10. Lang S., Scholz A. The diverging role of the systematic risk factors: evidence from real estate stock markets // Journal of Property Investment & Finance. 2015. Vol. 33, Issue 1. P. 81–106. doi: https://doi.org/10.1108/jpif-05-2014-0032
11. Organizational and financial mechanisms for implementation of the projects in the field of increasing the energy efficiency of the regional economy / Tsurkan M. et. al. // Problems and Perspectives in Management. 2017. Vol. 15, Issue 3. P. 453–466. doi: https://doi.org/10.21511/ppm.15(3-2).2017.13

Khalatur Svetlana, *Doctor of Economic Sciences, Associate Professor, Department of Finance, Banking and Insurance, Dnipro State Agrarian and Economic University, Ukraine, e-mail: halatyr@i.ua, ORCID: http://orcid.org/0000-0001-8331-3341*

Zubkova Yuliia, *Department of Finance, Banking and Insurance, Dnipro State Agrarian and Economic University, Ukraine, e-mail: yulyazubkova261@gmail.com, ORCID: http://orcid.org/0000-0002-0038-0563*

UDC 339.13.012
JEL Classification: F65
DOI: 10.15587/2312-8372.2018.146142

Bondarenko M.,
Bunin S.

ANALYSIS OF THE REGIONAL DIFFERENTIATION OF THE WORLD FINANCIAL MARKET

Об'єктом дослідження є світовий фінансовий ринок, який об'єднує національні фінансові системи та має значну регіональну диференціацію розвитку. Одним з найбільш проблемних місць розвитку світового фінансового ринку є зниження внутрішньо-регуляторного впливу країн на свою фінансову систему. А також зростання світової заборгованості країн за зовнішніми запозиченнями, непостійний характер розвитку ринку, де проявляє свою дію закон нерівномірності економічного розвитку.

В ході дослідження використовувався аналіз динаміки розвитку світового фінансового ринку за такими показниками, як:

– прямі іноземні інвестиції та їх чистий відтік (% від ВВП);
– прямі іноземні інвестиції та їх чистий приток (% від ВВП);
– кількість національних компаній, що котируються на біржі та їх ринкова капіталізація.

За допомогою класичних загальнонаукових методів дослідження, регресійного аналізу, методів статистичної обробки даних отримано, що найменші показники відтоку капіталу притаманні країнам стрімкого характеру розвитку (регіон Латинської Америки та Карибського басейну, Південної Азії). Найбільші показники притоку капіталу притаманні високорозвиненим країнам, що входять до Європейського Союзу або Єврозони. Більшість компаній, що мають котирування на біржі та найбільшу ринкову капіталізацію, розташована в країнах ОЕСР (Організація економічного співробітництва та розвитку), у тому числі в країнах Європейського Союзу. Це пов'язано з тим, що всі складові фінансового ринку перебувають у тісному взаємозв'язку. Збільшення обсягів грошових заощаджень населення і вільних коштів підприємств сприяє розширенню та активізації кредитного ринку і ринку цінних паперів. А випуск цінних паперів знижує потребу у фінансуванні економіки за рахунок кредитів та акумулює тимчасово вільні грошові кошти інвесторів. Завдяки цьому забезпечується умовний характер поділу фінансових ринків на ринок грошей і ринок капіталів.

Ключові слова: *світовий фінансовий ринок, регіональна диференціація розвитку, прямі іноземні інвестиції, фінансова капіталізація національних компаній.*

1. Introduction

In the modern world, the processes of financial globalization are unfolding and the dependence of individual countries on world financial markets is increasing. This trend is typical for many countries of the world and requires coordinated actions from financial market regulators in order to ensure sustainable and dynamic development of the financial sector. The objective basis for the development of the world market is the development of the international division of labor; internationalization of social production; concentration and centralization of financial capital. The modern world financial market unites the national financial markets of countries and the international financial market, they differ in terms of the issue and the mechanism of circulation of financial assets. Considering this, the study of imbalances in the development of the world market and the study of its regional differences at the present stage is highly relevant.

2. The object of research and its technological audit

The object of research is the global financial market, which unites national financial systems and has significant regional development differentiation. In particular, the main feature of the financial market at the present stage can be defined financial integration, which involves the process:

- unification of financial services, banking operations;
- liberalization of customs procedures;
- unification of the coordination system through international financial institutions, electronic means of payment;
- movement to the world monetary system with a single world money.

The financial markets of developed countries have united in the global financial system, which allows directing large amounts of capital not only to its economy, but also to the economies of developing countries.

One of the most problematic places for development of the world market is the reduction of the internal regulatory influence of countries on their financial system while increasing the influence on national economies of supranational entities and international companies. Also a big problem is the growth of world debt of countries on foreign borrowing. Increasing the availability of international borrowed funds for use in the domestic economy has allowed emerging countries to attract additional resources to meet the needs of the national economy.

3. The aim and objectives of research

The aim of research is studying regional imbalances in the development of the world market in the context of its dynamic development during 2000–2017. According to the aim, the objectives of research are:

1. Analysis of net inflows and outflows of foreign direct investment in % of the global economy GDP.

2. Estimation of the number of national companies listed on world markets and their market capitalization.

4. Research of existing solutions of the problem

Among the main areas of world market research, it is necessary, first of all, to single out a thorough study of its development [1, 2], however, they do not consider current market trends.

In [3, 4], an analysis of development of the global financial market in the conditions of cyclical development of the world economy is carried out; however, dynamic transformations are indicated only for certain countries of the world without taking into account regional entities.

Many scientists have considered the significant impact of globalization transformations on the development of global finance. In particular, in [5] market institutions and possible post-crisis risks of financial markets are investigated, however, using only developed countries in the world as an example, and similar problems of developing countries remained outside the study. Interesting results of a study of the financial markets of Sweden and the USA are given in [6, 7], however, the rest of the countries and regions of the world also remained outside the attention of the authors. The work [8] is devoted to the differentiation of market levels and the levers of their regulation. However, the author's opinion is not sufficiently supported by statistical data. The authors of [9] using the economic and mathematical methods of research have to connect the securities market and the development of the real economy in the dynamics from 1926 to 2000. However, despite the thoroughness of the calculations, the study lacks a regional approach that would reveal significant regional segmentation on the world financial market.

The authors of the study [10] make significant calculations on the international differentiation of the development of the financial market and the influence on it of the structural changes that are taking place at the present stage of its development. However, the study focuses on the mood of American investors in various economies of the world.

Thus, the results of the analysis allow to conclude that, despite the considerable amount of theoretical and practical research in the field of global finance, it is necessary to expand the analytical base of the study, which would reflect the dynamics of quantitative changes in the development of the global financial market from 2000 to 2017.

5. Methods of research

Classical general scientific research methods are used, namely:

- regression analysis to assess the prospects for the dynamics of market capitalization of companies listed on the stock exchange;
- methods of statistical data processing, in particular, the countries of the world are systematized in terms of the net inflow and outflow of foreign direct investment and the market capitalization of national companies listed on world exchanges.

6. Research results

An important part of the financial system of the global economy is the financial markets, in which the redistribution of financial resources. Such markets arise from the existence of temporarily free capital in the economy. Thanks to financial markets, they turn into loan capital invested in the economy.

In general, the types of financial assets of the financial market can be divided into (Fig. 1):

- credit market (capital market);
- stock market or share market;
- currency market;
- insurance market;
- gold market;
- financial services market.

Also, financial markets are divided into capital markets and money markets. Capital markets have financial claims with a maturity longer than one year, usually referred to as long-term claims. Short-term claims with a maturity of less than one year apply in money markets.

The money market is a highly competitive market in which a wide range of investors operate, from individuals and government agencies to large corporations, and all of them are offered a whole menu of documents of the internal money market. So, financial markets are a combination of financial institutions and securities markets.

The global financial system is very complex and diverse, it operates with a huge number of development indicators. So, to determine the main imbalances in the market, time series from 2000 to 2017 are analyzed. In such indicators [11]:

1. Foreign direct investment and its net outflow (% of GDP).

2. Foreign direct investment and its net inflow (% of GDP).

3. The number of national companies listed on the stock exchange.

4. Market capitalization of companies listed on the stock exchange at current prices (USD).

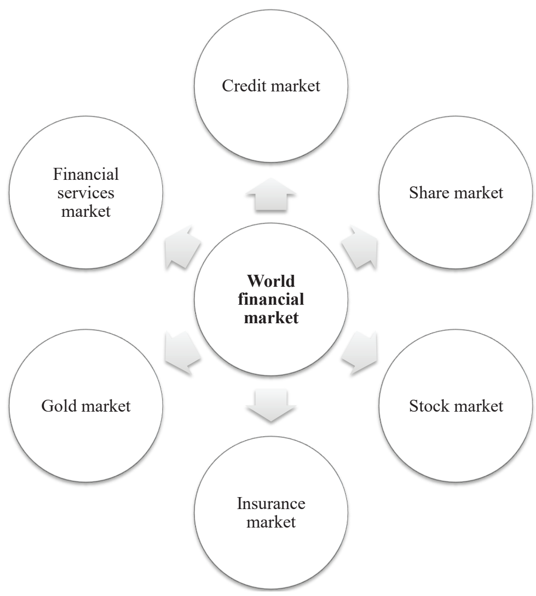

Fig. 1. Structure of the world market

Let's consider in more detail the results of the analysis.

1. *The net outflow of foreign direct investment* is an important indicator of a country's investment security. The analyzed data reflect the net outflow of foreign investment from this economy to other countries in % of the country's GDP.

The total global dynamics of the outflow of foreign direct investment for the period from 1970 to 2017 in % of global GDP are shown in Fig. 2.

As can be seen from the above data (Fig. 2), the maximum outflows of investment of the global economy were in the early 2000s and are on average 2.5 % per year.

Analysis of the regional diversification of the indicator under study during 2010–2017 is given in Table 1. They indicate a uniform trend in each of the investigated regions. The lowest rates of capital outflows in 2016–2017 are in countries characterized by the rapid development of the region of Latin America and the Caribbean, as well as South Asia.

Table 1

Dynamics of net outflow of foreign direct investment in regions of the world (2010–2017)

Regions	2010	2011	2012	2013	2014	2015	2016	2017
World	2.57	2.84	2.30	2.37	1.99	2.54	2.66	2.01
East Asia and the Pacific	2.14	1.95	1.84	2.09	2.50	2.27	2.47	2.01
Europe and Central Asia	3.97	4.69	3.57	3.53	2.08	4.34	4.71	2.29
Latin America and the Caribbean	1.05	1.04	0.91	0.77	0.98	1.06	0.78	0.46
Middle East and North Africa	1.20	1.08	0.45	1.08	1.06	1.14	1.59	n. s.
North America	2.33	2.81	2.45	2.41	2.10	2.01	1.90	2.40
South Asia	0.80	0.58	0.40	0.11	0.47	0.29	0.19	0.35
Sub-Saharan Africa	0.49	0.34	0.65	1.08	0.91	0.73	0.81	n. s.
Arab world	1.06	1.33	0.78	1.56	1.50	1.30	1.83	n. s.
Eurozone	4.74	5.94	4.86	4.64	3.41	6.14	5.56	2.24
European Union	3.92	5.13	3.73	3.85	2.02	4.18	4.96	2.64
OECD	2.88	3.55	2.76	2.87	2.07	3.05	3.20	2.36

Note: developed on the basis of data [11]; n. s. – no statistics

In general, over the study period, the average values of changes in the volumes of the net outflow of foreign direct investment are analyzed (Fig. 3).

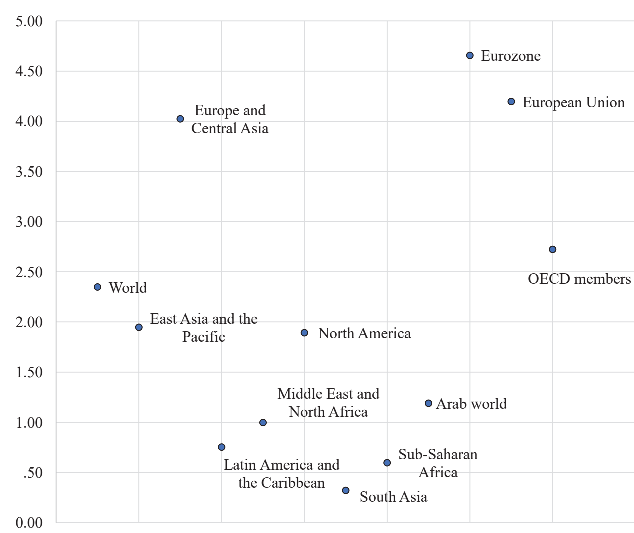

Fig. 3. Distribution of regions of the world according to the dynamics of the net outflow of foreign direct investment (2010–2017) [11]

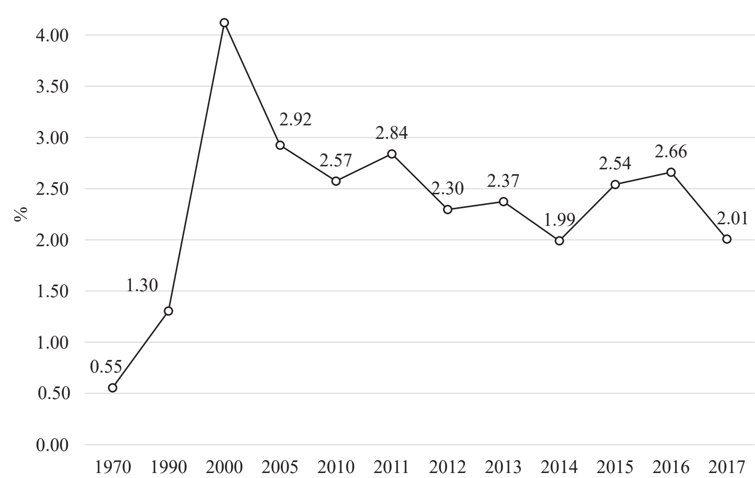

Fig. 2. Dynamics of net outflow of foreign direct investment in % of GDP (1970–2017) [11]

It is concluded that the biggest outflows are inherent in regions that unite countries of high socio-economic development (Eurozone, European Union, Europe and Central Asia, OECD countries (Organization for Economic Cooperation and Development)).

The smallest outflow indicators for the study period are characteristic for the countries of South Asia and Africa.

Outsider countries have been identified, the outflow of capital in 2017 reached the largest Malta (–59.36 %), Iceland (–8.91 %), Austria (–7.33 %), Seychelles (–4.79 %), Montenegro (–4.23 %).

2. *The net inflow of foreign direct investment* is also an important indicator of

 ISSN 2226-3780

the country's investment security, indicative of economic growth, a favorable investment climate and the presence of investment-attractive sectors of the economy. This indicator shows net investment flows from the reporting economy of the rest of the world in % of the country's GDP.

The general global dynamics of the inflow of foreign direct investment for the period from 1970 to 2017 (compared to the dynamics of the outflow of investments) in % of global GDP is shown in Fig. 4.

As can be seen from the above data (Fig. 4), the maximum volumes of investment inflows of the global economy were in the early 2000s and average of 3 % per year. In the 1970s and 1990s the outflow of investments was dominated by the net inflow of investment in the global economy, which indicated a long-term stagnation period of development and its end in the early 2000s.

Analysis of the regional diversification of the studied indicator during 2010–2017 is given in Table 2. It indicates uneven dynamics in each of the studied regions. The highest rates of capital inflows in 2017 are inherent in highly developed countries within the European Union or the Eurozone.

In general, over the study period, the average values of changes in the volumes of net inflows of foreign direct investment are analyzed (Fig. 5).

It is concluded that the biggest inflow values are inherent in the regions that unite countries of rapid or sustainable socio-economic development (Eurozone, European Union, Europe and Central Asia, Latin America and the Caribbean).

The smallest outflow indicators for the study period are characteristic for the countries of South Asia and Africa.

Leading countries were selected, capital inflows into which in 2017 reached the highest values (Fig. 6).

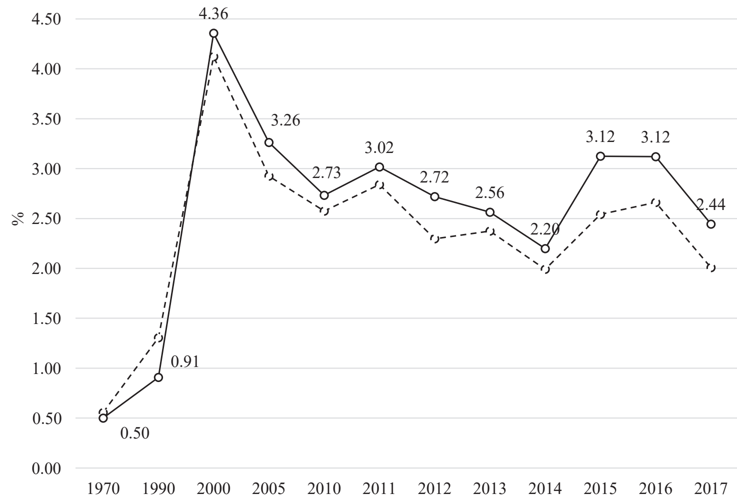

Fig. 4. Dynamics of the net inflow of foreign direct investment (as compared with the net outflow of foreign direct investment) in % of GDP (1970–2017) [11]

Table 2

Dynamics of net inflows of foreign direct investment in regions of the world (2010–2017)

Regions	2011	2012	2013	2014	2015	2016	2017
World	3.02	2.72	2.56	2.20	3.12	3.12	2.44
East Asia and the Pacific	2.85	2.45	2.77	2.80	2.80	2.37	2.21
Europe and Central Asia	4.29	3.95	2.98	2.03	3.96	4.87	3.36
Latin America and the Caribbean	3.54	3.43	3.16	3.25	3.79	3.53	3.05
Middle East and North Africa	1.96	1.79	1.75	1.49	1.67	1.78	n. s.
North America	1.71	1.67	1.92	1.57	2.89	2.55	1.79
South Asia	1.79	1.21	1.42	1.56	1.84	1.75	1.43
Sub-Saharan Africa	2.76	2.44	2.38	2.41	2.87	2.53	n. s.
Arab world	1.83	1.82	1.74	1.62	1.51	1.58	n. s.
Eurozone	5.61	5.11	4.09	2.12	4.65	3.96	4.40
European Union	4.64	4.13	3.37	2.11	3.84	5.23	3.68
OECD	2.76	2.43	2.28	1.74	3.08	3.30	2.36

Note: developed on the basis of data [11]; n. s. – no statistics

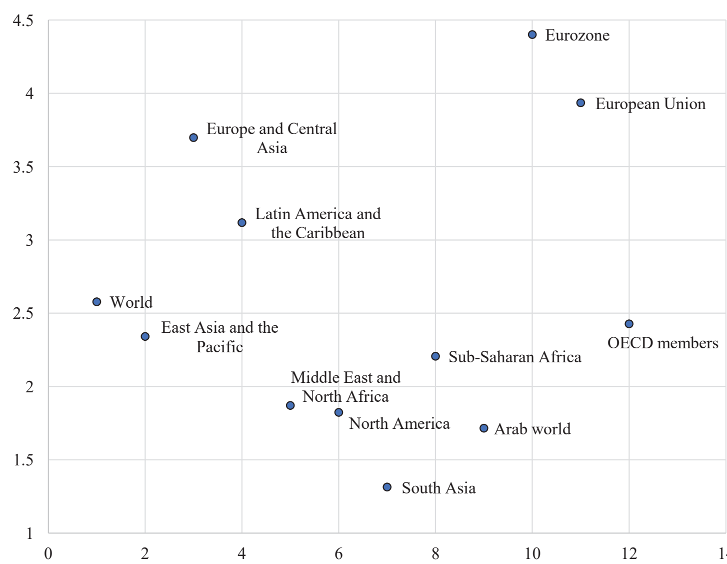

Fig. 5. Distribution of regions of the world according to the dynamics of the net inflow of foreign direct investment (2010–2017) [11]

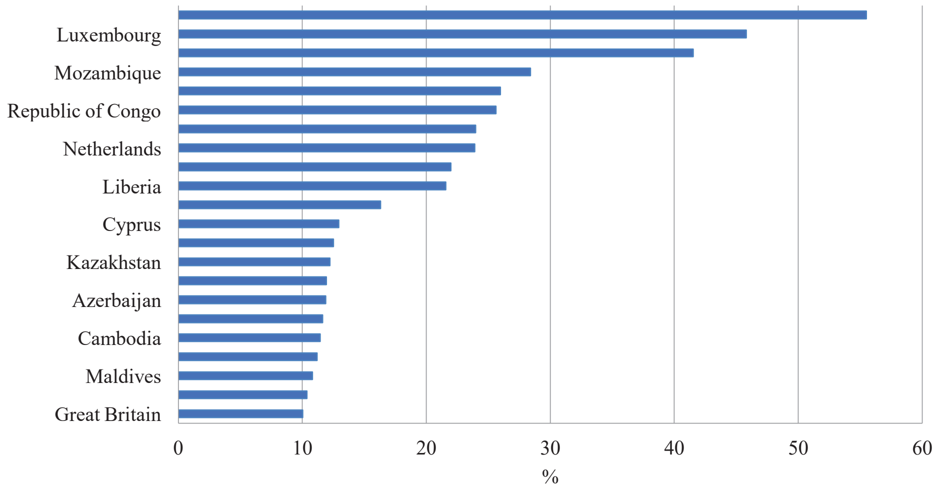

Fig. 6. Leading countries in terms of net inflows of foreign direct investment (2017) [11]

Fig. 6 indicate that, according to the results of 2017, the largest volumes of net foreign direct investment inflows were in Hungary (55.49 %), Luxembourg (45.81 %) and Hong Kong (41.53 %).

3. *The number of national companies listed on the stock exchange* is an indicator of the functioning of the securities market as part of the capital market, where the issue, purchase and sale of securities is carried out. The greater the number of national companies attracted to functioning on the stock exchange, the greater the degree of openness the national economy.

The general global dynamics of the number of national companies listed on the stock exchange from 1990 to 2017 is shown in Fig. 7.

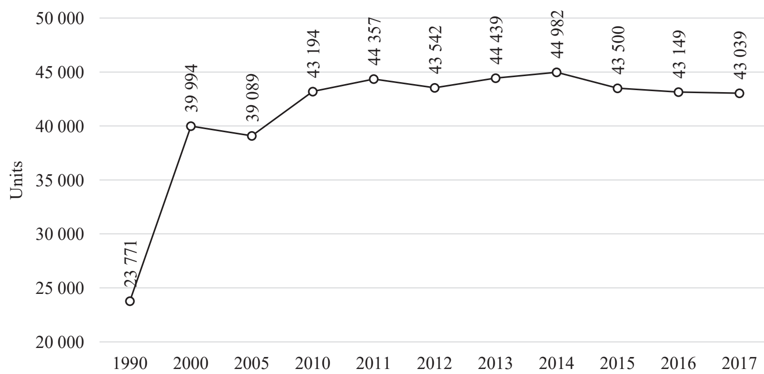

Fig. 7. Dynamics of the number of national companies listed on the stock exchange (1990–2017) [11]

As can be seen from the data (Fig. 7), since 2010 the number of such companies does not increase and amounts to 43000–44000 units.

Analysis of the indicator under study comparing 2010 and 2017 (Table 3, Fig. 8) shows that the majority of companies in the world are located in OECD countries (over 50 % of all relevant companies in the world). The countries of the European Union account for 1/5 of the companies in the world. In the countries of the Arab world there are only 2 % of companies that have quotes on world markets. And only the companies of the Arab world for the study period slightly increased the percentage of their companies in the world. The countries of the European Union and the OECD, on the contrary, have somewhat lost their positions in the global dimension.

In terms of the number of companies in the world, the countries of East Asia and the Pacific are leading (42.17 % in 2017 compared with 31.91 % in 2010). Approximately the same share of companies in the global dimension has the countries:

– Europe and East Asia (16.42 % in 2017 compared with 25.72 % in 2010);
– North America (17.72 % in 2017 compared with 18.67 % in 2010);
– South Asia (15.06 % in 2017 compared with 14.15 % in 2010).

Leading countries by the number of national companies listed on the stock exchange in 2017 are highlighted:

– India (5615 companies);
– USA (4336 companies);
– Japan (3598 companies);
– Spain (3110 companies);
– Canada (3278 companies);
– China (3485 companies);
– South Korea (2114 companies).

Table 3

Regional differentiation of the number of national companies that have quotations on the stock exchange (2010–2017)

Regions	2010	2017
World	100 %	100 %
East Asia and the Pacific	31.91 %	42.17 %
Europe and Central Asia	25.72 %	16.42 %
Latin America and the Caribbean	2.97 %	2.78 %
Middle East and North Africa	4.91 %	4.54 %
North America	18.67 %	17.72 %
South Asia	14.15 %	15.06 %
Arab world	2.62 %	2.72 %
Eurozone	13.91 %	11.04 %
European Union	21.88 %	20.17 %
OECD	56.57 %	52.57 %

Note: developed on the basis of data [11]

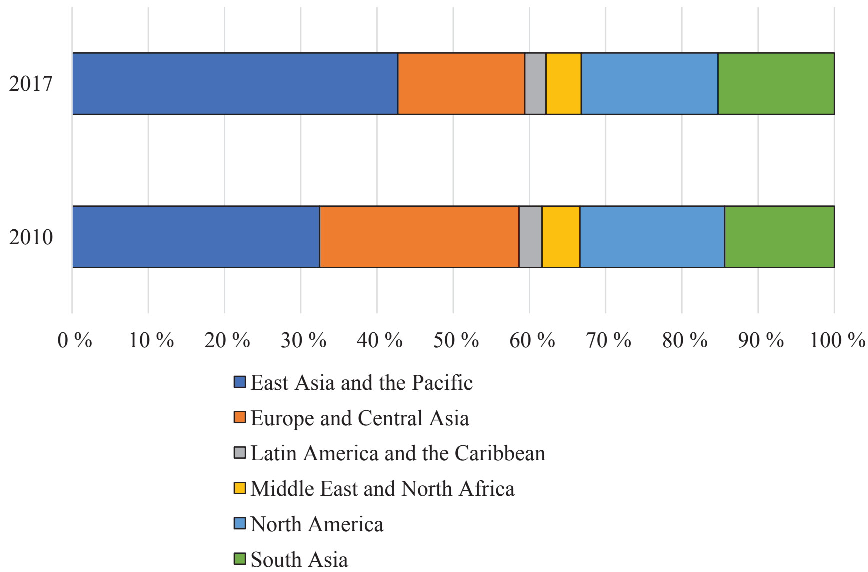

Fig. 8. Regional differentiation of the number of national companies that have quotations on the stock exchange (2010–2017) [11]

The countries of the Arab world and the OECD increased the capitalization of their companies during 2010–2017.

In terms of the number of companies in the world, the countries of East Asia and the Pacific are leading (33.53 % in 2017 compared to 30.96 % in 2010) and North America (43.54 % in 2017 compared to 37.8 % in 2010).

Leading countries in terms of market capitalization of companies listed on the stock exchange in 2017 are highlighted: the USA, China, Japan, Hong Kong and others (Fig. 11).

So, the analysis of regional differences in the development of the world market is made and the leading regions in terms of its development and the outsider regions are determined.

4. *The market capitalization of companies listed on the stock exchange* at current prices (USD) is a derivative indicator of the number of national companies listed on the stock exchange and also indicates the development of the securities market in countries.

The general global dynamics of market capitalization of companies listed on the stock exchange for the period from 1990 to 2017 are shown in Fig. 9.

As can be seen from the above data (Fig. 9), the dynamics of the market capitalization of companies listed on the stock exchange in the world, has a positive development trend and indicates the growth of the global economy.

Analysis of the investigated indicator comparing 2010 and 2017 (Table 4, Fig. 10) shows that the majority of companies in the world are located in OECD countries (almost 70 % of all relevant companies in the world). The countries of the European Union account for only 1/10 of the companies in the world.

In the countries of the Arab world there are only 1 % of companies that have quotes on world markets. And only the companies of the European Union and the Eurozone during the study period have somewhat lost their positions in terms of capitalization.

Table 4

Regional differentiation of market capitalization of companies listed on the stock exchange (2010–2017)

Regions	2010	2017
World	100 %	100 %
East Asia and the Pacific	30.96 %	33.53 %
Europe and Central Asia	18.55 %	13.96 %
Latin America and the Caribbean	5.31 %	2.53 %
Middle East and North Africa	2.06 %	1.72 %
North America	37.8 %	43.54 %
South Asia	3.36 %	3.07 %
Arab world	1.07 %	1.29 %
Eurozone	12.51 %	10.02 %
European Union	13.02 %	11.57 %
OECD	68.72 %	69.93 %

Note: developed on the basis of data [11]

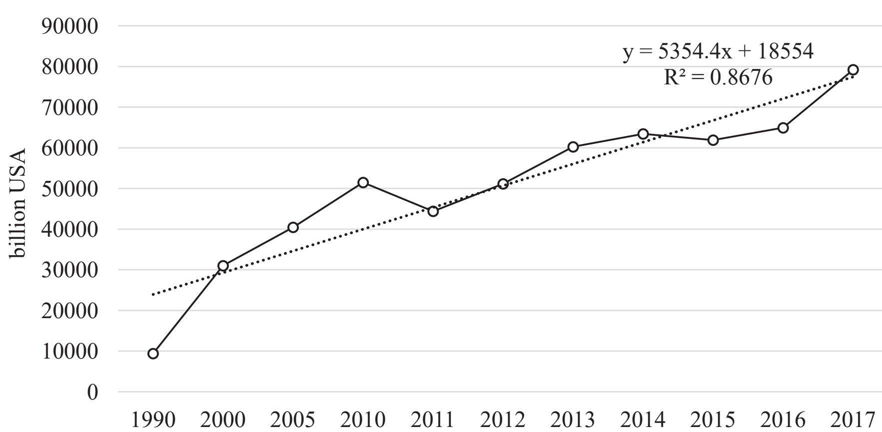

Fig. 9. Dynamics of market capitalization of companies listed on the stock exchange (1990–2017) [11]

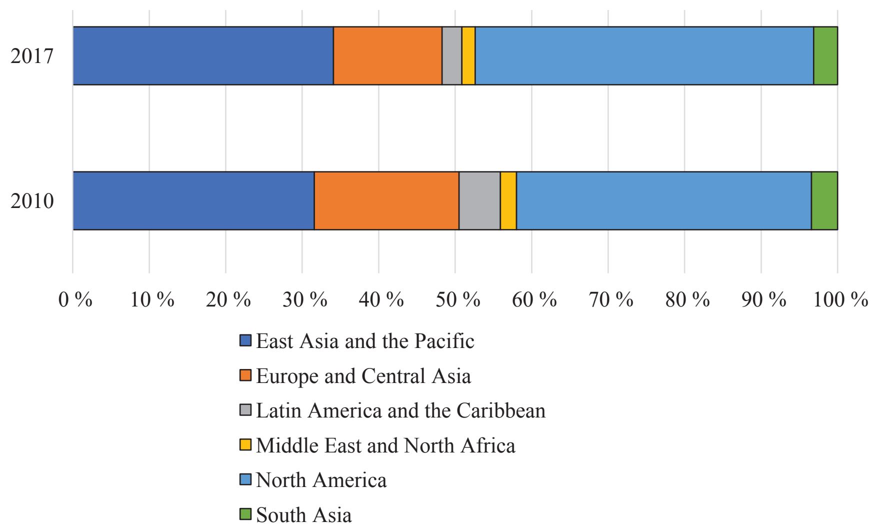

Fig. 10. Regional differentiation of market capitalization of companies listed on the stock exchange (2010–2017) [11]

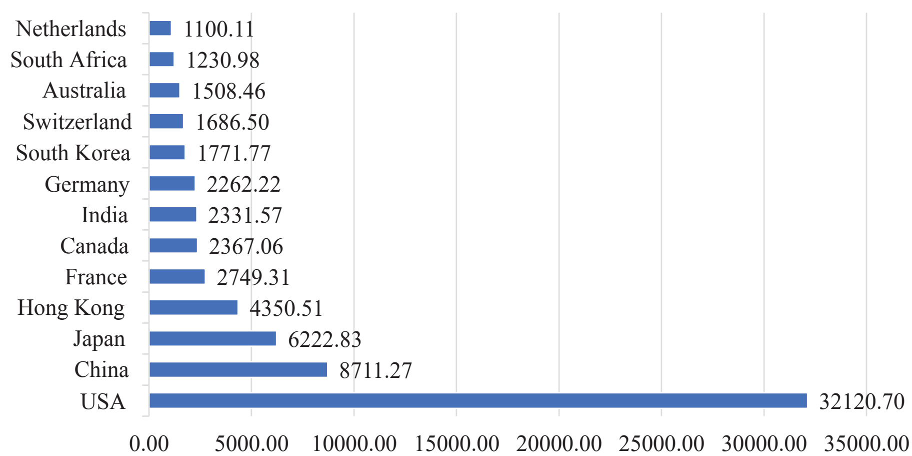

Fig. 11. The leading countries in the market capitalization of companies listed on the stock exchange (2010–2017) [11]

7. SWOT analysis of research results

Strengths. The global financial market operates on the basis of multilateral relations and is a harmonious combination of financial relations on a bilateral basis. This makes it possible to conduct research in the context of countries and regions of the world by definition of leading countries and countries-outsiders of the world market.

Weaknesses. The constant development of international markets and the integration processes in them contribute to the development of the world economy, but they make the economies of different countries more interdependent and reduce the opportunities for governments to regulate processes in national financial markets. However, it is this feature that makes it possible to quantify the interdependence of countries in terms of the net outflow and inflow of foreign direct investment.

Opportunities. The promising areas of world market research are the expansion of the database of indicators describing the state of its development, and further multivariate assessment using cluster and factor analysis. This will allow for a regional differentiation of the development of the world market at a higher scientific level.

Threats. Between the structural elements of the world market there is a constantly recurring interconnection, which determines the stages and forms of the process of the formation and development of the world economy. However, the development of world monetary and financial relations and the entire world economy is of an intermittent nature. In this case, the law of uneven economic development manifests itself. Thus, the dynamics of the global market has periods of growth and decline. Such situation does not always allow for regression analysis and requires the use of more complex methods of assessing the global market.

8. Conclusions

1. Emphasis is placed on significant regional diversification of the global market. Outsider countries are highlighted, capital outflows of which in 2017 reached the highest values:
– Malta (–59.36 %);
– Iceland (–8.91);
– Austria (–7.33 %);
– Seychelles (4.79 %);
– Montenegro (–4.23).

Leading countries in terms of the largest volumes of attracting foreign direct investment in 2017 are identified. Namely:
– Hungary (55.49 %);
– Luxembourg (45.81 %);
– Hong Kong (41.53 %).

ISSN 2226-3780

2. It is concluded that the leading countries in terms of the market capitalization of companies listed on the stock exchange. In particular, in 2017 leading countries were the United States, China, Japan, Hong Kong. The leading countries in the number of national companies listed on the exchange in 2017 were:

– India (5615 companies);
– USA (4336 companies);
– Japan (3598 companies);
– Spain (3110 companies);
– Canada (3278 companies);
– China (3485 companies);
– South Korea (2114 companies).

References

1. Petryk O. I. Shliakh do tsinovoi stabilnosti: svitovyi dosvid i perspektyvy dlia Ukrainy: monograph / ed. by Heiets V. M. Kyiv: UBS NBU, 2008. 369 p.
2. Bilorus O. H., Lukianenko D. H. et. al. Hlobalizatsiia i bezpeka rozvytku: monograph. Kyiv: KNEU, 2001. 736 p.
3. Brigham E., Gepanski L. Financial Management Theory and Practice. Chicago: The Dryden Press, 2011. 1184 p.
4. Liaskovets H. M. Doslidzhennia rozvytku svitovoho finansovoho rynku v umovakh tsyklichnosti svitohospodarskoho rozvytku. Odessa-Sevastopol-Donetsk: DonNU, RF NYSY, 2011. P. 425–433.
5. Market institutions, financial market risks, and the financial crisis / Carey M. et. al. // Journal of Financial Economics. 2012. Vol. 104, Issue 3. P. 421–424. doi: http://doi.org/10.1016/j.jfineco.2012.02.003
6. Hagelin N. Index option market activity and cash market volatility under different market conditions: an empirical study from Sweden // Applied Financial Economics. 2000. Vol. 10, Issue 6. P. 597–613. doi: http://doi.org/10.1080/096031000437953
7. Sarwar G. U.S. stock market uncertainty and cross-market European stock returns // Journal of Multinational Financial Management. 2014. Vol. 28. P. 1–14. doi: http://doi.org/10.1016/j.mulfin.2014.07.001
8. Bond P., Leitner Y. Market run-ups, market freezes, inventories, and leverage // Journal of Financial Economics. 2015. Vol. 115, Issue 1. P. 155–167. doi: http://doi.org/10.1016/j.jfineco.2014.08.008
9. Straehl P. U., Ibbotson R. G. The Long-Run Drivers of Stock Returns: Total Payouts and the Real Economy // Financial Analysts Journal. 2017. Vol. 73, Issue 3. P. 32–52. doi: http://doi.org/10.2469/faj.v73.n3.4
10. Switzer L. N., Tahaoglu C. The benefits of international diversification: market development, corporate governance, market cap, and structural change effects // International Review of Financial Analysis. 2015. Vol. 42. P. 76–97. doi: http://doi.org/10.1016/j.irfa.2014.11.010
11. World Development Indicators (WDI). URL: https://datacatalog.worldbank.org/dataset/world-development-indicators (Last accessed: 20.05.2018)

Bondarenko Mikhail, *Postgraduate Student, Department of Foreign Economic Relations, V. N. Karazin Kharkiv National University, Ukraine, e-mail: meo_1@ukr.net, ORCID: http://orcid.org/0000-0002-2460-3848*

Bunin Serhii, *Assistant, Department of Foreign Economic Relations, V. N. Karazin Kharkiv National University, Ukraine, e-mail: meo_1@ukr.net, ORCID: http://orcid.org/0000-0002-4707-1813*