance, but were like very successful hedges - funds, and those who went bankrupt.

According to Hedge Fund Research, the average life expectancy of a hedge fund does not exceed 4 years. From 4 to 10% of hedge funds are closed annually. In order to be successful, it is necessary to show a yield of 10 to 30% [9].

According to LCH Deputy Chairman Rick Sopher, 2020 was one of the best years for those hedge funds whose managers were able to navigate and profit from the sharp rise in stock prices. That became possible due to the well-thought-out economic policy of the central banks of developed countries to support the economy [16].

Despite the fact that the total profit of hedge funds in 2019 (\$ 178 billion) was higher than in 2020 (\$ 127 billion), the profit of the 20 most successful hedge funds in the world in 2020 (\$ 63.5 billion) (Fig. 3) was greater than in 2019 (59.3 billion dollars) [16].

According to 2019 data, according to the HFRX MENA Index, since 2004 there has been a trend of steady growth of assets in hedge funds, whose activities are aimed at the Middle East and Africa. In turn, the HFRX North America Indices are almost stable [19].

The HFRX MENA Index is used to reflect the performance of hedge funds in the Middle East and Africa. The regional investment focus is designed to reflect the main direction of the strategic action of the hedge fund in various market cycles, regardless of the jurisdiction of the hedge fund and its managers. Such hedge funds typically own more than 50% of the shares in the Middle East and Africa.

HFRX North America indices are used to reflect the performance of hedge funds in the countries of the North American region. The regional investment focus is designed to reflect the main direction of the strategic action of the hedge fund in various market cycles, regardless of the jurisdiction of the hedge fund and its managers. Such hedge funds typically own more than 50% of the shares in the North American regions.

Today, there are more than 15,000 hedge funds in the world. According to HFR, the assets of hedge funds are about 4 trillion dollars (Table 1) [20].

We present the 20 largest hedge funds in the world as of the end of the 3rd quarter of 2020 and the size of their assets (Table 2).

In 2021, five industry representatives became the best hedge funds. Let's look at them in more

Table 1

Hedge fund assets under management

	Amount of assets by quarters,					
Year	billion dollars USA					
	1	2	3	4		
2006	1 409.2	1 464.4	1 589.5	1 695.8		
2007	1 870.3	2 084.7	2 214.1	2 295.5		
2008	2 263.1	2 348.8	1 963.7	1 499.8		
2009	1 164.2	1 189.4	1 303.7	1 367.4		
2010	1 341.3	1 292.3	1 354.6	1 402.7		
2011	1 510.4	1 580.5	1 399.5	1 408.4		
2012	1 508.0	1 467.8	1 508.6	1 481.9		
2013	1 606.7	1 582.9	1 760.0	1 883.8		
2014	2 023.1	2 067.0	2 067.0	2 024.8		
2015	2 099.1	2 263.0	2 244.7	2 219.2		
2016	2 322.6	2 371.2	2 412.6	2 367.5		
2017	2 451.8	2 594.3	2 780.9	2 905.7		
2018	2 993.7	3 014.3	3 064.9	2 878.1		
2019	3 011.3	3 150.7	3 054.9	3 194.0		
2020	2 857.1	3 112.6	3 379.6	3 826.3		

Compiled by the author according to the data [20]



Fig. 3. Top hedge funds earn \$63.5 billion in 2020 [11]

Hedge fund	Country	Year of foundation	Assets in the amount of billion US dollars		
rredge fund			2019	2 quarter 2020	3 quarter 2020
Bridgewater Associates	USA	1975	132.0	98.92	149.9
Millennium Management	USA	1989	40.0	43.91	33.3
Elliott Management	USA	1977	37.7	42.0	28.8
Och-Ziff Capital Management	USA	1994			42.4
D.E. Shaw & Co.	USA	1988		34.26	26.0
Citadel Advisors	USA	1990	32.24	34.34	24.0
Viking Global Investors	USA	1999		19.95	29.0
Baupost Group	USA	1982		29.10	29.2
AQR Capital Management	USA	1998	60.8	32.10	84.1
Man Group	UK	1983	62.0	62.3	52.9
Standard Life Investments	UK	2006			37.6
Winton Capital Management Ltd.	UK	1997			34.9
Renaissance Technologies	USA	1982	68.0	70.0	34.7
Bracebridge Capital	USA	1994			21.8
York Capital Management	USA	1991			22.0
Davidson Kempner Capital Management	USA	1990	30.8	31.85	25.4
Marshall Wace	UK	1997		27.8	26.0
Adage Capital Management	USA	2001			27.5
Two Sigma Investments	USA	2001	42.9	38.84	27.6
BlackRock Alternative Investors	USA	2005	32.9	39.91	28.6

The largest hedge funds in the world year 2019-2020

Compiled by the author according to the data [21; 22]

detail.

Renaissance Technologies is a quantitative trading company that uses sophisticated mathematical strategies to analyze the market and execute transactions. In February 2020, it experienced not the best of times, when its assets fell by 7%. Throughout 2020, its public funds are gradually being restored thanks to Medallion's secret strategy, which has been bringing the fund incredible benefits for many years. Thus, since 1988, Renaissance Medallion has an average annual return of 66%, and after taxes -39% [21;23].

Bridgewater Associates, the world's largest fund, began as an investment adviser. Subsequently, there was an expansion of activities and, as a consequence, independent institutional investment. Today, Bridgewater Associates uses the Global macro strategy. The management style of the global macro focuses on economic trends (inflation, exchange rates, GDP). The fund's investors include pension, university, charitable and sovereign wealth funds, and government and central banks around the world. At the end of 2019, the largest fund Bridgewater Associates faced great difficulties. Its' assets amounted to 160 billion dollars USA. In four months in 2020, its assets decreased by 18%, and flagship funds in June 2020 fell by 14% [21;23]. Pershing Square Capital Management - a highly concentrated fund with seven shares – one of the largest hedge funds in the history of which were both ups and good profits (2004-2014), falls – losses of \$ 4 billion USA (2015-2018), and rebranding. In 2020, the fund's return was 70.2%, which is the best index in the history of the hedge fund [21;23].

Jana Partners, like most large hedge funds, has a family of funds. The hedge fund is managed by Barry S. Rosenstein, who is one of the best experts in the strategies used by this hedge fund. The hedge fund was founded in 2001 and by 2019 its return was 17.5% per annum [21;23].

Tiger Global Management is one of the best hedge funds in the world, founded in 1980 with a start-up capital of only \$ 8 million. And already in 1990 the assets of the hedge fund amounted to 22 billion dollars USA. For the period from 2016 to 2019, according to the chosen strategy, the hedge fund was the best among large hedge funds with a yield of 22.4% per annum. In 2020, Tiger Global received the largest profit among hedge funds of \$ 10.4 billion. USA [23].

Hedge funds such as Citadel, Man Group, AQR Capital are also successful.

The Chicago hedge fund Citadel was recognized as the best fund of 2019 at the Institutional Investor Awards. Citadel deals with stocks, fixed income instruments, commodity loans and quantitative

Table 2

strategies. Due to the coronavirus epidemic, in March 2020 Citadel began to form a new fund and opened an emergency trading platform. This approach has led to an increase in the popularity and profitability of the fund, which made 40% of all retail sales on US stock exchanges [21;23].

Man Group is the largest public hedge fund in the world and the largest hedge fund in Europe with its headquarters in London and branches in New York, Boston, Hong Kong, Tokyo, Sydney and Switzerland [21;23].

AQR Capital, Greenwich, Connecticut, uses quantitative analysis and computer modeling to make effective investment decisions. It has 1,000 employees in Greenwich, Chicago, Boston, Los Angeles, London, Tokyo, Hong Kong, and Frankfurt [21;23].

Most of all large hedge funds are located in the United States, namely in New York or its environs. But the hedge fund industry is evolving in Europe and Asia, attracting more and more investors and expanding assets (Figure 4).

Among hedge fund managers, the majority are



Fig. 4. Hedge fund assets under management in selected countries worldwide as of November 2019(in billion U.S. dollars) [24]

representatives of the United States (57.31%). 2.5 times less hedge fund managers are from Europe (22.94%). Slightly less managers compared to Europe (17.22%) are from the Caribbean. Representatives of other countries among hedge fund managers are 2.53% [25].

Table 3

Table 4

Manager	Position in Forbes 400	Financial state, 2019 /2020	Hedge fund	
James Simon	23	\$21.6 billion /\$23.5 billion	Renaissance Technologies (average return 66 %)	
Ray Dalio	29	\$18.7 billion /\$16.9 billion	Bridgewater Associates	
Kenneth Griffin	34	\$12.7 billion /\$15 billion	Citadel	
Steve Cohen	36	\$13.6 billion /\$14.5 billion	Point72 Asset Management	
Carl Icahn	39	\$17.6 billion /\$14 billion	Icahn Capital Management	
David Tepper	41	\$12 billion /\$13 billion	Appaloosa Management (average return 66 %)	
George Soros	56	\$8.6 billion /\$8.6 billion	Quantum	
Israel Englander	74	\$6.6 billion /\$7.2 billion	Millennium Management	
Chase Coleman	85	\$4.5 billion /\$6.9 billion	Tiger Global	
John Overdeck (mathematician)	95	\$6.1 billion /\$6.5 billion	Two Sigma Investments	
David Siegel	95	\$6.1 billion /\$6.5 billion	Two Sigma Investments	

The richest managers of American hedge funds according to Forbes

Compiled by the author according to the data [26]

The most successful hedge fund managers in 2020

Hedge fund Reward Flagship Fund Return No Managers Israel Englander $+26\overline{\%}$ \$3.8 billion 1 Millennium Management 2 James Simon \$2.6 billion +76% Renaissance Technologies 3 Chase Coleman Tiger Global Management \$2.5 billion +48%4 Kenneth Griffin Citadel \$1.8 billion +24% 5 Steve Cohen Point72 Asset Management \$1.7 billion +16% 5 Appaloosa Management David Tepper \$1.7 billion +13% 7 Philippe Laffont Coatue Management \$1.6 billion +65%8 Andreas Halvorsen Viking Global Investors \$1.5 billion +27% 8 Scott Shleifer Tiger Global Management \$1.5 billion +65%10 Bill Ackman Pershing Square Capital Management \$1.5 billion +70%

Compiled by the author according to the data [27]

Many hedge fund managers have earned their fortunes directly from hedge funds. Among American managers, according to Forbes, 25 are in the rank of the richest Americans (Table 3). As of the beginning of the second half of 2020, their total wealth is \$ 185 billion. USA.

Despite the fact that 2020 was quite problematic for business, some hedge fund managers not only earned large profits for their investors, but also thanks to these profits, received a decent reward (Table 4).

The success of hedge funds depends primarily on the talent of managers, and secondly on the chosen strategy. Thus, as of March 2021, the most successful strategies were Alternative Risk Premia, Market Neutral Equity, Long / Short Equity. But it is a dynamic process that depends on environmental conditions. Thus, in 2017 and 2018, the Alternative Risk Premia strategy was not the most successful and generally not successful at all. Also the Quantitative Discretional Equity strategy, which showed a fairly high level of profitability in 2017 and 2019, in 2020 and 2021 is no longer successful. But these are average indexes (Table 5).

The hedge fund industry is constantly developing. According to experts, there are 10 main trends in 2021 (Table 6).

The hedge fund industry is a very successful and risky invention of today. Yes, making alternative investments is possible to both get rich and lose everything that was invested. This is exactly the type of business that should be researched and developed in the conditions of national economies, in particular the Ukrainian one. In order to do this it is necessary to fulfill certain conditions, i.e. the first steps to the introduction of this alternative investment product.

In order to implement and expand the hedge

fund industry in Ukraine, it is necessary to simultaneously perform several analytical steps in correspondence with each other and the requirements of the hedge fund industry. Such analytical steps are carried out continuously, but separately, independently of each other, without reference to the hedge fund industry, which in this case is a necessary condition.

First, in order to assess the possibility of investing directly in the country and identify attractive areas of investment, investigate the investment attractiveness of Ukraine. That is, to determine how interesting Ukrainian assets can be for investments by hedge funds and what needs to be done to increase their investment attractiveness.

Secondly, to give a proper assessment of the state of the stock market of Ukraine as an element that provides the basis for the functioning of hedge funds. This will determine which strategies can be used by hedge funds in Ukraine and what needs to be done to expand the range of strategies that can be used in Ukraine.

Third, to analyze the regulatory framework for regulating the activities of investment funds, in particular hedge funds, in Ukraine in order to identify gaps in legislation and bring their principles to the world level. This will eliminate inconsistencies and contradictory principles in various regulations and develop principles that are not enough for the formation and development of the hedge fund industry.

Fourth, to study the investment opportunities of potential individual and institutional investors of Ukraine in order to determine the size of a hedge fund and the minimum amount (threshold) of membership in this hedge fund.

Table 5

		-				
Strategy	March	YTD 2021	2020	2019	2018	2017
Alternative Risk Premia	3.02%	3.52%	-10.93%	0.78%		
Market Neutral Equity	1.75%	4.37%	2.61%	2.16%	-3.26%	3.60%
Long/Short Equity	1.5%	7.36%	15.27%	14.06%	-6.97%	12.10%
Distressed	1.33%	8.28%	7.35%	2.91%	-0.32%	6.63%
Multi-Strategy	0.92%	4.10%	8.39%	9.92%	-3.26%	6.68%
Event Driven	0.84%	6.11%	9.51%	6.03%	-2.00%	7.42%
Event Driven-Activist	0.8%	8.57%	17.30%	17.19%	-10.29%	10.89%
Managed Futures	0.64%	3.8%	5.89%	7.59%	-6.08%	2.73%
Insurance-Linked	0.52%	0.12%	2.45%	3.75%		
Credit Long/Short	0.33%	2.46%	4.55%	6.11%		
Macro	-0.03%	1.15%	10.42%	6.22%	-2.92%	4.09%
Convertible Arbitrage	-0.38%	2.61%	15.14%	8.82%	-2.25%	5.50%
Origination & Financing	-2.55%	3.48%	21.78%	6.77%%	4.92%	7.35%
Discretional Credit	1.00%	4.37%	3.12%	6.02%	0.72%	5.31%
Relative Value Credit				6.30%	-0.91%	5.45%
Quantitative Discretional Equity				8.39%	-4.61%	10.45%

Primary Strategy

Compiled by the author according to the data [17;18].

Table 6

Trends in hedge fund industry in 2021

Trends	Characteristics			
Historical maximum inflow of	Increase of hedge fund assets to historical maximum. Distinctive feature			
funds into the industry	of this trend is the growth due to funds inflow into the industry and not			
	due to hedge funds activities, like it was before.			
Rising demand for services of the search of managers'	Expectations of the biggest demand for hedge fund managers in recent years. This is due to positive trends in the increase in the value of hedge fund assets, rising demand, redistribution of funds, increase in managers' changes in and, as a result, their active search.			
Reviving the popularity of strategy «Equity long-short»	In recent years, most investors have lost confidence in the "Long-short Equity" strategy due to the similarity of average income in accordance with this strategy with the results of the S&P 500. Today, the demand for managers of "Equity long-short" is restored and a high level of profitability is being expected.			
Focus on social investment	Changing the type of thinking of hedge fund managers towards social investment. Focus of hedge funds on the principles of social investment (for example, not to invest in alcoholic and tobacco companies, but to invest in companies whose activities are aimed at renewable energy sources).			
Reducing differences between alternative and traditional investment strategies	Recently, the convergence of strategies of traditional investment funds and hedge funds has been carried out. But funds remain different in accordance with their stock structures.			
Reward 1-15 becomes the norm	The classic reward of the management company is 2-20, but in recent years it is no longer relevant. Today, institutional investors pay reward under the formula 1-15. Most managers compromise with institutional investors in terms of size and frequency of reward.			
Increasing the inflow of assets to small and medium-sized companies	The decrease in face-to-face meetings led to an outflow of funds from small and			
Increasing demand for virtual meetings	During the epidemic, the effectiveness of virtual meetings was initiated and proved. This approach will allow using virtual meetings in the future in order to gain access to investors and obtain primary capital. Such a trend is especially interesting for small and medium-sized funds that are not located in financial centers.			
Stimulating alternative investment by healthcare organizations	The medical sector is separated into an independent investment segment. The development of technologies, the accumulation of a large number of assets allowed healthcare enterprises to try their power, and not unsuccessfully, in the field of alternative investment.			
Strengthening the super-vision for hedge fund activity	Hedge funds have taken quite a significant position in the world. They affect the global economic processes. The Biden administration expects to regulate the activities of hedge funds and increase the requirements for transparency of their activities.			

Compiled by the author according to the data [28]

Fifth, to assess the psychological readiness of Ukrainian individual investors to invest their free funds in such an attractive, but at the same time, very risky product of the financial market, as hedge funds. A certain layer of Ukrainians, who are potential investors, has free funds, but they may be unwilling to invest in a new financial market product. It is necessary to carry out appropriate work in order to gain confidence in alternative investment funds.

Sixth, develop existing and adjust or develop the necessary regulations for cooperation of institutional investors with alternative investment funds. Provide a legal justification for such a possibility and define the boundaries and safeguards of such cooperation.

Seventh, to study the availability of professionals who have relevant experience and are able to work successfully in the hedge fund industry. According to the study, in world practice, hedge fund managers are high-level professionals who are in high demand. Is it possible in modern conditions to involve domestic managers; is there a need to involve foreign specialists on the terms of outsourcing?

The presented steps are quite general, but the implementation of such actions is an objective

necessity for the initial implementation and further successful operation of the hedge fund industry in Ukraine.

Conclusions

Based on the results of the study, we come to the conclusion that the hedge fund industry should be developed in the conditions of national economies, in particular the Ukrainian one. To this end, it is necessary to first take simultaneous steps such as:

- investigate the investment attractiveness of Ukraine;

- give a proper assessment of the stock market of Ukraine;

- carry out an analysis of the regulatory framework for regulating the activities of investment funds;

- to study investment opportunities of potential individual and institutional investors of Ukraine;

- assess the psychological readiness of Ukrainian individual investors to invest their free funds;

- develop existing and adjust or develop the necessary regulations for the cooperation of institutional investors with alternative investment funds;

- examine the availability of professionals who have relevant experience and are able to work successfully in the hedge fund industry.

The introduction of the alternative investment industry under the jurisdiction of Ukraine will increase Ukraine's economic potential and expand its investment opportunities, as it requires careful training in various fields and also at the state level and dynamic activities during operation.

Prospects for further research

The direction of further research is to develop a model of a hedge fund with Ukrainian investments under the jurisdictions of Ukraine on the basis of mathematical methods and the latest management technologies [29–30].

REFERENCES

1. McCarthy D.F., & Wong B.M. (2020). A Performance Update – Hedge Funds Versus Hedged Mutual Funds: An Examination of Long-Short Funds. *The Journal of Alternative Investments*, 2 (23), 35–47. Retrieved from: https://dfmccarthy.com/longshort.html (accessed 24 April 2021) [in English].

2. Hallam A. (2017). Why Warren Buffett Knows He'll Win The Hedge Fund Bet. *assetbuilder.com*. Retrieved from: https:// /assetbuilder.com/knowledge-center/articles/why-warren-buffettknows-hell-win-the-hedge-fund-bet (accessed 21 April 2021) [in English].

3. Hilpold C., & Kaiser D.G. (2013). Alternative Investment-Strategien: Einblick in die Anlagetechniken der

Hedgefonds-Manager, John Wiley & Sons [in German].

4. Smirnov F.A. (2015). *Vliyaniye khedzh-fondov na transformatsiyu mirokhozyaystvennykh svyazey* [The influence of hedge funds on the transformation of world economic relations]. *Extended abstract of PhD thesis.* Moscow [in Russian].

5. Vinichenko O., Shkura I., & Hrybkova M. (2021). *Kohnityvna model khedzhynhovoho investuvannya* [Cognitive model of hedging investment]. *Visnyk Lvivskoho universytetu. – Bulletin of Lviv University, 58* [in Ukrainian].

6. Vinichenko O.M., & Hrybkova M.A. (2021). Systema vzayemodiyi khedzh-fondiv zi svitovoyu hospodarskoyu systemoyu [System of interaction of hedge funds with the world economic system]. *Investytsiyi: praktyka ta dosvid. – Investments: practice and experience, 7,* 5–12 [in Ukrainian].

7. Shkura I.S., Vinichenko O.M., & Hrybkova M.A. (2021). Mozhlyvosti vykorystannya potentsialu khedzh-fodiv dlya ukrayins№kykh investoriv [Possibilities of using the potential of hedge funds for Ukrainian investors]. *Akademichnyy ohlyad.* – *Academic Review, 1 (54),* 108–124 [in Ukrainian].

8. Pammtoday (2021). *Investitsii v Khedzh-fondy (chto eto), primery* [Investing in Hedge Funds (what is it), examples]. (n.d.). *pammtoday.com*. Retrieved from: https://pammtoday.com/ investicii-v-xedzh-fondy.html (accessed 20 April 2021) [in Russian].

9. Rusforexclub (2018). Khedzh-fondy. Ponyatiye, vidy, strategii [Hedge funds. Concept, types, strategies]. (n.d.). *rusforexclub.com*. Retrieved from: http://rusforexclub.com/articles/ 19-common/55-hedge-funds (accessed 19 April 2021) [in Russian].

10. Finance (2020). V mire deystvuyet svyshe 15 tys. khedzhfondov [There are over 15 thousand hedge funds in the world]. (n.d.). finance.uz. available at: https://finance.uz/index.php/ru/ fuz-menu-economy-ru/6842-v-mire-dejstvuyut-svyshe-15tysyach-khedzh-fondov (accessed 18 April 2021) [in Russian].

11. Financial Advisor (2021). These Are The World's Top-Performing Hedge Funds Of 2020 (*This article was provided by Bloomberg News*). (n.d.). *fa-mag.com*. Retrieved from: https:// www.fa-mag.com/news/these-are-the-world-s-top-performinghedge-funds-of-2020-59976.html (accessed 18 April 2021) [in English].

12. Green M. (2021). Top hedge funds earn \$63.5B in 2020, highest in a decade. *clicklancashire.com*. Retrieved from: https://clicklancashire.com/2021/01/26/top-hedge-funds-earn-63-5b-in-2020-highest-in-a-decade.html (accessed 20 April 2021) [in English].

13. Yaroshevich V., & Shkut A. (2016). *Khedzh-fondy na sovremennom etape razvitiya mezhdunarodnogo rynka kapitala* [Hedge funds at the present stage of development of the international capital market]. *Bankamsku vesnuk. – Bank Bulletin, 12 (341),* 40–47. Retrieved from: https://www.nbrb.by/bv/articles/10343.pdf (accessed 16 April 2021) [in Russian].

14. Freedom Finance (2020). *Pribyl khedzh-fondov za 2019 god silno otstala ot fondovogo rynka* [The profit of hedge funds for 2019 lagged far behind the stock market]. (n.d.). *ffin.ru*. Retrieved from: https://ffin.ru/market/news/85202/ (accessed 19 April 2021) [in Russian].

15. Moscow Hedge Fund Managers Club (2020). *Obzor HFR za pervoye polugodiye 2020* [HFR review for the first half of

2020]. (n.d.). *hedge-funds.club*. Retrieved from: https:// www.hedge-funds.club/post/hfr-1h2020 (accessed 18 April 2021) [in Russian].

16. *Reuters (2021)*. Top hedge funds earn \$63.5 billion in 2020, highest in a decade: LCH data. (n.d.). *reuters.com*. Retrieved from: https://www.reuters.com/article/us-hedgefunds-returns/top-hedge-funds-earn-63-5-billion-in-2020-highest-in-a-decade-lch-data-idUSKBN29U00R (accessed 17 April 2021) [in English].

17. Evestment (2020). Varied returns among largest managers highlights hedge fund performance. (n.d.). *evestment.com*. Retrieved from: https://www.evestment.com/news/varied-returns-among-largest-managers-highlights-hedge-fund-performance/ (accessed 20 April 2021) [in English].

18. Evestment (2021). Hedge fund industry performance moderately positive in March. (n.d.). *evestment.com*. Retrieved from: https://www.evestment.com/news/hedge-fund-industry-performance-moderately-positive-in-march/ (accessed 17 April 2021) [in English].

19. Nicosia E. (2021). How the coronavirus is changing the fate of the hedge fund industry. *bscapitalmarkets.com*. Retrieved from: http://www.bscapitalmarkets.com/how-the-coronavirus-is-changing-the-fate-of-the-hedge-fund-industry.html (accessed 18 April 2021) [in English].

20. Statista (2021). Assets under management of hedge funds worldwide 1997–2020. (n.d.). *statista.com*. Retrieved from: https://www.statista.com/statistics/271771/assets-of-the-hedgefunds-worldwide/ (accessed 17 April 2021) [in English].

21. Ovsyannikov P. (2020). *Top-10 krupneyshikh khedzhfondov mira* [Top 10 largest hedge funds in the world]. *vsatrader.ru* Retrieved from: https://vsatrader.ru/top-10-hedzh-fondov-mira/ (accessed 20 April 2021) [in Russian].

22. Statista (2021). Assets under management of the largest hedge fund firms worldwide in June 2020. (n.d.). *statista.com*. Retrieved from: https://www.statista.com/statistics/273133/assets-under-management-of-the-largest-hedge-fund-firms/ (accessed 16 April 2021) [in English].

23. John Divine (2021). 5 of the Top Hedge Funds in 2021. *money.usnews.com*. Retrieved from: https://money.usnews.com/investing/funds/articles/top-hedge-funds-this-year (accessed 16 April 2021) [in English].

24. Statista (2021). Hedge fund assets under management in selected countries worldwide as of November 2019. (n.d.). *statista.com*. Retrieved from: https://www.statista.com/statistics/ 1196508/worldwide-hedge-fund-aum/ (accessed 16 April 2021) [in English].

25. BarclayHedge (2020). Hedge Fund Database. (n.d.). *barclayhedge.com*. Retrieved from: https://www.barclayhedge.com/databases/hedge-fund-database (accessed 17 April 2021) [in English].

26. Pontsiano Dzh. (2020). Glavnyye na Uoll-strit: samyye bogatyye upravlyayushchiye amerikanskikh khedzh-fondov [Major on Wall Street: The Richest Managers of American Hedge Funds]. forbes.ru. Retrieved from: https://www.forbes.ru/milliardery-photogallery/408623-glavnye-na-uoll-strit-samye-bogatye-upravlyayushchie-amerikanskih (accessed 18 April 2021) [in Russian].

27. Institutional Investor (2021). The 20th Annual Rich

List, the Definitive Ranking of What Hedge Fund Managers Earned in 2020. (n.d.). *institutionalinvestor.com*. Retrieved from: https://www.institutionalinvestor.com/article/b1qmsgpxhz0lpt/ The-20th-Annual-Rich-List-the-Definitive-Ranking-of-What-Hedge-Fund-Managers-Earned-in-2020 (accessed 19 April 2021) [in English].

28. Alfa-Quant (2021). *Trendy v industrii khedzh-fondov na 2021* [Trends in the hedge fund industry for 2021]. (n.d.). *alfa-quant.ru*. Retrieved from: https://www.alfa-quant.ru/2021/02/2021.html (accessed 20 April 2021) [in Russian].

29. Garmider L.D., Taranenko I.V., Korotkaya L.I., & Begma P.O. (2019). Methodological approach to labor potential assessment based on the use of fuzzy sets theory. *Naukovyy visnyk NHU – Scientific Bulletin of the NMU, 6,* 144–150 [in English].

30. Fedulova S., Dubnytskyi V., Komirna V., & Naumenko N. (2019). Economic development management in a water-capacious economy. *Problems and Perspectives in Management*, *17(3)*, 259–270, DOI: 10.21511/ppm.17(3).2019.21 [in English].

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АНАЛІЗ ІНДУСТРІЇ ХЕДЖ-ФОНДІВ З МЕТОЮ ВПРОВАДЖЕННЯ В ФІНАНСОВУ СИСТЕМУ УКРАЇНИ

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Інтеграція України у світове глобальне середовище сприяє залученню у вітчизняну практику прогресивних інвестиційних продуктів, механізмів та технологій. Метою статті є аналіз індустрії хедж-фондів на сучасному етапі функціонування та визначення шляхів їх впровадження в українську фінансову систему. Для досягнення поставленої у роботі мети використано сукупність загальноприйнятих методів, зокрема: аналіз, синтез, статистичні методи збору інформації, експертні оцінки, порівняльний аналіз, системній підхід. У статті здійснено аналітичний огляд індустрії хедж-фондів у світовому масштабі. Розглянуто існуючі проблеми та успіхи індустрії. За результатами аналітичного дослідження запропоновано впровадження індустрії хедж-фондів під юрисдикцією України. З цією метою необхідно для початку здійснити одночасно такі кроки, як: дослідити інвестиційну привабливість України, дати належне оцінювання фондовому ринку України; провести аналіз нормативно-законодавчої бази щодо регулювання діяльності інвестиційних фондів; вивчити інвестиційні можливості потенційних індивідуальних та інституціональних інвесторів України: оцінити психологічну готовність українських індивідуальних інвесторів вкладати свої вільні кошти; опрацювати існуючі та відкоригувати або розробити необхідні нормативні акти щодо співпраці інституціональних інвесторів з фондами альтернативного інвестування; вивчити наявність фахівців які мають відповідний досвід і спроможні успішно працювати в індустрії хедж-фондів. Впровадження індустрії альтернативного інвестування під юрисдикцією України дозволить підвищити економічний потенціал України і розширити її інвестиційні можливості, бо потребує ретельної підготовки у різних галузях, а також на державному рівні та динамічної діяльності під час функціонування. Напрямом подальшого дослідження є розробка моделі хедж-фонду з українськими інвестиціями під юрисдикцій України на основі математичних методів та новітніх управлінських технологій.

Ключові слова: хедж-фонди, інвестиції, стратегії, управління, альтернативне інвестування.

АНАЛИЗ ИНДУСТРИИ ХЕДЖ-ФОНДОВ С ЦЕЛЬЮ ВНЕДРЕНИЯ В ФИНАНСОВУЮ СИСТЕМУ УКРАИНЫ

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Интеграция Украины в мировую глобальную среду способствует привлечению в отечественную практику прогрессивных инвестиционных продуктов, механизмов и технологий. Целью статьи является анализ индустрии хедж-фондов на современном этапе функционирования и определения путей их внедрения в украинскую финансовую систему. Для достижения поставленной в работе цели использовано совокупность общепринятых методов, в частности: анализ, синтез, статистические методы сбора информации, экспертные оценки, сравнительный анализ, системный подход. В статье осуществлен аналитический обзор индустрии хедж-фондов в мировом масштабе. Рассмотрены существующие проблемы и успехи индустрии. По результатам аналитического исследования предложено внедрение индустрии хедж-фондов под юрисдикцией Украины. С этой целью необходимо для начала осуществить одновременно такие шаги, как: исследовать инвестиционную привлекательность Украины. дать надлежашию оценки фондовом рынке Украины; провести анализ нормативно-законодательной базы по регулированию деятельности инвестиционных фондов; изучить инвестиционные возможности потенциальных индивидуальных и институциональных инвесторов Украины; оценить психологическую готовность украинских индивидуальных инвесторов инвестировать свои свободные денежные средства; проработать существующие и откорректировать или разработать необходимые нормативные акты о сотрудничестве институциональных инвесторов с фондами альтернативного инвестирования; изучить наличие специалистов имеющих соответствующий опыт и возможность успешно работать в индустрии хедж-фондов. Внедрение индустрии альтернативного инвестирования под юрисдикцией Украины позволит повысить экономический потенциал Украины и расширить ее инвестиционные возможности, поскольку требует тщательной подготовки в различных областях, а также на государственном уровне и динамичной деятельности во время функционирования. Направлением дальнейшего исследования является разработка модели хедж-фонда с украинскими инвестициями под юрисдикцией Украины на основе математических методов и новейших управленческих технологий.

Ключевые слова: хедж-фонды, инвестиции, стратегии, управление, альтернативное инвестирование.

ANALYSIS OF THE HEDGE FUND INDUSTRY FOR THE PURPOSE OF IMPLEMENTATION IN THE FINANCIAL SYSTEM OF UKRAINE

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Ukraine's integration into the global environment helps to attract progressive investment products, mechanisms and technologies into domestic practice. The purpose of the article is to analyze the hedge fund industry at the present stage of operation and identify ways to implement them in the Ukrainian financial system. To achieve this goal, a set of generally accepted methods was used, in particular: analysis, synthesis, statistical methods of information collection, expert assessments, comparative analysis, system approach. The article provides an analytical overview of the hedge fund industry worldwide. The existing problems and successes of the industry are considered. the hedge fund industry under the jurisdiction of Ukraine is proposed. To this end, it is necessary to first take such steps as: investigation of the investment attractiveness of Ukraine, proper assessment of the stock market of Ukraine; analysis of the regulatory framework for regulating the activities of investment funds; study of the investment opportunities of potential individual and institutional investors of Ukraine; assessment of the psychological readiness of Ukrainian individual investors to invest their free funds; development of existing and adjustment or development of the necessary regulations for cooperation of institutional investors with alternative investment funds; study of the availability of specialists who have relevant experience and are able to work successfully in the hedge fund industry. The introduction of the alternative investment industry under the jurisdiction of Ukraine will increase Ukraine's economic potential and expand its investment opportunities, as it requires thorough training in various industries and also at the state level and dynamic activities during operation. The direction of further research is to develop a model of a hedge fund with Ukrainian investments under the jurisdictions of Ukraine on the basis of mathematical methods and the latest management technologies.

Keywords: hedge funds, investments, strategies, management, alternative investing.

REFERENCES

1. McCarthy D.F., & Wong B.M. (2020). A Performance Update – Hedge Funds Versus Hedged Mutual Funds: An Examination of Long-Short Funds. *The Journal of Alternative Investments*, 2(23), 35–47. Retrieved from: https://dfmccarthy.com/ longshort.html (accessed 24 April 2021) [in English].

2. Hallam A. (2017). Why Warren Buffett Knows He'll Win The Hedge Fund Bet. *assetbuilder.com*. Retrieved from: https://assetbuilder.com/knowledge-center/articles/why-warrenbuffett-knows-hell-win-the-hedge-fund-bet (accessed 21 April 2021) [in English].

3. Hilpold C., & Kaiser D.G. (2013). Alternative Investment-Strategien: Einblick in die Anlagetechniken der Hedgefonds-Manager, John Wiley & Sons [in German].

4. Smirnov F.A. (2015). *Vliyaniye khedzh-fondov na transformatsiyu mirokhozyaystvennykh svyazey* [The influence of hedge funds on the transformation of world economic relations]. *Extended abstract of PhD thesis.* Moscow [in Russian].

5. Vinichenko O., Shkura I., & Hrybkova M. (2021). Kohnityvna model khedzhynhovoho investuvannya [Cognitive model of hedging investment]. Visnyk Lvivskoho universytetu. – Bulletin of Lviv University, 58 [in Ukrainian].

6. Vinichenko O.M., & Hrybkova M.A. (2021). Systema vzayemodiyi khedzh-fondiv zi svitovoyu hospodarskoyu systemoyu [System of interaction of hedge funds with the world economic system]. *Investytsiyi: praktyka ta dosvid. – Investments: practice and experience, 7,* 5–12 [in Ukrainian].

7. Shkura I.S., Vinichenko O.M., & Hrybkova, M.A. (2021). Mozhlyvosti vykorystannya potentsialu khedzh-fodiv dlya ukrayins№kykh investoriv [Possibilities of using the potential of hedge funds for Ukrainian investors]. *Akademichnyy ohlyad.* – *Academic Review*, 1 (54), 108–124 [in Ukrainian].

8. Pammtoday (2021). *Investitsii v Khedzh-fondy (chto eto), primery* [Investing in Hedge Funds (what is it), examples]. (n.d.). *pammtoday.com*. Retrieved from: https://pammtoday.com/investicii-v-xedzh-fondy.html (accessed 20 April 2021) [in Russian].

9. Rusforexclub (2018). Khedzh-fondy. Ponyatiye, vidy, strategii [Hedge funds. Concept, types, strategies]. (n.d.). *rusforexclub.com*. Retrieved from: http://rusforexclub.com/articles/19-common/55-hedge-funds (accessed 19 April 2021) [in Russian].

10. Finance (2020). V mire deystvuyet svyshe 15 tys. khedzhfondov [There are over 15 thousand hedge funds in the world]. (n.d.). finance.uz. available at: https://finance.uz/index.php/ru/ fuz-menu-economy-ru/6842-v-mire-dejstvuyut-svyshe-15-tysyach-khedzh-fondov (accessed 18 April 2021) [in Russian].

11. Financial Advisor (2021). These Are The World's Top-Performing Hedge Funds Of 2020 (*This article was provided by Bloomberg News*). (n.d.). *fa-mag.com*. Retrieved from: https:// www.fa-mag.com/news/these-are-the-world-s-top-performinghedge-funds-of-2020-59976.html (accessed 18 April 2021) [in English].

12. Green M. (2021). Top hedge funds earn \$63.5B in 2020, highest in a decade. *clicklancashire.com*. Retrieved from: https://clicklancashire.com/2021/01/26/top-hedge-funds-earn-63-5b-in-2020-highest-in-a-decade.html (accessed 20 April 2021) [in English].

13. Yaroshevich V., & Shkut A. (2016). Khedzh-fondy na

sovremennom etape razvitiya mezhdunarodnogo rynka kapitala [Hedge funds at the present stage of development of the international capital market]. Bankamsku vesnuk. – Bank Bulletin, 12(341), 40–47. Retrieved from: https://www.nbrb.by/bv/articles/10343.pdf (accessed 16 April 2021) [in Russian].

14. Freedom Finance (2020). *Pribyl khedzh-fondov za 2019 god silno otstala ot fondovogo rynka* [The profit of hedge funds for 2019 lagged far behind the stock market]. (n.d.). *ffin.ru*. Retrieved from: https://ffin.ru/market/news/85202/ (accessed 19 April 2021) [in Russian].

15. Moscow Hedge Fund Managers Club (2020). *Obzor HFR za pervoye polugodiye 2020* [HFR review for the first half of 2020]. (n.d.). *hedge-funds.club*. Retrieved from: https:// www.hedge-funds.club/post/hfr-1h2020 (accessed 18 April 2021) [in Russian].

16. *Reuters (2021)*. Top hedge funds earn \$63.5 billion in 2020, highest in a decade: LCH data. (n.d.). *reuters.com*. Retrieved from: https://www.reuters.com/article/us-hedgefunds-returns/top-hedge-funds-earn-63-5-billion-in-2020-highest-in-a-decade-lch-data-idUSKBN29U00R (accessed 17 April 2021) [in English].

17. Evestment (2020). Varied returns among largest managers highlights hedge fund performance. (n.d.). *evestment.com*. Retrieved from: https://www.evestment.com/news/varied-returnsamong-largest-managers-highlights-hedge-fund-performance/ (accessed 20 April 2021) [in English].

18. Evestment (2021). Hedge fund industry performance moderately positive in March. (n.d.). *evestment.com*. Retrieved from: https://www.evestment.com/news/hedge-fund-industry-performance-moderately-positive-in-march/ (accessed 17 April 2021) [in English].

19. Nicosia E. (2021). How the coronavirus is changing the fate of the hedge fund industry. *bscapitalmarkets.com*. Retrieved from: http://www.bscapitalmarkets.com/how-the-coronavirus-is-changing-the-fate-of-the-hedge-fund-industry.html (accessed 18 April 2021) [in English].

20. Statista (2021). Assets under management of hedge funds worldwide 1997–2020. (n.d.). *statista.com*. Retrieved from: https://www.statista.com/statistics/271771/assets-of-the-hedge-funds-worldwide/ (accessed 17 April 2021) [in English].

21. Ovsyannikov P. (2020). *Top-10 krupneyshikh khedzhfondov mira* [Top 10 largest hedge funds in the world]. *vsatrader.ru* Retrieved from: https://vsatrader.ru/top-10-hedzh-fondov-mira/ (accessed 20 April 2021) [in Russian].

22. Statista (2021). Assets under management of the largest hedge fund firms worldwide in June 2020. (n.d.). *statista.com*. Retrieved from: https://www.statista.com/statistics/273133/assetsunder-management-of-the-largest-hedge-fund-firms/ (accessed 16 April 2021) [in English].

23. John Divine (2021). 5 of the Top Hedge Funds in 2021. *money.usnews.com*. Retrieved from: https://money.usnews.com/investing/funds/articles/top-hedge-funds-this-year (accessed 16 April 2021) [in English].

24. Statista (2021). Hedge fund assets under management in selected countries worldwide as of November 2019. (n.d.). *statista.com*. Retrieved from: https://www.statista.com/statistics/ 1196508/worldwide-hedge-fund-aum/ (accessed 16 April 2021) [in English].

Analysis of the hedge fund industry for the purpose of implementation in the financial system of Ukraine

25. BarclayHedge (2020). Hedge Fund Database. (n.d.). *barclayhedge.com*. Retrieved from: https://www.barclayhedge.com/databases/hedge-fund-database (accessed 17 April 2021) [in English].

26. Pontsiano Dzh. (2020). Glavnyye na Uoll-strit: samyye bogatyye upravlyayushchiye amerikanskikh khedzh-fondov [Major on Wall Street: The Richest Managers of American Hedge Funds]. forbes.ru. Retrieved from: https://www.forbes.ru/milliardery-pho-togallery/408623-glavnye-na-uoll-strit-samye-bogatye-upravlyay-ushchie-amerikanskih (accessed 18 April 2021) [in Russian].

27. Institutional Investor (2021). The 20th Annual Rich List, the Definitive Ranking of What Hedge Fund Managers Earned in 2020. (n.d.). *institutionalinvestor.com*. Retrieved from: https://www.institutionalinvestor.com/article/b1qmsgpxhz0lpt/ The-20th-Annual-Rich-List-the-Definitive-Ranking-of-What-Hedge-Fund-Managers-Earned-in-2020 (accessed 19 April 2021) [in English]. 28. Alfa-Quant (2021). *Trendy v industrii khedzh-fondov na 2021* [Trends in the hedge fund industry for 2021]. (n.d.). *alfa-quant.ru*. Retrieved from: https://www.alfa-quant.ru/2021/02/2021.html (accessed 20 April 2021) [in Russian].

29. Garmider L.D., Taranenko I.V., Korotkaya L.I., & Begma P.O. (2019). Methodological approach to labor potential assessment based on the use of fuzzy sets theory. *Naukovyy visnyk NHU – Scientific Bulletin of the NMU, 6,* 144–150 [in English].

30. Fedulova S., Dubnytskyi V., Komirna V., & Naumenko N. (2019). Economic development management in a watercapacious economy. *Problems and Perspectives in Management*, *17(3)*, 259–270, DOI: 10.21511/ppm.17(3).2019.21 [in English].