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Investors' behavior models in emerging markets

The study aims to reveal and classify investors' behavior models in emerging financial markets as well as to uncover Russian, Latin American and developed financial markets co-movement patterns that may act as an indicator of global investors' homogeneous behavior. Additional goal of the research is the suggestion of three behavioral scenarios of the Russian financial market development.

The research is multidisciplinary – it embraces not only economic and financial topics, but also some elements of psychology and sociology, therefore it combines quantitative methods (correlation and macroeconomic analysis, Granger-causality test) as well as qualitative methods (conceptual modeling, analysis of international sociological surveys' results and investment funds' prospectuses). Correlation analysis and Granger causality test are performed on daily time series denominated in U.S dollars.

Hypotheses tested in the research:

H_0 (1): Russian and Brazilian financial markets demonstrate significant co-movement, because of the foreign investors' dominant role

H_0 (2): The higher the share of US **portfolio investment** in the emerging market is, the more significant its co-movement with global (American) stock market is

H_0 (3): The higher the share of US **direct investment** in the emerging market is, the more significant its co-movement with global (American) stock market is

H_0 (4): Russian and Latin American financial markets demonstrate significant co-movement, because of the similar internal investors' behavior models

H_0 (1) is not rejected. Spearman correlation coefficient of the Russian and Brazil stock markets in the period from 22.06.2012 to 29.09.2017 is 0.91. In the same time Brazilian stock market Granger caused Russian stock market. The given period is chosen, because in 2012 metals' prices began to fall that triggered the crises in natural resources – oriented economies.

In 2005-2017, the share of foreign investors in the Brazilian stock market (BOVESPA) was on average 41%, in the derivatives market (BM&F) – 25%. The share of foreign investors in BOVESPA in 2017 was 1.5 times higher than in 2005, in BM&F – 3 times higher [1]. Foreign portfolio investors' share in Russia is significant as well – 44% in the stock market and 43% in derivatives market in 2013-2017 [9]. Moreover, Russian and Brazilian financial markets are very attractive for carry-trade speculative strategy realization as both countries have high key rate in real terms.

According to investment prospectuses of such global institutional players as Norges Bank Investment Management, Hermes Investment Funds Limited Company, Goldman Sachs Emerging Markets CORE Equity, Comgest Growth Emerging Markets, the considered funds invested in Russian and Brazilian stock markets in 2014-2017. Norges Bank Investment Management follows the strategy of diversification and hedging risks in order to preserve national wealth as well as to contribute to its growth. The rest of the mentioned funds have long-term capital growth strategy, which means that their goals in emerging markets are merely speculative [2, 3, 4, 5, 6, 10].

$\mathbf{H_0}$ **(2)** is not rejected. Correlation analysis performed in the period from 31.01.2008 to 29.09.2017 showed the following results: Russia & USA – (0.36), Brazil & USA – (0.58), Peru & USA – (0.15), Chile & USA – (0.02), Mexico & USA – 0.27, Argentina & USA – 0.96. United States portfolio investment share was analyzed in 2008, 2009, 2014 and 2016. However, the weight of the later periods is higher than those of the earlier – total portfolio investments in the considered group of countries in 2016 1.8 times exceeded the level of 2008. US portfolio investors' share in the Russian market was 37% in 2014 and 45% in 2016, in the Argentinian market – 64% and 53% respectively, in the Mexican market – 61%. US portfolio investment share for the rest of the countries was between 43% and 53% in 2014 and 50-52% in 2016 [8].

$\mathbf{H_0}$ **(3)** is not rejected. For Argentina and Mexico USA is the largest direct investor, its share in total direct investments in these countries makes up 33% and 39% [11]. For Russia USA is not in top-10 direct investors [13], for Brazil, Chile and Peru USA it is on the 2nd - 3rd place [11].

$\mathbf{H_0}$ **(4)** is not rejected. According to G. Hofstede's research [7] and World Values Survey [12], Post-soviet and Latin American behavior model have many common features. Investors in both models may be characterized by low risk-tolerance combined with the aspiration to get "easy money". Similarly to Continental European model, the role of banking system is significant, property concentration takes place. In CIS countries as well as in Latin America local investors demonstrate pronounced collectivism that increases the probability of herding and behavioral anomalies connected with newsbreaks in financial markets.

Based on the above-mentioned results of hypotheses' testing it is possible to make the conclusion that the key difference in foreign and local investors' behavior in emerging markets is risk-appetite. Foreign investors have high risk-appetite, while local investors' tolerance to risk is low. In the majority of cases foreign investors' financial, information and analytical resources as well as their experience in the industry are more significant as compared with the local players. Predominantly foreign investors' behavior model is close to Anglo-Saxon, sometimes – to Swiss or Scandinavian. Their level of individualism is very high, in the portfolios' structure stocks constitute larger share than debt instruments. As foreign players are more experienced, the probability of following contrarian strategies and being less liable to behavioral anomalies is higher. Local investors in emerging markets, on the opposite, tend to collective behavior. Some of them enter equity markets, when due to different reasons there are few options to allocate funds to less risky alternatives such as banking and real estate sectors or debt markets. Thus, bank products' preference, understanding of the fact that competition with foreign investors that have opportunities for market manipulation is unequal are reasons for local investors for not entering financial markets. High volatility, the lack of strict legislation as well as comparatively deep expertise, on the opposite, attract speculative capital to emerging markets.

For effective forecasting of the Russian financial market middle-term dynamics, it is necessary to take into account the following aspects: low role of local retail investors; significant influence of foreign investors – nonresidents; speculative short-term character of the investments; Russian and Latin American markets' strong link; high emerging markets' volatility; determination of the Russian financial markets dynamics by oil prices and the US dollar exchange rates.

The above-mentioned factors significantly influence Russian financial market middle-term dynamics in the absence of significant internal or external shocks. The most probable external shock may be financial contagion – large developed markets' crisis spillover to emerging markets, because of the global investors' negative sentiment. The accumulation in the banking system of the toxic assets that will be purchased in the process of financial rehabilitation by the Central bank may act as an important intracountry risk. The considered process will lead to inflation growth simultaneously with money supply contraction: large depositors – both physical and legal persons may lose their funds, because of the banks' bankruptcies. The described phenomenon most likely will result in negative stock market dynamics and bonds' yield growth. Business' liquidity loss as well as decrease of the purchasing power and trust to the market by retail investors may aggravate the situation.

It is possible to outline three Russian stock market development aggregative scenarios: further governmentalization of economy, preservation of current economic situation, economic liberalization.

The scenario of economy's further governmentalization assumes sanctions' reinforcement for foreign companies, particularly stricter trade and capital movement limitations. As a result, financial market capitalization, return and liquidity may fall. Russian government-sponsored companies and Central Bank will crowd out foreign players, whose share in the market is high. In the scenario of current economic situation preservation foreign players will continue to dominate the market and carry out mostly speculative strategies. Russian and Latin American financial markets co-movement will continue, because, as can be seen from the large investment funds' portfolios, from the global investors' point of view entering given markets results in similar risk-return ratios. In the least probable economic liberalization scenario foreign players will continue to dominate in the Russian financial market, however their investments will become long-term and strategic. This process will be accompanied by foreign direct investment stimulation.

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