Risks of Traders on the World Stock Market on the Example of Ukraine

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Abstract. The article reveals the essence and features of the development of the stock market in Ukraine. It was established that the vigorous activity of countries in the world financial markets means that they also face a risk of global financial turmoil (the so-called “domino effect”). It is determined that the impact of global financial instability on the country depends on the openness of its economy that will lead to significant external “shocks”. The possibility of providing effective influence on domestic stock market activity with taking into account the changing world situation, development of perfect trading strategies for each participant is substantiated. The conducted analysis of the world market conditions of stock markets in recent years has made it possible to assess the real risks for new participants in the stock market and become the basis for the development of an appropriate effective trading strategy. The practical significance of the results is that they allow for a measurable approach to assessing the existing risk when choosing one or another trading strategy to move to the world stock market.

Introduction

Necessary condition for success in an area of activity which is characterized by increased risks is the creation and improvement of risk management systems to identify, assess, locate and control risks. The decision-making mechanism should not only identify the risk, but also allow you to assess which of the risks is acceptable and define whether the expected returns will justify the appropriate risk. Justified or acceptable risk is a necessary component of the strategy and tactics of effective management.

An effective strategy of risk-taking behavior enables financial market participants to successfully carry out its activities and achieve its goals with the least losses. A strategy that can be called a risk management strategy consists of:

- awareness of risk, identification of causes of its occurrence and risk areas;
- analysis and risk assessment;
- selection of risk management methods;

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use of selected methods;  
control.

The first and most important component of the risk management strategy is the practical data that will be based on the construction of the entire trading strategy of the trader. Therefore, the development of qualitative analysis of the market with the dynamics in recent years is a prerequisite for the creation of a true trading strategy for entering the stock market.

The world stock trading market is still a rather new, but very attractive and promising arena for Ukraine, but the country’s own experience is insufficient to react in a timely manner to changes in world market conditions, which determines the relevance of the topic of the article.

**Theoretical basis**

Market conditions are a system of indicators and conditions that characterize the current state of demand, supply, price and level of competition in the market (commodity, stock, etc.) in general or in its individual segments; for the market situation there are four stages (business cycle):

- rise of the market conditions;
- conjuncture boom;
- weakening of the conjuncture;
- decline in market conditions.

**Table 1.** Dynamics of trade volume on the world stock market, billion transactions.  
(authors’ calculations on the base of dates [2])

| Indicator                  | 2014 | 2015 | 2016 | 2017 | 2018 | Average over the last 3 years | Change 2017 to 2016, +/-% | Change from 2017 to the average indicator, +/-% |
|----------------------------|------|------|------|------|------|-------------------------------|---------------------------|-----------------------------------|
| Total volume of deals      | 2498 | 21.19| 21.55| 21.83| 24.78| 22.72                        | 2.94                      | 0.13                              |
| Chain growth rate, +/-, %  | x    | -    | 1.71 | 1.30 | 13.48| x                            | x                         | x                                 |
| Basic growth rate, +/-, %  | x    | -    | 13.73| 12.60| -0.82| x                            | x                         | x                                 |

Analysis of the activities of the world's stock exchanges (Table 1) shows that they have not been trading for the long term, which, as a result of the evolutionary development of stock trading, has been ousted on the over-the-counter market. Instead, modern world exchanges serve as an indicator of world pricing, including the main types of agricultural products (cereals and oilseeds). Today, virtually all world exchanges are integrated into stock exchanges with electronic trading platforms.
Dynamics of growth volumes continues from 2013 (Table 2). Since 2006, trade in futures and options has risen faster than any other sector of global derivatives markets. Currently, the global commodity derivatives market is characterized by a boom.

Table 2. Structure of world trade in derivatives, billion transactions (authors’ calculations of changes on the base of dates [2]).

| Stock sector       | 2013  | 2014  | 2015  | 2016  | 2017  | Average indicator | Change 2017 to 2016, +/-% | Change from 2017 to the average indicator, +/-% |
|--------------------|-------|-------|-------|-------|-------|-------------------|---------------------------|-----------------------------------------------|
| Commodity derivatives | 2.59  | 3.05  | 3.61  | 3.79  | 4.65  | 4.02              | 22,59                     | 22.59                                          | 0.63                                          | 15.78                                          |
| Part,%             | 10.36 | 14.41 | 16.73 | 17.37 | 18.76 | x                 | x                         | x                                             | x                                             | x                                             |
| Financial derivatives | 22.16 | 17.88 | 17.60 | 17.69 | 19.31 | 18.20              | 9.16                      | 9.16                                          | 1.11                                          | 6.10                                          |
| Part,%             | 88.72 | 84.40 | 81.66 | 81.01 | 77.93 | x                 | x                         | x                                             | x                                             | x                                             |
| Other types        | 0.23  | 0.25  | 0.35  | 0.35  | 0.82  | 0.51              | 131.56                    | 131.56                                        | 0.31                                          | 61.71                                         |
| Part,%             | 0.92  | 1.19  | 1.61  | 1.62  | 3.31  | x                 | x                         | x                                             | x                                             | x                                             |
| Total quantity     | 24.98 | 21.19 | 21.55 | 21.83 | 24.78 | 22.72              | 13.48                     | 13.48                                        | 2.06                                          | 9.05                                          |

The financial derivatives market significantly exceeds the commodity derivatives market, but in real time markets are analyzed considerably better with volumes of trade. Analysis of the structure of world trade in commodity and financial derivatives (Table 2) showed that the growth rate of derivatives of the commodity market significantly exceeds the growth rate of financial derivatives. These indicators characterize the commodity derivatives market as a rapidly developing market. The structure of commodity derivatives trading by types of underlying assets is quite stable and harmonious (Table 3).

At the global level, the total number of futures and options traded on exchanges around the world increased to 24.78 billion contracts in 2016. This figure is not a record, but com-
pared to 2015, it shows an increase of 13.5%, giving the industry its highest growth rate since 2011.

Table 3. Commodity derivatives trade structure by types of basic assets (authors’ calculations of changes on the base of dates [2]).

| Commodity derivatives | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------|------|------|------|------|------|
| Commodity derivatives, billion deals | 2.59 | 3.05 | 3.61 | 3.79 | 4.65 |

Part in the sector by the basic asset, %

| Agricultural products, % | 38.51 | 41.07 | 33.56 | 36.60 | 35.27 |
| Metals, % | 30.01 | 28.59 | 29.96 | 32.79 | 34.46 |
| Energy resources, % | 31.48 | 30.33 | 36.48 | 30.61 | 30.27 |

One of the main reasons was a surge in trading activity in Asia. Recent annual surveys have shown that North America grew faster than the rest of the world in 2014 and 2015, but the model changed in 2016. On the Asian-Pacific exchanges, total trade volumes rose by 33.7% to 9.7 billion contracts in 2015, the highest level for this region since 2011.

Table 4. Dynamics of trade volume on the world stock market by geographic regions, billion deals (authors’ calculations on the base of dates [2]).

| Geographic regions | 2012 | 2013 | 2014 | 2015 | 2016 | Average indicator | 2016 to 2015, +/-% | 2016 to average, +/-% |
|--------------------|------|------|------|------|------|-------------------|-------------------|-------------------|
| North America | 8.185 | 7.227 | 7.83 | 8.195 | 8.216 | 8.080 | 0.021 | 0.26 | 0.136 | 1.68 |
| Part, % | 32.76 | 34.11 | 36.33 | 33.08 | 37.63 | x | X | x | x | x |
| South America | 1.603 | 1.731 | 1.683 | 1.451 | 1.517 | 1.550 | 0.066 | 4.55 | -0.033 | -2.15 |
| Part, % | 6.42 | 8.17 | 7.81 | 5.86 | 6.95 | x | X | x | x | x |
| Europe | 5.017 | 4.389 | 4.359 | 4.77 | 4.41 | 4.513 | -0.360 | -7.55 | -0.103 | -2.28 |
| Part, % | 20.08 | 20.71 | 20.23 | 19.25 | 20.20 | x | X | x | x | x |
| Asia-Pacific | 9.825 | 7.526 | 7.302 | 9.701 | 7.257 | 8.087 | -2.444 | -25.19 | -0.830 | -10.26 |
| Part, % | 39.33 | 35.52 | 33.88 | 39.16 | 33.24 | x | X | x | x | x |
| Other stock exchanges | 0.351 | 0.317 | 0.377 | 0.658 | 0.433 | 0.489 | -0.225 | -34.19 | -0.056 | -11.51 |
| Part, % | 1.41 | 1.50 | 1.75 | 2.66 | 1.98 | x | X | x | x | x |
| Total volume of world stock trading | 24.98 | 21.19 | 21.55 | 24.77 | 21.83 | 22.72 | -2.942 | -11.87 | -0.887 | -3.90 |

However, the increase in activity in the Asia-Pacific region was due to the presence of large exchanges. Out of the 28 exchanges in the region covered by our study, 18 had double
digit growth in 2016 and only six were down. In addition, growth has been extended to a large number of countries, including China, India, Korea, Singapore and Taiwan. Even Japan, which has suffered from a drop in trade for several years, has seen growth. All exchanges of the studied regions had an increase in the growth rate of trade activity in 2016.

Results

The research of the last year is based on data collected from 78 derivatives traded exchanges. The volume includes futures and options traded on the stock exchange and presented for clearing, as well as contracts traded on the stock exchange. The geographical location is determined by the jurisdiction in which the exchange is regulated and not by the location of the parent company. Contracts based on stock indices, exchange rates, and commodities are the three categories with the highest rates of growth in 2016. The total number of futures and stock index options is increased by 13.7% to 8.34 billion contracts, almost reaching a maximum of 8.47 billion in 2012. Some of this growth came from markets where the size of contracts is relatively small, such as the National Stock Exchange of India. But there was also an increase in wholesale markets dominated by institutional investors, such as Eurostoxx 50 futures and options traded on Eurex. Foreign-exchange contracts jumped by 31.2% to 2.78 billion in compare with 2013, when the volume in this category fell by 15%. Here, much of the growth came from relatively small contracts traded on exchanges in places like India, Russia, Turkey and Argentina, and in most cases, contracts were tracked at the local exchange rate against the US dollar. But there was also growth in wholesale markets, such as futures and options on Euro FX, quoted on the Chicago Commodity Exchange. Futures trading in Euro FX increased by 25.2% to 65.4 million contracts in 2016, while Euro FX options increased by 62.1% to 12.4 million contracts.

The state of the Ukrainian stock market agrarian market in recent years shows its low level of development. At the same time, China's interest in Ukraine's capabilities increases every year.

The share of Chinese investment in the total volume of foreign investment in Ukraine suggests the need for risk assessment based on existing methods and world experience (Figure 2).

![Direct investments in economic of Ukraine, mln $](image)

**Fig. 2.** The share of China in general quantity of direct investments in economy of Ukraine (authors’ elaboration on the base of dates [4]).
A prerequisite for success in an area of activity characterized by increased risks is the creation and improvement of risk management systems to identify, assess, locate and control risks. The decision-making mechanism must not only identify the risk, but also allow it to assess which risks are permissible, and to determine if the expected returns justify the corresponding risk. Justified or acceptable risk is a necessary component of the strategy and tactics of effective management.

Conclusion

The presence of the stock market in Ukraine contributes to the integration of the national financial market into the world, which has a positive effect on the economy, but at the same time, it increases its dependence on the uncertainty of the world financial market. Greater integration of countries on global financial markets means that they are at greater risk of transmitting the effects of shocks from abroad (the so-called “domino effect”).

The impact of global financial instability on the country depends on the openness of the economy, and accordingly – on the probability that financial instability will cause significant external shocks for the economy. Developed countries have created mechanisms to counter these negative impacts, but most developing countries, without internal safeguards, are becoming their victims. The research proves that risks have a significant impact on market participants. Functioning of the stock market is most often in the conditions of increased instability of the market situation. Consequently, it causes high risks and low income. For a competitive operation of Ukrainian traders on the world stock market, a thorough analysis of the world market situation in recent years has been conducted, which will help develop a successful trading strategy. With the help of statistical data, the analysis of the most active participants of the world stock market was conducted and the dynamics of trade volumes according to geographic regions is shown. This information can be used by scientists to develop practical recommendations for shaping trading strategies and risk assessments for entering the global stock market.

References

1. Müller, Janis and Posch, N. Peter, Wrong-Way-Risk in Tails http://dx.doi.org/10.2139/ssrn.3124863 (2017)
2. Official website of Futures Trading Association, https://fia.org/
3. Grant L. Kenneth. Trading Risk: Enhanced Profitability Through Risk Control. New Jersey, NJ: John Wiley & Sons, (2014)
4. Official website of State statistical service of Ukraine. External activity, http://ukrstat.gov.ua.
5. M. Rusnakova, Agricultural Economics, 61, 149-157 (2016)
6. M.O. Solodkyy, V.O. Yavorska Birzhowa torhivlya tovarnymy deryvytyvamy: svitovy dosvid ta perspektyvy rozvytku v Ukrayini. Kyiv: TSP Comprint, (2015)
7. M.O. Solodkyy, V.O. Yavorska, Birzhovy tovarnyy rynok. (Kyiv: TSP Comprint (2015)
8. Ramzan Imran, Role of Financial Derivatives in Risk Management. https://ssrn.com/abstract=3264962 (2018)
9. Kim, Myunghyun, How the Financial Market Can Dampen the Effects of Commodity Price Shocks. http://dx.doi.org/10.2139/ssrn.3256554 (2018)
10. Thakral, Mehak and Chander, Ramesh. Does Derivative Trading Facilitate Price Discovery and Risk Management? https://ssrn.com/abstract=3220294 (2017)