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CROSS-COUNTRY ANALYSIS OF COMPANIES VALUATION IN DEVELOPED AND EMERGING MARKETS BASED ON THE OHLSON MODEL

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Motivation

The relevance of "considering the subject of stock pricing as a financial instrument lies in the widespread use of this asset by investors in the process of forming and managing an investment portfolio. Shares provide their holders with a higher yield in comparison with government and corporate bonds, however, as a rule, they are associated with a higher degree of risk, and in order to optimize the level of portfolio risk, it is necessary to approach in detail the assessment of the fair value of shares of each company included in the portfolio" [Khassanov, 2019b]. To date, a significant number of studies have been published on the stock pricing process.

Conceptually, asset valuation went through several key stages, starting from the early work of Arrow, Debreu, who proposed a general equilibrium system, Markowitz, who laid the foundations of modern portfolio theory, Sharpe, Lintner, Mossin, who were at the origins of the creation of the CAPM model. Criticism of the premises of the original CAPM model contributed to the development of two directions: the emergence of arbitrage pricing theory, which later grew into the theory of option pricing, and the study of intertemporal problems, whose proponents made significant contributions to the evolution of financial thought. Among domestic researchers, the key ones are scientific works of such authors as: Berzon N.I., Gryaznova A.G., Ivashkovskaya I.V., Teplova T.V., Fedotova M.A., Chirkova E.V. and others.

The calculation of the value of shares is based on the provisions of the income, comparative and cost approaches, within which the model of discounting future cash flows and the method of market multiples, are most common. The dissertation research focuses on "an alternative methodology proposed in 1995 in

the article "Earnings, book values and dividends in equity valuation" by James Ohlson. Ohlson's model in general is an econometric model with three specific prerequisites, aimed at explaining market quotations using factors of financial and non-financial information" [Khassanov, 2019b]. The first premise boils down to the assertion that the discounted expected dividend flow determines the market value of the company. The second premise about "the ratio of net growth shows the dependence of the book value of equity capital, net profit and dividends, provided that everything is reflected in the financial statements" [Berzon, Khassanov, 2019]. The idea of capitalizing "abnormal returns" and their addition to the net asset value is called the Edwards-Bell-Ohlson model (hereinafter referred to as EBO), the theoretical concept of which is described in the works of Edwards, Bell and Pisnell [Edwards, Bell, 1961; Peasnell, 1982]. Ohlson, improving the EBO model, introduces a third "premise of information dynamics of "abnormal income" that follow the autoregressive process tend to zero at infinity. The premises described above conclude that making decisions regarding current and expected dividend payments changes the book value of capital, but does not affect the amount of current and future "abnormal income" and the indicator of "other information", which is consistent with the concept of Miller, Modigliani" [Berzon, Khassanov, 2019].

Analyzing the reasons for the emergence of the Ohlson model, it can be noted that the model has become a universal answer to eliminate most of the shortcomings inherent in traditional approaches to assessing the value of a firm. Due to the combination of the advantages of the income and cost approach, the presence of formal links between the valuation and accounting indicators, the possibility of analyzing not at the level of individual companies, but at the macro level, the Ohlson model is able to identify the features of national accounting systems and help solve complex issues of their transformation (for example, transfer to IFRS).

Since the publication of Ohlson's paper [Ohlson, 1995], the model has been "validated in various variations on data from more than 30 developed and emerging markets worldwide, indicating a high degree of academic interest" [Khassanov, 2019b]. At the same time, the original methodology proposed by Ohlson was not deeply tested on the information resources of the Russian stock market, which is the main argument in favor of choosing a research topic.

Contribution

1. In the dissertation, in contrast to previously conducted scientific studies, fragmentarily covering individual local markets of one or two countries, for the first time a large-scale study was conducted on one-stage testing of the Ohlson model using data from 845 companies representing 26 developed and emerging markets in Europe.

2. In the context of the studied market clusters, for the first time, the values of the "information dynamics" of abnormal incomes (ω) and the parameter of "other information" (γ) were empirically calculated, which makes it possible to statistically adapt the model for these specific markets. Following Ohlson's concept, these values are in the range from 0 to 1, while developed markets are characterized by greater stability of parameters ($\omega = 0.78$, $\gamma = 0.45$ versus $\omega = 0.59$, $\gamma = 0.36$) in comparison with emerging markets.

3. Based on the values of "information dynamics", an empirical analysis was carried out aimed at identifying the significance of factors in the Ohlson model within and between clusters of developed and emerging markets in Europe. The set of significant factors is identical, but their relative importance is different: in developed markets, the change in abnormal earnings per share has the strongest influence on the dynamics of share prices, while in emerging markets the key parameter is "other information".

4. For the sample of companies under study, the Ohlson model makes it possible to determine the nature of deviations from the actual prices of shares in

both developed and emerging markets. In the course of the analysis, two groups of factors were identified: those that affect the sign with average deviations and those that determine the accuracy of the estimate by the Ohlson model. The first group is the level of inflation relative to the target and the company's industry affiliation. The share of the state in the share capital and the nature of changes in dividend payments belong to the second group of factors.

5. For the first time, on the data of developed and emerging markets in Europe, the Ohlson model was compared with traditional approaches to company valuation, as a result of which it was revealed that the Ohlson model, along with the discounted cash flow model, gives a more reliable result than the market multiplier method.

Practical significance of the results obtained

The results of the dissertation research can be used in making investment decisions with a focus on shares of public companies representing developed and emerging capital markets, due to the understanding of the nature of the impact of a number of factors on their market value. Selected parts of the study can be used in courses on company valuation for students of master's programs.

Brief literature review

The author analyzed more than 180 scientific papers published between 1950 and 2020. The period of the 60-70s of the XX century marked the heyday of financial thought, which saw the development of the concept of general equilibrium of Arrow-Debreu and the provisions of the CAPM model, simultaneously with which the fundamental works of Modigliani and Miller appeared [Modigliani, Miller, 1958; Miller, Modigliani, 1961]. In particular, Modigliani and Miller found that the cost of raising capital, and hence the structure of capital (as a means of financing), do not affect the value of the firm. It is understood that changes in the ratio between equity and borrowed funds should also not affect the value of the company in the absence of arbitration.

Until 1961, the approach to dividends was descriptive, and the only question was to find the proportion between dividend and exchange rate income when assessing the value of shares. Modigliani and Miller argue that there is no relationship between dividend payments and firm value under certain assumptions. Among the assumptions are the invariability of the investment policy, the symmetry of information for shareholders and managers, the absence of costs in the purchase and sale of shares, tax payments and agency costs. The article shows that the owners of shares can receive dividends without any costs by selling their shares and not depend on the dividend policy of the companies. Such statements caused a lively discussion in the scientific community, during which the effect on the value of the company of the size of dividends, changes in dividend payments, and the form of payment of dividends was tested.

Simultaneously with this, the Edwards-Bell model appeared which laid the foundation for a deep study of the relationship between accounting indicators and the value of the firm [Edwards, Bell, 1961]. In particular, it is assumed that changes in the size of assets and equity lead to changes in market prices [Edwards, 1975; Edwards, 1980; Chambers, 1982]. The model is based on the ratio of net growth, which sets the dynamics of net assets. The model "includes the concept of "abnormal returns" (residual), showing the difference between the return on capital actually received by the investor and the expected return, that is, the return based on the discount rate" (EBO model) [Rutgaiser et al., 2005]. Relying, among other things, on the formal relations proposed by Peasnell [Peasnell, 1982], Ohlson develops the concept and prerequisites for his model [Ohlson, 1995].

Since 1995, the information field has been narrowed down to 40 scientific articles directly containing testing of the Ohlson model on real data from world markets. Their geographic coverage is "wide enough and includes the markets of the following countries: Austria, Belgium, Great Britain, Germany, Greece, Spain, Italy, Turkey, France, Sweden, Canada, USA, Latin America, Mexico, Jordan,

China, Kuwait, Pakistan, Taiwan, South Korea, Japan, Ghana, South Africa" [Khassanov, 2019b].

One of the key tasks of the researcher is the approximation of the "other information" parameter. The term "other information" "means data relevant to the company's valuation, the impact of which will be reflected in the reporting of the future period. In most of the articles studied, this array is ignored in order to simplify the empirical analysis, which is identical to testing the residual income model (hereinafter referred to as RIV)" [Berzon, Khassanov, 2019].

Relevant studies devoted to testing the complete Ohlson model were critically analyzed, which made it possible to develop their classification depending on the type of approximating indicator taken as a parameter of "other information". The first block of meaning includes historically early works based on analysts' forecasts [Dechow, et al., 1999; Gregory, et al., 2005; Choi, et al., 2006; Easterday, et al., 2011; Al-Hares, et al., 2011; Higgins, 2011; Silvestri, Veltri, 2012; Bergmann, Schultze, 2018]. The second semantic block is represented by studies that include corporate governance factors as a parameter of "other information" [Lee, et al., 2011; Fiador, 2011; Brugni, et al., 2012; Özer, Çam, 2016; Velte, 2017; Miralles-Quiros, et al., 2017; Tshipa, et al., 2018]. The third semantic block includes articles whose authors relied on financial indicators and the measurement of their quality in the matter of approximating the "other information" parameter [Vergos, et al., 2011; Durán-Vázquez, et al., 2014; Zhang, 2016; Alfraih, 2016]. The specified blocks of work did not overlap with each other in the context of the used parameter "other information".

Objectives of the research

The *purpose* of the study is to conduct a comparative analysis of the ability of the Ohlson model to assess the value of companies in the developed and emerging markets of Europe.

To achieve this goal in this study, the following *objectives* were solved:

1) to provide a historical overview of equity valuation models;

2) to identify and describe the essence of Ohlson's economic model;

3) to analyze the results of empirical studies based on testing the Ohlson model from 1995 to 2020;

4) to test the Ohlson model on the basis of available statistical information for the stock markets of developed and emerging countries;

5) to compare the results obtained with the actual stock prices and explain the reasons for the deviations.

Research hypotheses

Hypothesis H1a. In developed markets, the impact of analysts' underestimation of companies' net profits on market quotes is significant and has a positive sign.

In the context of the hypothesis, the leading works are [Dechow, et al., 1999; Gregory, et al., 2005; Choi, et al., 2006; Easterday, et al., 2011; Higgins, 2011; Silvestri and Veltri, 2012; Bergmann and Schultze 2018].

Hypothesis H1b. In emerging markets, the impact of analysts' underestimation of companies' net profits on market quotes is significant and has a positive sign.

The hypothesis for emerging markets is built by analogy with the results from developed markets. As an example, the work of Al-Hares and co-authors [Al-Hares, et al., 2011] can be singled out, "emphasizing the exceptional importance of including the parameter "other information" in the process of determining the market value of Kuwait companies, calculated as the difference between the consensus profit forecast of the following period and the amount of the book value of equity, profit, capital expenditures, research costs, dividends of the current period" [Berzon, Khasanov, 2019].

Hypothesis H2a. In developed markets, the impact of abnormal returns on market quotes is significant and has a positive sign. In other words, a co-directional movement of stock prices and the specified variable is assumed.

Most of the studies studied use the book value of equity and abnormal earnings as the main variables and prove their importance in the issue of valuation of shares.

Hypothesis H2b. In emerging markets, the impact of abnormal returns on market quotes is significant and has a positive sign.

The hypothesis for emerging markets is built by analogy with the results from developed markets. The experience of Asian studies is interesting in this regard. Rehman, Shahzad [Rehman, Shahzad, 2014] found that "the book value of net assets and abnormal profit positively affect the dynamics of company stock prices in the Pakistani market. At the same time, the coefficients for the book value of net assets in all cases exceed the coefficients for profit" [Berzon, Khasanov, 2019]. The article by Wang, Zhang [Wang, Zhang, 2015] "established a direct impact of the book value of equity and abnormal profit on the market value depending on the level of profitability of companies in China" [Berzon, Khasanov, 2019].

Hypothesis H3a. The proportion of board members with professional certificates and licenses has a significant positive impact on share market quotations.

Hypothesis H3b. The average term of office of members of the board of directors has a significant positive impact on the market share prices.

Hypothesis H3c. The share of independent members in the Board of Directors and the Audit Committee has a significant positive impact on the market share prices.

Hypothesis H3d. The size of the board of directors has a significant positive impact on the market share prices.

In the process of selecting corporate governance factors, the author relies on his own judgments and the results of the articles listed below. The influence of the share of independent members on the board of directors on the market value of companies is shown in the works of Teresen et al., Gan, Simerli and Moorsli [Terjesen, et al., 2016; Gan, Simerly, 2019; Moursli, 2020]. The consideration of the level of education and specialty is studied in detail in the article by Rossignoli [Rossignoli, et al., 2020]. The average tenure of board members and the size of the board of directors are among the factors that determine market value in studies by Fiador, Welte, Tshipa et al., Ghana, Simerli [Fiador, 2011; Velte, 2017; Tshipa, et al., 2018; Gan, Simerly, 2019].

Hypothesis H4. The Ohlson model, in comparison with the method of market multipliers, has a smaller deviation between the actual prices of shares and the estimated values of the model used.

The starting point for such a formulation is the presence of disadvantages inherent in the method of market multipliers: the problem of selecting multipliers and related errors that affect the valuation of companies, possible bias in the value of the value of an analogue company used, the presence of statistical errors.

Hypothesis H5. The Ohlson model has a smaller deviation between the actual stock prices and the estimated values of the model used when compared with the discounted cash flow model.

Testing the Ohlson model without taking into account the informational dynamics of "abnormal incomes" is equivalent to testing the RIV model. A comparative analysis of the estimates obtained by RIV and traditional approaches is presented in the works of Bernard, Penman, Sugiannis, Frankel, Lee, Francis, Lundholm, Okif, Heinrichs and co-authors [Bernard, 1995; Penman and

Sougiannis 1998; Frankel, Lee, 1998; Francis, et al., 2000; Lundholm, O'Keefe, 2001; Heinrichs, et al., 2013]. These studies confirm the advantage of the Ohlson model over income approach models.

Methodology

Due to the fact, that "the regressant of the model is the price of shares; the studied set of companies includes those of them whose shares were continuously quoted during the observation period. Financial institutions (banks and insurance companies) were excluded from consideration, due to the fact that for financial organizations the components of their balance sheet (assets) are liabilities for companies in the real sector of the economy" [Berzon, Khassanov, 2019; Khassanov, 2019b]. A similar approach was used by a number of authors who excluded banks and insurance organizations in the process of sampling [Dechow, et al., 1999; Gregory, et al., 2005; Choi, et al., 2006; Easterday, et al., 2011; Al-Hares, et al., 2011; Higgins, 2011; Kouki, 2018]. For the purpose of "comparability of the analyzed data, the variables derived from the values of financial indicators are reduced to a single currency (US dollars)" [Berzon, Khassanov, 2019; Khassanov, 2019b].

In the context of the assumption about the informational dynamics of abnormal incomes, it is the discount rate that comes out on top. Initially, Ohlson (1995) proposed ways to include risk in the model, one of which was to replace the risk-free rate with a synthetic discount rate (risk-free rate plus risk premium). Another way involves the use of the CAPM; the third way is more speculative, assuming an abstract measure of risk connecting unpredictable observation errors and implicit price system. The author made a choice in favor of an alternative option, which, according to its estimates, is close to market realities, that is, the use of CAPM taking into account country risk on the Damodaran website [see, for example, Myers, 1999; Lee, et al., 2011].

In order to test the Ohlson model, information about the month of the end of the financial year for each company from the final sample is systematized. This information is obtained from the Compustat database and allows the use of the value of the explained variable for the "correct month for companies whose fiscal year does not end in December. In the dissertation research for 119 out of 845 companies, the month of the end of the financial year was different from December (14% of the sample). In all scientific articles devoted to testing the Ohlson model, regressants are indicated for a certain month after the end of the financial year, however, evidence of such a preliminary analysis of companies for which the financial year ends in a month other than December is not given in them" [Khassanov, 2019b].

In this work, it is customary to investigate the influence of factors in the Ohlson model in comparison with the actual share price in the fourth month after the end of the financial year. Such a choice of the period for companies can be justified by two reasons: firstly, it takes up to four months to form an audit report based on the results of an audit of the annual financial statements of organizations, and it is the data that has passed the audit that deserves more confidence. Secondly, in the studies studied, stock quotes for testing the Ohlson model are most often used individually for the fourth month.

The use of panel data is common in the scientific literature on testing the Ohlson model. In particular, in the articles of most of the studied authors [e.g., Dechow, et al., 1999; Agostino, et al., 2008; Rehman, Shahzad, 2014; Okafor, et al., 2016] this method of information analysis is used.

At the preliminary stage of testing, the coefficients of information dynamics were calculated for abnormal incomes and "other information". To test the hypotheses, the linear specification of the Ohlson model is used, which is reduced to the dependence expressed by formula 14. Here, the information dynamics coefficients (gamma and omega) play a key role. The equations for finding the

gamma and omega coefficients are autoregressions, which are estimated on the historical data of abnormal incomes and the "other information" parameter separately for each market and for clusters. After calculating the gamma and omega coefficients, it became possible to obtain the parameters α_1 and α_2. Subsequently, in accordance with them, the estimated share price was calculated using formula 14 and compared with the actual value of the share price in the next period.

Deviations from actual prices are considered in three types: average, average absolute, root-mean-square. With the relative simplicity of calculations, the average deviations make it possible to draw a conclusion about the fact of an underestimation or overestimation, depending on the sign, and the standard deviations serve as an indicator of the accuracy of the forecast.

Such an iteration is carried out on the horizon of one year, however, it is worth noting that the statistical series for the explanatory variables is taken from 2011 and the identified factors of the market value of companies can have a significant impact in the long term.

Additional subsamples were formed depending on industry affiliation, as well as for various macroeconomic scenarios (inflation dynamics and the national currency exchange rate). An important condition is the structure of the sample of companies in each market; for this, in addition to the industry, the share of companies with state participation, as well as the size and changes in dividend payments during the period under review from 2011 to 2018, was specified. In the course of a comparative analysis, the factors influencing the sign with average deviations and the accuracy of forecasts were established.

Information base. In order to prepare the dissertation research, the databases of Bloomberg, Capital IQ, Thomson Reuters Eikon, Institutional Brokers' Estimation System Thomson Reuters (hereinafter referred to as I/B/E/S), Compustat S&P Global (hereinafter referred to as Compustat) were used.

From these sources, information available over the years was downloaded, which described the financial condition of public companies in Europe, their financial statements in accordance with IFRS, the number of shares in circulation, the amount of dividends, the month of the end of the financial year of companies, analysts' forecasts by company, macroeconomic and industry indicators, non-financial information from 2011 to 2018.

Initially, "the volume of downloads from the Compustat database was 3557 public companies registered in the developed and emerging markets of Europe. However, taking into account data from the I/B/E/S system, the sample size was reduced to 1025 companies. In order to prevent heteroscedasticity, the model regressors were normalized to the number of shares in circulation, after which the final number of observed companies was obtained, equal to 845" [Berzon, Khassanov, 2019; Khassanov, 2019b].

The study, being empirical, has limitations associated with the formation of the final sample. As the composition of data expands using various information resources, the funnel of the volume of companies available for analysis narrows. It is also worth noting that for developed markets, initial data are available for a period beyond the considered one, but it was decided to prioritize the comparability principle, in order to correctly compare with emerging markets, whose financial time series are shorter and contain gaps.

Main findings

The empirical part of the study led to the following results and conclusions, taking into account the mentioned limitations.

Referring to the obtained results, we can conclude that for clusters of developed and (developing) markets, the influence of the "other information" parameter is significant, and the undervaluation[1] of shares by 2.26 (1.61) % leads

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[1] The "other information" parameter is mainly approximated through "the difference between the predicted net profit of companies, which is calculated as the arithmetic average of analysts' forecasts for an individual company,

to an increase in the share price by 1%. For the studied developed markets, the situation is similar: the "other information" parameter has a positive sign for the UK, Germany, France, Italy and is in the range from 2.40 to 3.59. For Poland, Turkey and Russia, the interval is from 1.44 to 1.63.

The inclusion of the "other information" parameter in the Ohlson model has a positive effect: it reduces the deviations in stock price forecasts in the developed markets cluster from -0.277 to -0.112 and in the emerging markets cluster from 0.337 to 0.288.

The study found that stock prices of companies from a cluster of developed and (emerging) markets are positively affected by abnormal earnings. This influence is determined by the following relationship: a 1% increase in company stock prices results in an increase in abnormal earnings per share by 2.57 (1.08) %. In the context of developed markets, the situation is similar (range from 2.75 to 5.24). For the studied emerging markets, the indicator of abnormal incomes is significant, has a positive sign for Russia, Turkey and Poland and is in the range from 0.51 to 1.40.

Pointwise comparison of results between clusters of developed and emerging markets reveals similarities and differences. Based on their inherent properties, developed markets are more efficient, more stable, and less volatile than emerging markets, which may predetermine the excess of the coefficient estimate for abnormal incomes in clusters. The values of this variable, driven by the dynamics of net income and the book value of equity of the previous period, indicate that emerging markets are more volatile and speculative than developed ones, as well as that players in emerging markets can have a greater influence on the deviation of the company's market value from its book value. The indirect influence of information efficiency, as a property of financial markets, comes to the fore when comparing the influence of the "other information" parameter in clusters. The

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and the actual net profit for the financial year" [Khasanov, 2019b]. In other words, a positive difference represents an overvaluation of the company's shares, and a negative difference represents their undervaluation.

obtained values (2.26 versus 1.61) can confirm the opinion that in developed markets financial and analytical information reaches market participants quickly, and it is reflected in share prices almost instantly. In contrast, emerging markets, which, among other things, are characterized by a smaller market capitalization of companies, are dominated by speculative motives and more emotional behavior of investors in the event of a strong deviation of the fact from forecasts, which leads to stock price fluctuations.

When analyzing the results, two points should be taken into account: the sign of the average deviation (that is, the fact that the Ohlson model overestimates or underestimates the shares of companies) and the degree of accuracy of the forecasts (the smaller the deviation in absolute value, the more accurate the stock price forecast). The industries that are overestimated by the Ohlson model include the following industries: oil and gas, metallurgy, construction, logistics and transport, agriculture, information technology. These industries belong to a number of cyclic industries. The fact of revaluation intensifies during the period of accelerating inflation. Industries whose stocks have been undervalued include counter-cyclical industries (energy, trade, medicine and pharmaceuticals, telecom). The fact of underestimation is more noticeable for the period of inflation slowdown. Inflation plays a bigger role than industry affiliation.

The final results of the assessment are influenced by the sample structure of the considered list of companies in developed and emerging markets. In addition to industry affiliation at the company level, the following conditions are considered: the share of companies with state participation and the dynamics of dividend payments.

After analyzing the available data, we can conclude that the accuracy of the Ohlson model forecasts in the developed markets of Europe increases for:

• companies with a low level of government participation in capital;

• companies that have paid stable or growing streams of dividend payments.

In turn, the accuracy of the Ohlson model forecasts in emerging markets in Europe increases for:

• companies with a high level of government participation in capital;

• companies that have paid stable or growing streams of dividend payments.

After analyzing the available results, it can be concluded that the accuracy of the Ohlson model forecasts for the studied companies from developed and emerging markets in Europe increases for companies paying stable or growing dividend payment flows. In turn, the factor of the presence of the state in the equity capital of joint-stock companies affects differently: in developed markets, the accuracy of forecasts of the Ohlson model increases with a low level of state participation in the capital. In emerging markets, which are characterized by increased volatility and speculativeness, a significant presence of the state in the share capital of companies acts as a reassuring guarantee for investors and improves the accuracy of the Ohlson model estimates.

Based on the estimates obtained, the following conclusion follows: Ohlson model is able to predict the behavior of stock prices for the considered companies in clusters of developed and emerging markets in Europe. The results of the model are comparable to articles that target the developed markets of North America and Asia and the emerging markets of Latin America and Africa.

List of author's original articles

The main results of the research were published in four papers with a total volume of 5.0 author pages; personal contribution of the author is 4.5 author pages:

1. Berzon N.I., Khassanov A.B. (2019). Ohlson Model-based Valuation of Companies in European Emerging Markets. *Moscow University Economic Bulletin*

/ *Вестник Московского университета. Серия 6 Экономика*, vol. 5, pp. 92–115. (In Russ.).

2. Khassanov A.B. (2019a). Comparative analysis of the Ohlson model and methods for companies' valuation in Russia, Poland and France. *Finance and business / Финансы и бизнес*, vol. 15, issue 4, pp. 105–121. (In Russ.).

3. Khassanov A.B. (2019b). Business Valuation Through the Ohlson Model: Evidence from the Advanced Markets of Europe. *Finance and Credit / Финансы и кредит*, vol. 25, issue 5, pp. 1205–1226. (In Russ.).

4. Khassanov A. (2021). The Impact of Corporate Governance on the Cost of Equity for Russian Companies in the Ohlson Model. *Journal of Corporate Finance Research / Корпоративные Финансы*, vol. 15, issue 1, pp. 5–18.

The results of the dissertation were discussed at the following conferences and seminars:

1. Report at the XX April International Scientific Conference on Economic and Social Development (April 2019, Moscow, NRU HSE) with the work "Valuation of companies based on the Ohlson model on the example of emerging European markets".

2. Report at the XXVI International Scientific Conference of Students, Postgraduates and Young Scientists "Lomonosov 2019" (April 2019, Moscow, Moscow State University), according to the results of which the work "Valuation of companies based on the Ohlson model on the example of developed European markets" was awarded a prize from the organizers of the event.

3. Report at the XXVII International Scientific Conference of Students, Postgraduates and Young Scientists "Lomonosov 2020" (November 2020, Moscow, Moscow State University) with the work "Corporate governance in the Ohlson model for assessing the value of public companies in Russia".

Also, the results of the dissertation were repeatedly discussed at research seminars of the postgraduate school in economics (2018-2020, Moscow, NRU HSE).

List of key references

1   Berzon N.I., Khassanov A.B. (2019). Ohlson Model-based Valuation of Companies in European Emerging Markets. *Moscow University Economic Bulletin / Вестник Московского университета. Серия 6 Экономика*, vol. 5, pp. 92–115. (In Russ.).

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3   Khassanov A.B. (2019b). Business Valuation through the Ohlson Model: Evidence from the Advanced Markets of Europe. *Finance and Credit / Финансы и кредит*, vol. 25, issue 5, pp. 1205–1226. (In Russ.).

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5   Agostino, M., Drago, D., Silipo, D. (2008). International Accounting Standards and information efficiency in the European stock market. *SSRN Paper*, pp. 1–24.

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