

EVALUATION OF THE MODERN TENDENCIES IN THE UKRAINIAN STOCK MARKET DEVELOPMENT

Oleksandr TROFIMCHUK¹, Mykhailo TROFIMCHUK²,
International Economics and Humanities University named after S. Demyanchuk, Ukraine

Abstract. The *purpose* of the article is to research and critically evaluate the features of functioning and development the stock market in Ukraine. The main point is to substantiate modern tendencies and to find ways of more efficient development of the Ukrainian stock market. *Methodology.* The research is based on the analysis of the important aspects which characterize stock market development. They are the volume of trading activity that was done on stock exchanges, level of market capitalization, economic concentration, price policy on market services, and control over the insider information use and manipulation identification. *Results.* On the basis of volume of trading activity that was done on stock exchanges, features of stock market structure are determined. Comparative analysis between the stock market capitalization level of Ukraine and average world index of stock market capitalization is done. The level and dynamic of economic concentration is defined. Features of competition between Ukrainian stock exchanges are analyzed. Great attention in research is paid to problems of control over the insider information use and principles of manipulation identification by stock exchanges. *Value/originality.* The research showed that main amount of trading operations was done in "shadow" stock market, capitalization level decreased and stock market in Ukraine does not meet international standards of transparency. Further research should be focused on problems of ensuring the effective implementation of the basic principles of competition between market participants. Main point is to provide law mechanisms to increase transparency level of the national stock market and to increase share of organized stock market in Ukraine.

Key words: stock market, capitalization, competition on the stock market, organized stock market, stock exchanges.

JEL Classification: G1, G20, F36

1. Introduction

Ukraine chose the way of the economy development that oriented on integration into the European environment. It requires structural reform, including the construction of new and improvement of existing principles of the functioning in all economic and financial spheres, including stock market. Developed stock market provides a process of capital accumulation and distribution in different economic areas. In this regard, there is a necessity of closer and substantiated study of the phenomena that ensure effective stock market functioning.

The research of securities market functioning should be done on the basis of parameters that characterize the results of market activity. Among them we will evaluate: the volume of trading activity that was done on stock exchanges, level of market capitalization, economic concentration, price policy on market services, control over the insider information use and manipulation identification.

2. Trading activity

The development and the scale of any market, including the stock market, is affected with the presence of competition between its participants. Competitive principles of activity should be the basis of stock market operations on the stock exchanges because these organizations provide infrastructural redistribution of financial resources. In accordance with the law organized securities market in Ukraine is represented by the stock exchanges. At the beginning of 2014, 10 exchanges operated on the Ukrainian securities market: «Kyivska mizhnarodna fondova birzha», «Prydniprovska fondova birzha» «Ukrainska mizhbankivska valiutna birzha», «Ukrainska mizhnarodna fondova birzha», «Ukrainska fondova birzha», «Skhidno-Yevropeiska fondova birzha», «Ukrainian Exchange», «Fondova birzha «INNEKS», «Fondova birzha «PFTS», «Fondova birzha «Perspektyva» (NSSMC, 2013).

In Ukraine stock exchanges enforce the minor volumes of trading activities. Despite the fact that during 2004-

Corresponding author:

¹ Department of Management, International Economics and Humanities University named after S. Demyanchuk.
E-mail: mr.trofimchuk@gmail.com

² Department of Economics and Finance, International Economics and Humanities University named after S. Demyanchuk.
E-mail: mr.trofimchuk@gmail.com

2013 years the volume of transactions that were done in the stock exchanges, demonstrated positive dynamics the main array of transactions with securities in Ukraine was done outside the organized market (figure 1).

In our view the reasons that caused such situation, the low quality of the securities issued by Ukrainian enterprises, which determines the low level of enterprises development, poor competitive abilities, the lack of innovation factor in the strategic management and unwillingness to work transparently and to attract investments that cause a redistribution ownership on assets.

The positive trend of recent years for the competitive relations development on the domestic securities market is the growth of the share of organized market in the total volume of trade transactions that were done on the stock exchanges.

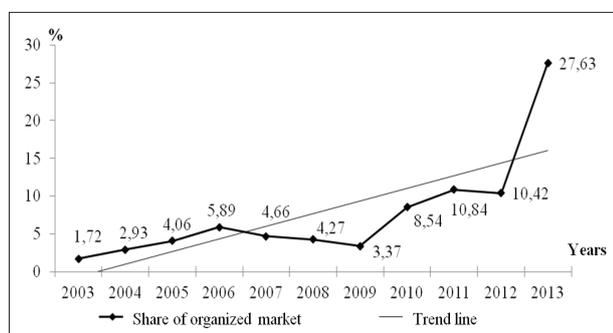


Fig. 1. The Dynamics of the organized (stock exchange) market share in total trading activity of the Ukrainian securities market

Source: National Securities and Stock Market Commission

Thus, the open sales of financial instruments on stock exchanges from year to year demonstrate the growth dynamics but the volume of such trading activity is too small. Thus, during the each of the study period by 2013, the share of executed securities transactions with the direct participation of trade organizations ranged from 2% to 11%. But in 2013 it increased up to 27.63%. The rapid increasing of the share of trading volume of operations that were done on organized market in 2013 can be explained by the new tax that is dealing the operations that were done outside the stock exchanges. So, taxation rate for operations that providing out the stock exchanges at the moment is 1,5%. Implementation of this tax facilitated the transfer of trading operations to the organized stock market, because nobody wanted to pay extra tax. However national stock market is still does not provide the competitive transformation of accumulated capital into investment resources on the transparent basis.

3. Ukrainian stock market capitalization

The great criteria to determine the level of stock market development is a capitalization. It should be noted that capitalization of the stock market is the fictitious index of companies' value. It based on the multiplication of the current market value of the shares that were issued and

their number. So it does not reflect a real value because different market factors make influence on shares prices.

In the period from 2004 to 2007, on a background of economic growth of the national economy capitalization index of Ukrainian listed companies showed steady rising trend. So during this period in absolute value it increased almost on 100 billion US dollars.

But the global crisis negatively influenced on the index of stock market capitalization in Ukraine, it is evidenced with the rapid decline of this indicator, both in the world and in Ukraine (figure 2).

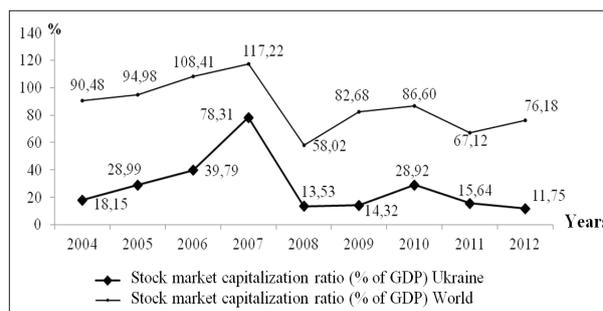


Fig. 2. Dynamics of stock market capitalization ratio in the world and in Ukraine

Source: The World Bank Group

The level of Ukrainian stock market capitalization in the period from 2008 to 2012 was extremely small in relation to GDP. In 2012 it was only 11.75%. While the average value of this indicator in the world was at level of 76,18%. In general, backlog in the capitalization ratio of the Ukrainian stock market relative to the average ratio in the world in the period from 2004 to 2012 was about 60 percentage points.

After 2008, when the stock market in Ukraine collapsed, due to the global financial crisis, it began gradual growth. In 2010, capitalization ratio increased significantly, which was primarily associated with the increased number of securities of issuers were allowed to trade their stock on the market. But GDP of Ukraine in 2011 and 2012 was growing faster than market capitalization of listed companies. This situation negatively influenced on capitalization ratio.

Thus, the total level of stock market capitalization used to reduce. We must to emphasize that on capitalization level influenced low volume of trading activity with shares on flagship of Ukrainian stock market – Ukrainian Exchange and stock exchange PFTS.

In general, level of stock market capitalization in Ukraine cannot be considered as objective index due to following reasons: transactions are concentrated mainly on shadow (non-organized) market, the agreements are concentrated mainly in the OTC market, large number of closed (private) joint stock companies (at the beginning of 2013 in Ukraine registered 18 008 private and closed joint stock it is 71,3% total number of joint stock companies in Ukraine) very low share of issuers whose shares are included in quotation lists of stock exchanges (Deeva, 2009).

4. Economic concentration and competition between stock exchanges

In 2009 high concentration level persisted, but the situation on Ukrainian stock market changed to oligopoly. From 2010 to 2013, was evident tendency to gradual monopolization of exchange services on the Ukrainian securities market. This conclusion we can do after analysis of special special indicators that characterize economic concentration. In this purpose we can use quantity of stock exchanges Herfindahl-Hirschman Index (HHI), Hall-Tidemann index (HT), Concentration ratio (CR3), Concentration ratio (CR4), coefficient of entropy (E), the maximum share index ($I_{d(max)}$).

The number of stock exchanges on the Ukrainian stock market during the analysed period was not stable, but variations were not significant. The last 4 on the market operates 10 trading platforms. Due to Concentration ratio (CR3) and Concentration ratio (CR4) in each period was hi level of economic concentration of stock exchanges on the market. Evaluating these coefficients we can see that from 2004 to 2008, the market situation was close to a monopoly.

In accordance with Herfindahl-Hirschman index during the research period this indicator was in frames 1800-10000 which indicates that the market for stock exchanges in Ukraine was highly concentrated. However, in 2006 due to volume of this index (HHI – 9286,95) the market was actually monopolized.

According to the Hall-Tidemann index (HT) the highest level of economic concentration was in 2006 – 0.86. Since 2009, entropy coefficient has been increased slightly, but its number is still small, so it means the existence of variation between monopoly and oligopoly market situation. Similar conclusions can be made based on the maximum share index. According to its thresholds from 2004 to 2009 the stock exchange market in Ukraine was practically monopolized by a few stock exchanges and from 2009 to 2012 there was an oligopoly situation.

Thus, all indicators characterize a similar trend, according to the results obtained on their basis, we can derive a synthesis conclusion – in recent years there is a redistribution of trading volume between different stock

exchanges. So there is no a monopoly of a one stock exchange like it was in 2006. In last 3 years all trading operation are divided between three trading platforms (figure 3). Now on the Ukrainian securities market there is an exacerbation of the competitive relationship between the trade organizers. They are competing for increase of their share in the total turnover of trading operations with financial instruments. Stock Exchange PFTS, which for a long period has been the flagship of the domestic stock market, due to various reasons, including the changes of political power in the country, began to lose its positions.

In 2008 the share of Stock Exchange PFTS in the structure of executed transactions on the securities market was 90%, but in 2013 only 23.8%. Also reducing of market share of the Ukrainian Exchange and Stock Exchange PFTS in the total trading volume, as the main areas where shares of Ukrainian issuers are listing their shares, is an evidence that the stock market in Ukraine is gradually diapering.

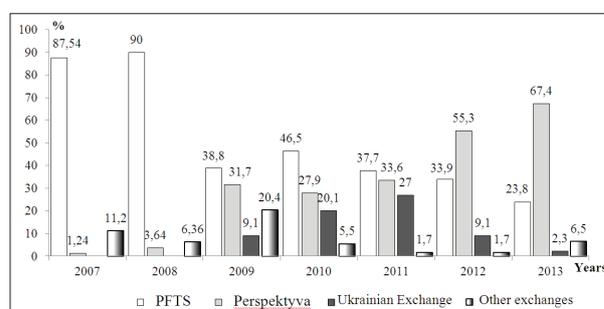


Fig. 3. The volume of trading operation with securities on Ukrainian stock exchanges (in percentage ratio)

Source: National Securities and Stock Market Commission

As we can see Stock Exchange Perspektyva significantly increased its position. In 2009 market share of this exchange was 37.1% and in 2013 – 67.4%. Moreover, the share of Stock Exchange Perspektyva in this segment is growing every year. First of all this can be explained that main amount of trading operations with government securities was done exactly on this stock exchange.

The rapid development of information technologies significantly facilitates automation of all aspects of stock

Table 1

Evaluation of stock exchanges concentration on the securities market of Ukraine

Period	Index	Number of stock exchanges	(CR3)	(CR4)	(HHI)	(HT)	(E)	$I_{d(max)}$
2004		10	93,13	95,34	5849,065	0,50	0,089	0,764
2005		10	94,62	96,18	7814,923	0,61	0,056	0,796
2006		11	98,68	99,44	9286,95	0,86	0,019	0,828
2007		9	96,62	97,88	7714,555	0,66	0,061	0,775
2008		10	96,79	98,19	8129,354	0,68	0,048	0,780
2009		11	79,57	84,56	2671,506	0,25	0,148	0,587
2010		10	94,50	96,53	3382,475	0,36	0,124	0,614
2011		10	98,30	99,18	3279,797	0,35	0,118	0,545
2012		10	98,20	99,06	4283,282	0,46	0,101	0,691
2013		10	93,95	96,44	5127,961	0,48	0,095	0,723

exchange's activity and makes great influence on non-price competition between stock exchanges. Thus, the stock exchange Perspektyva was the first in Ukraine that has implemented market of applications «self-listing» (2010), clearing and settlement model through the specialized non-bank payment system (2009), had registered specification (2011) and launched in the term contracts system (2012).

In addition, the dynamic movement of capital in an international scale, associated with the development of globalization processes, greater openness and deregulation of financial markets, increases the intensity of competition between exchanges that existed in the conditions of a closed market. Considering this domestic stock exchanges have to perform a number of tasks associated with the price and non-price methods of competition:

- active trade organizer positioning in the market, which involves keeping market niche with expanding the range of services (basic and collateral), flexible pricing policy;
- search for a new sources to finance their development, because changes in information technology, improving the technical equipment, provides the necessity for constant updating of trading system, which requires capital investments;
- improvement and development of the stock exchange marketing, development strategies, tactics of behaviour in the market in terms of increasing competition.

5. The tariff policy and profitability

In competition for the leading position in the organized securities market of Ukraine, the significant role was played by the tariff policy of domestic stock exchanges.

The most favourable operating conditions provide exchange PJSC “Perspective” (table 2). During trading volume of the shares Stock Exchange Perspektyva even ahead a key exchange in this market segment stock exchange Ukrainian Exchange where blue chips (shares of Motor Sich, Center Energo, Azovstal) are usually trade. However, in the leadership of this stock exchange, in addition to the obvious qualitative changes are negative phenomena. On the stock exchange “Perspective” quite a large share in the total volume of trading is taken by companies which are associated in business activity with this exchange (Modern credit technologies, Academy of Investments). Such scheme could be used to artificially increase volume of trading for the purpose to create the image of a large and effective stock exchange.

Table 2

Fees for services of some stock exchanges in Ukraine in the end of 2013

Stock exchange	The tariff policy
PFTS	Trading terminal – 500 UAH one-time and 1000 UAH. per month. Inclusion the securities to the exchange list 500 one-time UAH. Providing supplemental information about the results of trading on stock exchange to – 100 UAH.
Ukrainian exchange	Trading terminal – 500 UAH one-time +tax and 600 UAH per month +tax. Inclusion the securities to the exchange list 500 UAH one-time.
Perspektyva	Trading terminal – 1 UAH one-time. Inclusion the securities to the exchange list one-time 150 UAH. Providing supplemental information about the results of trading on stock exchange – 50 UAH per every working day included to the reporting period.

Financial activity of Ukrainian stock exchanges since 2008 has been demonstrating, reduction of the efficiency. The most profitable trade organizer, stock exchange PFTS turned into a very unprofitable trading platform, compared to other major exchanges on the national stock market.

As a result of clients churn from the PFTS due to unstable situation in the board of directors of the exchange, the volume of transactions on this stock exchange has decreased. Such situation had negative impact on the financial results of stock exchange activity compared with other main exchanges of Ukrainian stock market (figure 4). Abrupt increase of PFTS profitability in 2013 was caused by having in the ownership financial assets on the banking accounts. So, it does not connected with successful operation, because as a result of operating activity of the stock exchange had 9.244 million UAH of loss that year.

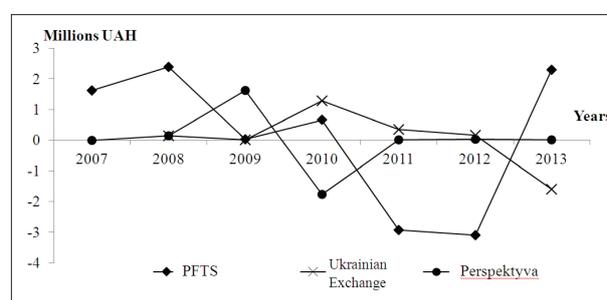


Fig. 4. Dynamics of the profitability of the major Ukrainian stock exchanges

Source: Securities Market Infrastructure development Agency

In Ukraine, the main income of stock exchanges consists of fees for access to trading, inclusion the securities to the exchange list, commission for the transactions and income from the sale of information. This commission income on transactions in the past year decreased due to lower equity trading activity.

6. Countering to manipulation

It should be noted that the effectiveness of the stock exchange as an infrastructure institution that provides the organization of trading operations, must be presented in ability to ensure transparent pricing and equal conditions and opportunities for all participants of trading operations. A key role in this plays the control of insider information use and mechanisms of countering to manipulation activity.

In legal document "About Approval of the Procedure to prevent price manipulation during trading with securities on the Stock Exchange" noted that stock exchange must to set up index and its level to indicate manipulation actions. But not enough attention is paid to the tracking the manipulative action due to the price deviations. We must say that mechanism of manipulation detection on the stock exchanges is rather formal and non-usable.

In the rules of stock exchange PFTS did not mentioned how to provide the definition of price volatility for securities and did not set up parameters that would be characterized volatility and manipulation.

Ukrainian Exchange applies methods of tracking manipulation and controls contracts concluding by participants of trading operations based on such indicators:

- excess of 25% share of operations of the total volume with certain securities in a calendar month\$
- growth of the average value of exchange contract more than a 30% in a calendar month;
- change in trading volume of certain securities in a calendar month more than 25%;
- the excess the share of concluded contracts between the two traders on certain trading day with the same securities in which the bidders alternately are as buyers and sellers more than 20% of the total volume of trading with this security on the same trading day.

Stock exchange Perspectyva in the context of manipulative actions detecting providing control of the agreements in a such parameters:

- the excess more than 50% of the total exchange trades, amount of contracts concluded by certain participant with addressless applications (excluding applications done by market makers), the this security in a calendar month set value – 50%;
- the excess more than 50% in a month of the total exchange trades concluded by participants in 6 months, the amount of contracts concluded by certain participant with addressless applications (excluding applications done by market makers).
- changes in the volume of trades with certain securities in a calendar month on the set value amount more than 75% compared with the previous calendar month;

To increase the effectiveness of competitive relations regulation it is necessary to make clear requirements to detect manipulative transactions on stock exchanges, exactly to define criteria that should be based on individual price deviations, it will enable to identify non-fair actions as manipulative actions exactly for certain shares.

In particular, at the level of National Securities and Stock Market Commission, along with the existing methods, should be provided effective methodology of manipulative actions identification based on calculating individual significant prices deviation for every share. This will allow to respond the illegal actions of market participants and providing more transparent conditions for the functioning at the Ukrainian stock exchanges.

In most developing countries and in Ukraine in particular, the low efficiency of the stock market is caused with common characteristic features: complete dependence on international capital flows, the lack of long-term investments and mainly speculative kind of operations. All this indicates about significant isolation of the domestic stock market from the real economy.

This is explained with the fact that Ukraine has a unique situation, which is characterized by a predominance of the informal (shadow) stock market and imbalance of its institutional elements.

7. Conclusion

The research results shows that stock market in Ukraine can be characterized by too hi level of trading operations that are execute out of the organized market. It is the evidence that Ukrainian stock market has low development level and as a result – low efficiency level. In general the dynamics of the stock market in Ukraine does not meet the objective tendencies of its development and development of the national economy. Imitation of activity of some stock exchanges, which are turned into simple auction where the lowest level of competition and there is usually operates the only one seller, which is represented by government and extremely limited number of buyers.

Despite on the positive dynamics of the volume of transactions that were concluded on the stock exchanges during the period 2004-2013, the main amount of trading was done in "shadow". So, regulatory institutions could not guarantee the security to investors who were going to enter the national stock market. In this reason Ukraine loose opportunity to attract capital and to develop its economy. Also the stock market in Ukraine has a low level of capitalization, so it does not perform its most important function – attraction investments for economic development.

The Analysis of the economic concentration of the stock exchanges showed that the competitive structure of the domestic organized securities market during 2004-2013 years was changing from monopoly to oligopoly. Previously almost all operations were concentrated in one stock exchange PFTS, but since 2009 three trade organizers had divided the market.

Identifying of manipulative actions is very important part of stock exchange activity. Its purpose to protect all participants from unfair competition and from the acts of artificially inflating or deflating the price of a security. But Ukrainian stock exchanges do not use efficient mechanism of manipulations identification. Existing methods do not use include price deviations, so investors has big risks to conclude unfair deal.

Further research should be focused on improving methods that ensure the effective implementation of the basic principles of competition between market entities. Also it is nessessary to to increase transparency level and to increase share of organized stock market in Ukraine. All this is extremely important for securities market development and its further integration into European financial system.

References

- Deeva, N.E. (2009). Ukrainian stock market capitalization: problems of evaluation and reaction on crisis. *Economic journal of Donbas*, 4 (18), p. 115–121.
- NSSMC: National Securities and Stock Market Commission (2013). Annual review and summary financial statements. [Electronic resource]. – Retrieved from: <http://www.nssmc.gov.ua/activities/annual>
- Perspektiva Stock Exchange official web-site (2014). [Electronic resource]. – Retrieved from: <http://fbp.com.ua>.
- PFTS Stock Exchange official web-site (2014). [Electronic resource]. – Retrieved from: <http://www.pfts.com/uk/pfts-report>
- SMIDA: Securities Market Infrastructure development Agency (2013) [Electronic resource]. – Retrieved from: <http://www.smida.gov.ua/>
- The World Bank Group (2012). GDP. [Electronic resource]. – Retrieved from: <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD>
- The World Bank Group (2012). Market capitalization of listed companies. [Electronic resource]. – Retrieved from: <http://data.worldbank.org>

Михаил ТРОФИМЧУК, Александр ТРОФИМЧУК

ОЦЕНКА СОВРЕМЕННЫХ ТЕНДЕНЦИЙ РАЗВИТИЯ ФОНДОВОГО РЫНКА В УКРАИНЕ

Аннотация. *Целью статьи* является экономическое обоснование и критическая оценка особенностей функционирования фондового рынка в Украине, поиск путей его развития с целью обеспечения эффективного исполнения возложенных на него функций. *Методология.* Исследование основано на анализе важных аспектов, которые определяют особенности работы и развития фондового рынка. К таким аспектам отнесено денежный объем совершенных сделок на фондовых биржах, уровень биржевой капитализации, степень экономической концентрации, ценовая политика бирж на рынке, контроль над использованием инсайдерской информации, а также идентификация манипулятивных действий. *Результаты.* На основе объема торговой деятельности, совершенной на фондовых биржах, выделены особенности структуры фондового рынка. Проведен сравнительный анализ между уровнем капитализации фондового рынка Украины и среднемирового значения уровня капитализации рынка ценных бумаг. Определены факторы оказывающее негативное влияние на уровень капитализации отечественного фондового рынка. Осуществлена оценка динамики уровня экономической концентрации фондовых бирж в Украине. Раскрыты и обоснованы особенности конкуренции между украинскими биржами. Значительное внимание в исследовании уделено существующим проблемам и методическим подходам к идентификации манипуляций с ценными бумагами. Проведен анализ использования украинскими биржами методов выявления сделок которые имеют признаки манипулирования. *Значение/оригинальность.* Проведенное исследование носит комплексный характер параметров влияющих на функционирование и развитие рынка ценных бумаг в Украине. Установлено что основное количество торговых операций с ценными бумагами на фондовом рынке Украины осуществляется вне фондовых бирж. Так, регулирующие органы не могут гарантировать безопасность инвестиций, которые могли бы быть направлены с помощью фондового рынка на развитие национальной экономики. Определение манипулятивных действий является очень важной частью биржевой деятельности. Ее цель – защита всех участников торгов от заключения недобросовестных сделок. Украинские биржи не используют эффективные методы идентификации манипуляций. Дальнейшие исследования должны быть направлены на увеличение доли организованного фондового рынке в Украине что возможно при совершенствовании методов, которые обеспечивают эффективную реализацию основных принципов конкуренции и увеличивают прозрачность совершения сделок. Все это крайне важно для развития рынка ценных бумаг в Украине и его дальнейшей интеграции в европейскую финансовую систему.