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HOW STOCK MARKET REACTS TO DIVIDEND SURPRISES: RUSSIAN AND INDIAN EXPERIENCE

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Abstract: This paper empirically investigates average reaction of emerging markets of Russia and India to dividend surprises on the post-crisis period 2010-2014. Traditionally, unexpected dividend component has been measured in relation to the "naïve" model, which assumes that the next period expected dividend level equals the previously paid dividend. The study proposes different, rarely applied in the dividend announcements literature analysts' expectations-based approach to measure unexpected component of a dividend announcement. As a proxy for dividend surprise the difference between the actual dividend and the consensus analyst forecast is used. The research was conducted using event study methodology on the sample of Russian and Indian public companies, which regularly pay dividends. Obtained results of the study provide the grounds to make conclusions about the fact that Russian market on average reacts negatively to both good and bad dividend surprises; good dividend surprises on average trigger positive abnormal returns on Indian stocks, whereas bad and no surprises are associated with negative reaction of Indian market. In this research the results are discussed from the perspective of signaling theory of dividends, markets efficiency, behavioral finance, economic and legal issues. The results of the study could provide market players with an instrument of investments decision-making. For companies it is important to take into account market reaction when deciding upon dividend payments and improvement their dividend policies.

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Introduction

Traditionally, unexpected dividend component has been measured in relation to the "naïve" model, which assumes that the next period expected dividend level equals the previously paid dividend. The term "naïve model" has already been used in the early papers (Lintner, 1956), (Wooldridge, 1983), (Bar-Yosef, Sarig, 1992), which investigated dividend policy and reaction of different markets to dividend announcements. Already at that time the researchers raised a question about the type of dividend news to which markets react. How to take into account the fact that with time markets absorb new publicly available information and reflect it in the stock prices? Alternative approach to the "naïve" model is the dividend "surprises" model, to which the authors (Wooldridge, 1983), (Bar-Yosef, Sarig, 1992) switch in their studies. Dividend "surprises" model assumes that expected dividend equals to the level forecasted by the financial analysts. This alternative to the "naïve" model is quite justified: analysts' forecasts already take into account both macroeconomic factors and special characteristics of a company, including previously paid dividend. In other words, consensus forecasts to high extent reflect all public information available by the moment forecast is made, which is not the case for the "naïve" model. In this paper we apply rarely used in the dividend announcements literature analysts' expectations-based approach to measure unexpected component of a dividend announcement. The goal of the research is to empirically investigate the average reaction of emerging markets of Russia and India to dividend surprises.

In the study the problem is examined from perspective of market reaction to dividend surprises, but not dividend changes per se. As a proxy for dividend surprise the difference between the actual dividend and the consensus analyst forecast is used. The idea behind this approach is that market participants' expectations are assumed to be built on the basis of publicly available forecasts about companies' financial performance. The research was conducted using event study methodology on two separate samples of Russian and Indian public companies, which regularly pay dividends. The study tests signaling theory of dividends as applied to the Russian and Indian stock markets. The time period of the research is 2010-2014. The relevance of the research can be reasoned by the following: novel, rarely applied in the dividend announcements literature analysts' expectations-based approach; post-crisis shifts in investors' behavior, which have triggered increased academic interest to behavior errors investigation; potential to fill the gap in the study of emerging markets in the context of dividend announcements.

Emerging markets are of a particular interest due to their quick growth, increasing level of liberalization and integration into a global economy. The two markets are the parts of BRICS and are considered to be developing. Nevertheless, they appeared to be very different from the points of view of capitalization; companies' dividend policies, ownership structure and concentration; investors' expectations; as well as legislation. All this makes it even more interesting to compare the results of the study for these markets with different characteristics.

Obtained results of the study demonstrate that Russian market on average reacts negatively to both good and bad dividend surprises. On the contrary, good dividend surprises on average trigger positive abnormal returns on Indian stocks, whereas bad and no surprises are associated with negative reaction of Indian market.

Literature Review

According to signaling theory of dividends, managers use dividend payments as a signal about company's future growth and profits (Ross, 1977; Bhattacharya, 1979; Miller, Rock, 1985; Jensen, 1986; Wooldridge, Ghosh, 1995). As a result, market reaction on the dividend announcements is reflected in the company's stock price. Adherents of dividend payments claim that dividends signal the market about the financial health of a company and its confidence about the future profitability (Lintner, 1956; Grullon, 2002). In the most recent paper (Liu and Chen, 2015) the researches provide evidence in favor of this and additionally inves-

tigate that dividends are signaling future equity-scaled earnings rather than future asset-scaled earnings, which can be corresponded to the fact that equity investors are the primary target to which the management team wants to signal about firm earnings prospects. Proponents of the opposite point of view claim that growth in dividend payments may signal about the lack of investment opportunities and attractive projects (Myers, 1977; Myers, 1984; John, Kalay, 1985).

In their paper on US market reaction to the announcement of dividend payments Aharony and Swary (1980) found that neutral announcements, regardless of the fact whether they were preceded before or after the earnings disclosure, do not affect the company's stock return. In case of positive announcements about increased level of dividends the market responded positively to such event. Finally, negative announcements about decreased dividends resulted in negative abnormal returns. It should be noted that both in the case of increased and reduced dividend level, market reaction to particular event was similar regardless of the fact weather the dividend announcement preceded or followed the earnings announcement.

Later on the researchers developed the subject further and provided the evidence for other markets, both developed and emerging. Signal theory of dividends in practice is confirmed not by all authors. In particular, in the study (Vieira, 2011) the author considers three developed markets – the UK, France and Portugal – and makes investigations that stock excess returns are observed only at the market of the UK. According to the obtained event study results the French and Portuguese markets on average do not react to the dividend announcements. Unconventional results were also obtained in the researches (Karim, 2010) and (Sorensen, Arveschoug, 2004). In both studies the authors conclude that the corresponding markets of the UK and Denmark react negatively to the announcements of increased dividends. Additionally, in the work of (Karim, 2010) the author investigates that the US market on average does not react to the dividend payments announcements, which differs from the earlier studies (Aharony and Swary, 1980; Benesh et al, 1982).

Emerging markets are of a particular interest due to their quick growth, increasing level of liberalization and integration into a global economy. Concerning Russian market reaction to dividend announcements, it should be pointed out that in the studies (Teplova, 2008), (Rogova and Berdnikova, 2014) and (Berezinets et al., 2015) quite unconventional results were obtained, despite the fact that different time intervals were used in the named studies. The studies have shown that the Russian market on average reacts negatively to positive dividend news. Such interesting findings do not coincide with traditional signalling theory. In the other study of the Russian market done by (Teplova, 2011) different findings were obtained. It was investigated by the author that during the period from the mid of 2009 to the mid of 2010 Russian market reacted positively to announcements on dividend reductions. Nevertheless, separate study on the subsample of oil&gas firms has shown that investors of this industry on average reacted negatively to the dividends cut announcements.

If to consider the existing studies of Indian market with respect to their reactions to dividend announcements, it should be highlighted that the results are also not of a one place. For example, in the studies (Mallikarjunappa, 2009) and (Taneem, 2011), (Berezinets, Bulatova, Ilina, 2013) the researchers provide evidence for the presence of abnormal returns around the date of dividend announcement attributable to the Indian market. The event study results indicate that Indian market on average reacts positively to dividend increases, negatively to dividend decreases and does not react to unchanged dividend announcements. In other words, results of the named studies show that the average reaction of Indian market is in line with the signaling theory of dividends. The same results in the favour of the fact that the Indian market is inefficient in semi-strong form are obtained in the paper (Kumar, Singhal, Kamboj, 2011), in which the authors conduct the study on the sample of firms only from the banking sector. Nevertheless, the papers (Sharma, 2011) and (Ramachandran, 2013) argue that there is no evidence of market inefficiencies in the semi-strong form. The authors study reaction of the Indian market to the dividend announcements and conclude that information release of divi-

dends does not influence the stock returns in any significant manner. Such ambiguous results may be because of different time intervals consideration and, thus, different behavioural patterns and dividend expectations of market players; or different samples criteria.

In the studies of market reactions to dividend announcements the authors assume that the next-period expected dividend is to be be unchanged compared to the previous-period paid dividend. At the same time the researchers suggest that unexpected part to which market reacts or does not react is the difference between the announced dividend and the previous dividend. According to this, the researchers classify the announcements into good news, bad news and neutral news. However, many researchers argue that it is not fully correct to take dividend change as a proxy for dividend surprise (Wooldridge, 1983; Bar-Yosef, Sarig, 1992; Conroy, Eades, Harris, 2000; Fuller, 2003; Andres et al., 2013; Amin et al., 2015). They explain it by the fact that expectations of market players about forthcoming dividend and their signalling effects are formed by the analysts' forecasts but not by the previously paid dividend. The researchers who are on the side of using consensus dividend forecasts as the natural estimate of dividend surprise call the traditional approach to be "naïve". There is an element of truth in such criticism: the time passes by, new information is revealed to the market in the form of the forecasts, the market absorbs this information and reflects it in the stock price, which means that an unexpected component is now on the difference between the announced dividend and the forecasted one.

The classical paper (Wooldridge, 1983) analyses the impact of dividend surprises on common stock as well as on preferred stock and bonds, - along with the signaling effect of dividends the author studies the wealth transfer effect on the sample of 225 companies traded on NYSE over the 1970-1977 period. As far as dividend surprises had a similar directed impact on common stock value, preferred stock as well as bonds value, the author concludes that signaling rather than wealth redistribution is the primary factor influencing security prices.

There are also more recent papers, which consider analyst forecasts in the context of different markets' reactions to dividend announcements. The study by (Fuller, 2003) is devoted to the investigation of the relation between informed trading and the US market reaction to dividend signal. The event study has shown positive reaction of the US market to positive dividend surprises. Empirical results additionally confirm that the more informed the trading in a firm's stock is, the smaller the price reaction to a dividend increase. With the increase in the number of informed traders on the company's stock, the private information is reflected more precisely in the price and thus the importance of the signals made by the firm to the market decreases (e. g., dividend or earnings announcements).

One of the most recent articles, in which dividend surprises are determined as the difference between the announced dividend and the average analyst dividend forecast, is (Andres et al., 2013). Results of the study have shown that positive surprises as well as no-news events are associated with a significantly positive announcement day abnormal return and negative dividend surprises trigger a negative share price reaction of the German market. Along with that positive surprises have slightly more pronounced positive impact on the stock return than no-news events. The researchers also conduct the study using naïve expectations model and make a conclusion that sorting by dividend changes and dividend surprises yields different results. However, when the researchers control for dividend surprise it turns out that dividend change has no explanatory power for the abnormal return. The authors build an econometric model which indicates that dividend surprises but not dividend changes per se explain variations in CAAR. Based on that the researchers conclude that studies of dividend announcements should take market expectations into account and thus should consider dividend surprises rather than dividend changes.

The most recent research on the subject of dividend surprises impact on stock returns is conducted by (Amin et al., 2015). The investigations point out that there is no market reaction to dividend announcements made by the US companies in the dividend-reappearance era (2002-2008). In addition, the researchers investigate significant and negative relation between

institutional investors presence in the ownership structure and information content of dividend announcements proxied by CAR.

To sum up, the authors of the researches, which were reviewed in this section agree upon the fact that market expectations play an important role in share price reactions to dividend announcements. Thus, in this paper we switch from the naïve model to the dividend surprises approach in order to study the reaction of emerging markets of Russia and India to dividend announcements from the different viewpoint. The analysis of the Russian and Indian stock markets as well as dividend policies of Russian and Indian companies is conducted in the next section of the paper.

Institutional Background: Stock Market and Dividend Policy in Russia and India

1. Russian stock market environment

Emerging markets themselves constitute an environment which is substantially different from that of the developed markets. This environment is determined by institutional, legal, economic, social, political, cultural and other features. Compared to other BRICS stock markets, Russian capital market is quite young and small in terms of total capitalization. In particular, capitalisation of the Russian stock market at the beginning of 2014 was less than $800 bln. For comparison, capitalisation of the BSE India stock exchange at the same time was approximately $1,200 bln, of Shanghai stock exchange – near $2,500 bln. For all that, the number of stock issuers on the SSE exceeds 1000 companies, on the BSE – exceeds 5000 companies and on the Moscow SE the number of listed companies is less than 300.

Russian stock market was developing quite rapidly since 1994, when massive voucher privatization has taken place. By the year 2005 the capitalization of the Russian market reached $600 bln in many respects due to high returns, which was taking place along with high volatility of the Russian market (Goriaev, Zabotkin, 2006). The most sizeable characteristics of the Russian stock market are its low liquidity and high concentration in terms of capitalization. Liquidity of the Russian market is the lowest among the BRICS countries: for example, in 2013 the yearly turnover expressed in USD to GDP was only near 11%. The ratio of total stock turnover in USD to total market capitalization in Russia is also low: only 30% compared to, for example, 152% in China. These figures support the fact that Russian market suffers from low liquidity, which negatively impacts fair stock pricing. In particular, low liquidity of the market is one of the reasons of the undervaluation of many Russian companies' shares due to the lack of the objective criteria of valuation. Talking about the market concentration, in Russia the share in total market capitalization, which belongs to the top-10 most capitalized domestic companies, is twice higher than that in India or China: 62% in Russia against 31% and 33% in India and China respectively. Among others, one of the specific characteristics of the Russian market is the dependence of its indicators on the commodity market prices, especially on oil prices.

It should be highlighted that the general mood of the Russian investors and their trust was substantially undermined during the global financial crisis of 2008-2009, after which the market has not fully recovered mainly due to the impact of unfavorable economic and political factors. Thus, in 2001-2003 the RTSI Index was growing (Fig. 1) despite the slowdown on the US market along with financial and political instability, which put the pressure on the Latin-American stock market. Despite this, because of growing stock price of the Russian blue chips the market stayed in plus following the trading results of the year 2003 (Lucey, Voronkova, 2008). After the year 2005 the RTSI was growing up to the moment when the global financial crisis occurred. From the behavior of the RTSI it can be marked that after the year 2008 the market was recovering until March 2011 but still has not reached the pre-crises maximum value of 2487.98 index points: the peak after-crisis RTSI value was on the 4th April 2011, when index equaled to 2092.32 index points.
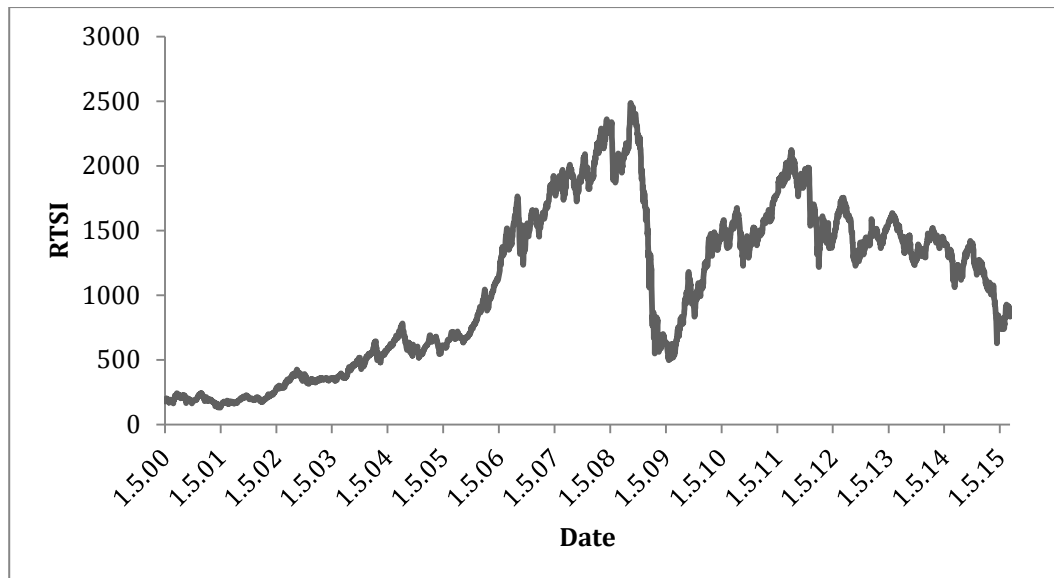
Figure 1. Dynamics of the RTSI index, 2000-2014

Source: Finam

After April 2011 the market has been showing decreasing trend and the downfall was deepened against the background of the occasions of 2014 (oil price drop, weakening of the RUB etc.), when the slump in Russian stock prices has taken place. During 2014 the total market capitalization of Russian companies has dropped by 50.1% (Annual query tool…, 2015) and its performance was considered by Bloomberg analysts to be the worst in the whole world (Russian stock market demonstrated…, 2015).

History of dividend payments by Russian companies points out the fact that the majority of dividend paying companies pay dividends once a year, without interim dividend payments. For example, in the year 2013 only 28 companies paid interim dividends once, 4 companies – twice and 2 companies 0 three times. The total number of dividend paying companies equaled to 117 (Russian capital market 2013…, 2013).

In general, after the financial crisis 2008-2009 there was a positive growing trend in average dividend yield of the Russian stocks. By the year 2014 the average annual dividend yield reached the level of 6.1%, which is, how analysts explain, in many respects due to the new norms of dividend payouts for the government-owned companies (25% of earnings), which have come into force from November 2012.

Despite the recessionary trends, which have taken place in the year 2014, in 2015 the majority of companies have increased dividends in comparison with the previous year. In absolute terms, following the results of the year 2014 the total announced by the Russian companies dividends have increased by 20.3% up to 929.7 bln RUB (Finam: Dividends-2014…, 2015). The total dividends paid by the Russian firms in 2014 were about 770 bln RUB. The statistics of dividend payments by Russian companies also points out the high level of concentration: for example, in 2013 10 companies accounted for 88.1% of the total dividend payments.

To sum up, it can be judged from the above analysis that Russian companies are currently on the stage of improvement of existing dividend policies or on the stage of forming effective dividend policies, which can be considered as one of the instruments which the companies use in order to increase their attractiveness for investors.

2. Indian stock market environment

Let us move on to the analysis of the Indian stock market and to the dividend policy features of Indian companies. The two major stock exchanges in India are Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). Indian capital market has a long history: BSE is the eldest stock exchange in the Asian region; it dates back to the year 1875. With all

that, it should be pointed out that in India there is a noticeable bias of liquidity of stocks towards family-owned companies as well as towards firms of machine and pharmaceuticals industries.

Capitalization of the Indian market is comparable with the one of developed markets, the total number of companies listed on BSE exceeds 5,500. Investors rights in India are protected by the Security Exchange Board of India, which is a non-statutory body and promotes orderly development of the securities market.

Another very important feature of the Indian market is the fact that the major portion of the funds invested in the stock market is coming from Foreign Institutional Investors (FII). Since 1991 Indian authorities actively work in the direction of economy liberalization. In the early 1990s the government of India has developed a special economic liberalization program. Opening of the market has led to substantial inflow of foreign investments in the Indian economy. Yearly foreign investments are about the level of $20 bln and almost one third of all stock transactions fall on foreign investors (Biswas, 2008). However, such peculiarity of the Indian market also has its dark side. More than half of all investments by FII is made in the form of hot money. This means that these funds are invested only for a short-term in order to make some quick profits. They are not invested for the long-term, which raises considerable concerns of the Government of India (All big crashes of Indian market…, 2015). Such high dependence on foreign direct investments makes the market more fluctuating, since foreign investors are very sensitive to inner market shocks and tend to quickly withdraw money and direct them to investments in other stock markets, which can provide investors with "safer" profits.

The fact that Indian market is highly dependent on foreign investments makes it to be more dependent on foreign stock markets, especially the US market. In this respect Russian market is different, being more isolated and less related to foreign stock markets. This means that volatility of the Indian market is highly linked to the global bourses. The thing is that in recession of the United States' economy foreign institutional investors tend to reallocate their funds from risky developing markets to developed ones. This fact undoubtedly influences the stock market, from which investments are withdrawn, i. e. India. If to have a look at the development of BSE SENSEX Index (Fig. 2), it is indeed noticeable that, for example, in the year 2008, when the housing bubble in the US burst, SENSEX Index has dropped by more than 50%: from 20300 index points at the beginning of the year to 9647 index point at the end of 2008.
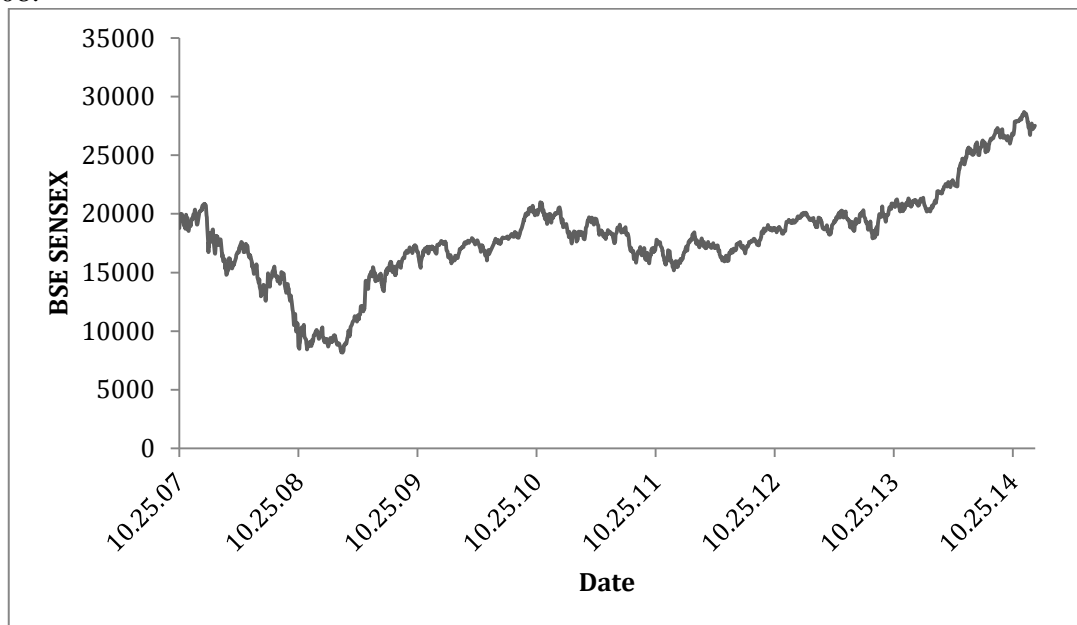

Figure 2. Dynamics of the BSE SENSEX index, 2007-2014
Source: www.bseindia.com

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On the contrast to the Russian market, Indian equities seem to be overvalued compared to the other BRICS nations and developed nations like the US and Japan. According to estimates by Thomson Reuters, the price-to-earnings multiple as of June 30, 2014, for U.S. equities was 19.2, for China 6.3, for Brazil 13.8, for Japan 13.9, and for Russia 5.3 (Must-know: why Indian equities…, 2014).

If to consider dividend policies of Indian companies, the analysis shows that most companies pay dividends as percentage of stock's face value. In Russia dividend payments per share are stated based on the dividend payout ratio. This means that in most cases Board of directors in Russia decides upon total amount out of free cash flow which will be distributed as dividends. That is why in India dividends quite often are stable from one period to another. In Russia, on contrast, dividends per share tend to be more volatile.

Taxation is another important feature of Indian market, which can partly influence dividend policies of Indian companies. There is a substantial difference in tax rates on capital gains and dividend income. The former in India is a subject of taxation on the rate from 10% to 40% depending on the type of an asset, whereas dividend income is usually exempt from taxation at all. This means that from the point of view of taxation Indian investors benefit more from dividend payments rather than from capital gains.

Global financial crisis 2008-2009 had an impact on the Indian market in terms of dividend payments. However, it is interesting that this impact was not only negative but sometimes positive. As it is reported by Tawiah and Bogeh (2014), in automotive industry average payout ratio has grown during the financial crisis years by almost 38%: in 2007-2008 average payout ration for companies of automotive industry was approximately 45%, whereas in 2008-2009 industry average was near 62%. The authors explain this fact mainly by the reduced number of investment opportunities during the crisis. However, it is striking that during the recovery period 2010-2011 the automotive companies have reduced dividend payout ratio on average by 50%, which Tawiah and Bogeh (2014) link to the fact that during the recovery period companies were becoming more confident about the global economy hence retaining more money to take advantage of the recovery. This pattern of dividend policy changes under different economic conditions plays in favor of the fact that dividend policy should be flexible with the objective of wealth maximization.

Analysis of the Indian market has shown that it is mature market with a long history and a number of remarkable peculiarities, such as high dependence on foreign investments as well as spread of family-owned conglomerates. These characteristics impact dividend policy of Indian companies.

To wrap up the analysis of the two stock markets – Russia and India – the following has to be mentioned. These two markets are the parts of BRICS and both of them are considered to be developing. Nevertheless, they appeared to be very different from the following perspectives: companies' typical dividend policies, ownership structure and concentration; investors' expectations; as well as legislation. All this makes it even more interesting to compare the results of the study for the two named markets with different characteristics.

Hypotheses and Methodology

Following the signalling theory of dividends as well as the researches (Wooldridge, 1983), (Fuller, 2003), (Andres et al., 2013), (Amin et al., 2015), etc., the two hypotheses were formulated for the event study on the samples of Russian and Indian companies:

H1: stock market reacts positively to good dividend surprises;

H2: stock market reacts negatively to bad dividend surprises.

Event study is a widely used methodology for testing signalling theory on different markets. This methodology was used in classical papers (Aharony, Swary, 1980; Divecha, Morse, 1983) as well as in more recent studies (Andres et al., 2013; Vieira, 2011; Dasilas, 2011; Karim, 2010).

First, let us consider the choice of event type, event day, estimation as well as even window. In the current research under event we understand the level of announced dividend. As event day we take the date of the boards of directors meeting, when the recommended dividend is announced. Indeed, first information about recommended dividend appears at the day of board of directors meeting but not when dividends are actually paid, which is why particularly this day is considered in the following study as an event date. All the dividend announcement dates were obtained from the Thomson Reuters Eikon Database. Only annual cash dividends were considered in the research.

Analysis of previous studies demonstrates that long event windows are usually chosen, when the reaction to events, which potentially have a long-term effect, is examined (e.g., M&A announcements). In their paper Agrawal et al. (1992) have selected a five-years event window in order to investigate the market reaction to M&A announcements. Shorter event windows are selected in cases when the effect of an announcement is potentially short-term. Dividend announcements belong to such type of events. As discussed in (Kothari, 2001) in such cases it is accepted to select an event window, which is no longer than 1 year and on average is 41 days long. Some authors use 21-days event window (e.g., Aharony, Swary, 1980; Irum et al, 2012; Joshipura, 2009); others consider shorter event windows of 11 or even 3 days (e.g., Andres et al., 2013). Based on previous studies and the nature of the event it was decided to choose the 11-days event window in this study (5 days before and after the event).

The choice of estimation window was also based on previous research analysis. Peterson (1986) in his paper devoted to the event study methodology discussion has indicated that average estimation window lies in the interval from 100 to 300 days. In most cases researchers select the estimation window, which lasts from 100 to 250 days. In the research (Aharony, Swary, 1980), the estimation of model parameters is conducted on the time period of 120 days. In the paper (Akbar, Baig, 2010) the length of the estimation window also equals to 120 days. However, some researchers use longer estimation periods in their works. For example, Taneem (2011) uses 250-days estimation window, Akben-Selcuk and Altiok-Yilmaz (2010) consider a 180-days event window. In the present study the estimation window of 180 days has been chosen: from the day T=-185 to the day T=-6.

For normal return estimation in the present study market model is used:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \mu_{it}, where$$

R_{it} – period-t return on security i; R_{mt} – period-t return on market portfolio; μ_{it} – the zero mean disturbance term.

As a market portfolio return usually market index return is used. In this study MICEX and BSE-200 were selected as market indexes of Russian and Indian markets respectively. It is important to emphasize the fact that daily market index returns, as well as the returns on stocks, were obtained in the logarithmic form.

Normal daily return in the event window across the whole observations sample for the both markets was calculated by substituting the market index daily return in the estimated market model. After normal returns estimation abnormal returns were calculated for each day t in the event window around each observation:

$$AR_{it} = R_{it} - E(R_{it}), where$$

AR_{it} – period-t abnormal return on stock i; R_{it} – period-t observed return on stock i; $E(R_{it})$ – expected (normal) return on stock i.

For calculation of observed returns data on stock closing prices for each trading day was used.

As far as panel data was used, aggregation of abnormal returns through time and across securities was conducted in two steps: first, average abnormal returns across a given group of surprises for each day t in event window was measured for a fixed calendar year k.

$$AAR_{kt} = \frac{1}{N_k} \sum_{i=1}^{N_k} \widehat{AR}_{ikt}, where$$

N_k – number of dividend surprises within a given group in calendar year k; $\widehat{AR}_{ikt}$ – period-t estimation of abnormal return on stock i.

After that average five years abnormal return was calculated for any day t within the interval of five days before to five days after an event date.

$$AAR_t = \frac{1}{K} \sum_{k=1}^{K} AAR_{kt}, where$$

AAR_t - period-t average abnormal return; K – number of years; AAR_{kt} – period-t average abnormal return over calendar year k.

After that cumulative average abnormal returns (CAAR) were measured for each event type for any day t within the event window (T = -5, …, 0, …, +5).

$$CAAR_T = \sum_{t=-5}^{T} AAR_t$$

In order to test whether average abnormal returns significantly differ from zero the t-test was conducted.

Sample Selection

The research is conducted using event study methodology on the samples of Russian and Indian public companies.

Initial sample of Russian companies consisted of 61 companies, which ordinary shares were actively traded on the Moscow stock exchange (before 2012 – on MICEX) and which regularly paid dividends from the year 2010 to 2014. Due to the fact that the crisis events were echoed in 2009, in this study were included only those dividend announcements of the year 2010, which were made by companies, which profits have increased in the year 2009 compared to 2008 or the ones which profits has not fallen by more than 20%. The year 2014 was also very eventful and economically difficult, especially for Russia. Because of that the dividend announcements, which were already made in March-April 2015 (following the financial results of the year 2014) were not included in the study.

Companies that had interim dividends payments, split/reverse split of shares, or belong to financial sector, were excluded from the initial sample. As a result, taking into account the above criteria, the final sample of 40 Russian companies was formed from the original sample of 67 companies. This sample is diversified by industry, which means that more fully reflects the market as a whole. The final sample included companies from 13 different sectors. The main share in the sample fell on electric power companies (25.00%), the oil and gas industry firms (17.50%), as well as the telecommunications sector (12.50%). Such shift towards these industries is due to the dominant role of oil and gas sector, the electricity telecommunications industries in Russian economy. Companies operating in these sectors regularly pay dividends, which explains their large share in the total sample. The remaining share of the sample is fairly evenly distributed among the other sectors (2.5-7.5%).

After forming the sample of companies the dividend announcement selection has been made based on the fact that in the event window no other significant events should be present. Those dividend announcements, which intersected with earnings announcements, were also excluded from the set of observations, because both events bring significant information to the market.

After the selection of dividend payments announcement the corresponding dividend forecasts were found. It is worth noting, that in Russia there is no one particular source of dividend forecasts, that is commonly used by market participants. Different brokerage companies

and investment groups, such as Prime, Sovlink, Olma, Energokapital, etc., on the regular basis publish brokerage reports, in which they include the dividend forecasts. In general, researchers agree that I/B/E/S Database can be considered as reliable source of historical consensus forecasts. Thus, in the paper (Brown et al., 2008) the author has shown that I/B/E/S dividend forecasts on average can be treated as an accurate estimate of actual dividend evidenced by a low forecast error. Moreover, in the study (Andres et al., 2013) the authors check the I/B/E/S forecasts for consistency and find no systematic bias in the data. That is why all available dividend forecasts for Russian companies from the final sample were downloaded from the I/B/E/S database. All the gaps in consensus forecasts data were closed by calculating the average forecasts made by the brokerage companies.

Another issue arises here: which consensus forecast to use? In the research (Andres et al., 2013) in 93% of their observations the authors use the consensus estimates which refer to the last month before the actual dividend was announced. In 6.8% of observations the researchers use earlier forecasts, although made no earlier than three months before the dividend announcement. Observations, for which no dividend forecasts were available for three months preceding the dividend announcement, were excluded from the study. In this study the same procedure of selecting analysts' consensus forecasts was used: from the I/B/E/S database the forecasts dated the previous month relatively to the actual dividend announcements were downloaded; in case of absence of such forecasts the ones which were made within three months preceding the dividend announcement were used. Observations are excluded when no dividend forecast were available for three months preceding the announcement.

As a result of the dividend announcements and corresponding dividend forecasts selection, 137 observations attributable to the Russian market were included in the study. In order to study the market reaction to the multidirectional dividend surprises - the "good news", "bad news" and "no news" - the entire set of announcements was divided into three subsets according to the type of event with accordance to the following rule:

If $\mathrm{Di} > \widehat{D}_i + 5\%$, dividend surprise is classified as positive;

If $\mathrm{Di} < \widehat{D}_i - 5\%$, dividend surprise is classified as negative;

If $\mathrm{Di} \in [\widehat{D}_i \pm 5\%]$, the news is classified as no surprise, where

Di – announced dividend level; $\widehat{D}_i$ – consensus forecast of dividend level.

As a result, the number of good news attributable to the Russian market in total equals to 49 observations, bad news - 65 observations and no news - 23 observations. The number of "no news" observations is too small in order to report reliable results, that is why in this study only "good news" and "bad news" will be considered (114 observations in total).

The original sample of Indian companies included companies, which shares are listed on the Bombay Stock Exchange (BSE) and which regularly carry out the dividend payments. In the initial sample only companies that belong to the Group A (as classified by the BSE) were included. This group consists of 200 large companies, which stocks are characterized by high liquidity. The comparability of the study period from 2010 to 2014 for the two markets will allow to compare the results of the research.

Further selection was carried out from the initial sample of 200 Group A companies based on several criteria that were previously marked for Russian companies. In particular, companies, which pay interim dividends, belong to the financial sector, as well as the ones, which carried out the split or consolidation of shares over the studied time period, were excluded.

The final sample consists of 55 Indian companies from 21 economic sectors. Such industry diversification reflects the Indian market as a whole. The largest share in the sample accounted for engineering companies (16.36%), pharmaceuticals (12.73%) and oil&gas (12.73%) sectors. Indeed, India is a leader in the production of defense equipment, as well as one of the main manufacturers of innovative pharmaceutical products in the world. Compa-

nies in these sectors regularly pay dividends, and demonstrate a high level of dividend yield, as the activities of these companies are characterized by the high level of profitability.

After selection of companies, dividend announcements and corresponding dividend forecasts were collected for the sample of Indian firms. The total number resulted in 196 observations, among which 74 announcements were classified as positive surprises, 82 announcements – as negative surprises and 40 observations – as no surprises. This classification was made based on the same criteria as for the Russian market (in case announced dividend falls in the interval ±5% of forecasted dividend, it was treated as no news announcement).

Estimation Results

In this section results of the estimation will be discussed. Testing of the Hypothesis 1 showed that average abnormal return AAR significantly differs from zero at days t=-1 and t=5. At these days average abnormal return is negative, which means that the Russian market reacts negatively to the dividend surprises of a positive nature. This result does not give the grounds to accept the research hypothesis that market reacts positively to "good news". Despite the fact that this result does not coincide with the signaling theory of dividends, it corresponds with previous studies, where naïve expectations model was used. Similar unconventional results for the Russian market were received in other studies (Berezinets et al., 2015; Rogova and Berdnikova, 2014; Teplova, 2008). Such in-line results of the studies, where "naïve" and dividend "surprises" models are used, serve as convincing argument in favor of negative reaction of the Russian market to dividend announcements of a positive nature. Similarly, for example, for the US market results of the dividend surprises research of (Wooldridge, 1983) coincide with the earlier "naïve"-based studies of the US market, such as (Aharony, Swary, 1980), (Eads, 1982), (Kwan, 1981), (Wooldridge, 1982), etc. The author himself pays attention to this fact in his article. Results of the study of German market reaction to dividend announcements (Andres et al., 2013), where analysts' expectations-based approach is used, also go in line with the earlier researches, where naïve model is used, for example, (Amihud, Mungria, 1997).

Testing of the Hypothesis 2 showed that average abnormal return significantly differs from zero on day t=1. Here, Russian market reacts negatively to "bad" dividend surprises because AAR on day t=1 has a negative sign. This result corresponds with the signalling dividends theory. On the basis of the results the second hypothesis of the research is accepted. The same conclusions were drawn in the previous "naïve" studies for the Russian market (Berezinets et al., 2015; Rogova and Berdnikova, 2014; Teplova, 2008).

It is interesting to mention that the shapes of the CAAR graphs (Fig. 3) in both cases ("positive surprises" and "negative surprises") are similar and point in favour of negative reaction of the Russian market to the both types of surprises: starting from the day 0 CAARs have a downwards trend and by the last day of event window reach lowest values. Nonetheless, the reaction to the negative surprises is more strongly pronounced than to the positive surprises: the respective CAARs on day t=5 are -1.3971% and -1.0765%.
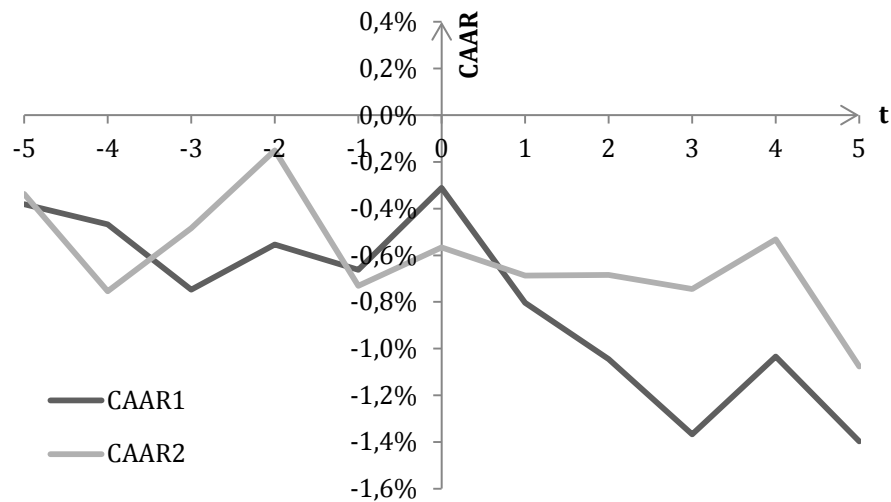
Figure 3. CAAR development in event window (positive and negative surprises), Russia
Notes: CAAR$_1$ – cumulative average abnormal return in case of negative surprises; CAAR$_2$ - cumulative average abnormal return in case of positive surprises

Thus, our study on the sample of 40 Russian companies from 13 industries gives the following results:

- Positive dividend surprises lead to occurrence of negative excess returns on the stocks of Russian companies;
- Negative dividend surprises are associated with negative abnormal returns on the Russian stocks.

Negative reaction of the Russian market to positive dividend surprises along with other factors can be explained by the sample characteristics. Significant share in the total sample of Russian firms falls on the companies from oil&gas as well as from utilities industries (42.5% in total of the final sample). Stocks of the companies from these sectors are traditionally perceived by the shareholders to be "cash cows", from which considerable dividend yields are expected. That is why it is reasonable to conduct separate study on the two subsamples of firms: the first is formed of the companies from oil&gas and utilities sectors; the second – from the companies of all other industries in the sample. The results of the event study for the two subsamples indicate that, in fact, negative reaction to positive dividend surprises is observed only in case of "other industries" subsample. Impact of dividend surprises on the stocks of Russian companies from oil&gas and utilities sectors appeared to be positive: the abnormal return on the day t=0 significantly differs from zero and has a positive sign. The described findings are visually demonstrated in the form of CAAR graphs for two cases – oil&gas and utilities and other industries (Fig. 4).
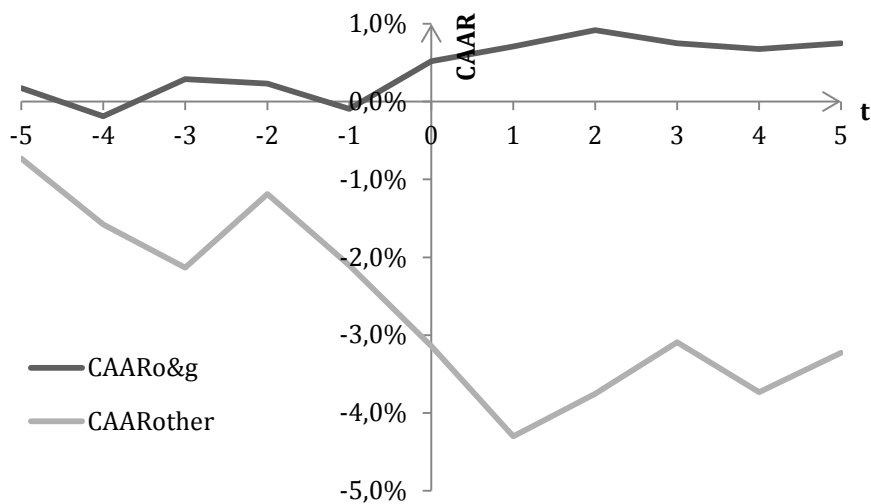
Figure 4. CAAR behavior in event window
("positive surprise", two subsamples), Russia
Notes: $CAAR_{o\&g}$ – cumulative average abnormal return within "oil&gas and utilities" subsample; $CAAR_{other}$ - cumulative abnormal return within "other industries" subsample

The additional results of the study, conducted on the two subsamples, support the fact that dividend surprises are perceived positively by the stockholders of companies, which belong to the oil&gas and utilities sectors. On the contrast, reaction of the Russian market to positive dividend surprises, associated with the companies of other sectors, is negative.

There is an evidence of Russian market inefficiency since there are abnormal stock returns around dividend surprise dates. The fact that there is a presence of excess returns points out that the market of Russia is closer to the weak form, according to the classification of (Fama, 1970). This means that not all publicly available information is instantly incorporated in the stock price, which leaves the opportunity for investors to benefit from abnormal price movements in the short-term, around the dividend surprise date.

Next, results for the Indian market will be discussed. In case of positive dividend surprises average abnormal return significantly differs from zero on days t=0, t=3 and t=5. On these days average abnormal returns are positive, which means that Indian market reacts positively to good dividend surprises. This result gives the grounds to accept the hypothesis 1 that market reacts positively to "good news". This result coincides with the signaling theory of dividends and corresponds with previous research, where naïve expectations model was used: similar conclusions were, for example, drawn in the papers (Taneem, 2011) and (Mallikarjunappa, 2009).

The results for negative dividend surprises have shown that at the day of announcement average abnormal return is negative and significantly differs from zero. This fact is an argument in favour of negative reaction of Indian market to bad dividend surprises. In other words, such kind of surprises carries negative information to the Indian market and leads to the occurrence of negative abnormal returns on Indian stocks. This result corresponds to the signaling theory of dividends and to the previously obtained results, for example, in the papers (Taneem, 2011) and (Mallikarjunappa, 2009).

As it has been pointed out before, the Indian "no news" sample size made it possible to additionally trace reaction of Indian market to such type of surprises. At 5% level it appears to be that AAR is negative and significantly different from zero on day t=-3 and day t=1; at 10% level – on day t=-2. This result indicates the fact that Indian market reacts negatively not only to "bad news", but also to "no news" events.

To sum up, for the Indian market both hypotheses are accepted: positive dividend surprises are on average followed by positive excess returns, whereas negative dividend surprises

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are associated with negative abnormal returns. Moreover, average Indian investor perceives "no news" events also negatively. Notable that negative reaction to potentially neutral announcements is even more pronounced than to negative surprises. This feature can be observed in the Fig. 5.
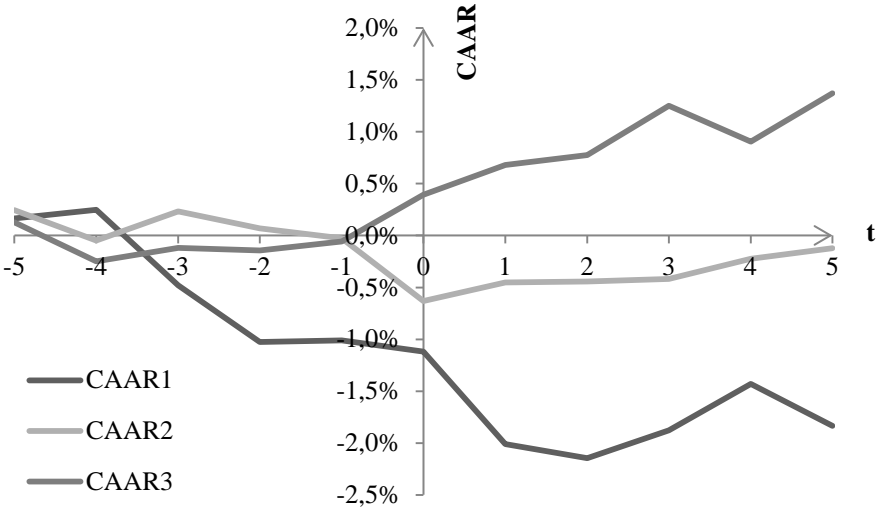

Figure 5. CAAR development in event window (India; positive, negative and no surprises)
Notes: $CAAR_1$ – cumulative abnormal return in case of no surprises; $CAAR_2$ - cumulative abnormal return in case of negative surprises; $CAAR_3$ - cumulative abnormal return in case of positive surprises

On the Fig. 5 graph a clear upward $CAAR_3$ trend can be traced starting from the event day t=0. This fact supports previously made conclusion that on average good dividend surprises are associated with positive stock returns of Indian companies. By the 11th day of event window $CAAR_3$ reaches the value +1.3725%. Additionally, the figure clearly demonstrates that $CAAR_2$ on the day of event deeply falls down and takes the value of -0.6322%. It is seen on the graph that $CAAR_2$ gets its lowest value particularly on day t=0. This issue supports the fact that Indian market on average reacts negatively to the events when announced dividend falls beyond the value forecasted by the analysts.

If to compare the results for the two markets, for which results appeared to be significant – Russia and India – it should be pointed out that reaction to "positive surprises" is different. In India higher-than-forecasted dividends are perceived positively by stockholders; in Russia situation is different – investors on average respond negatively to the dividend surprises of a positive nature. (Fig. 6).
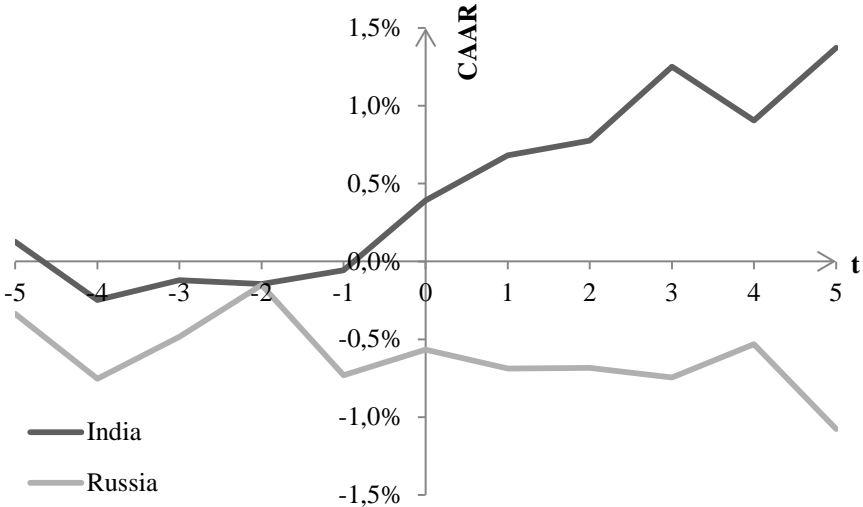

Figure 6. CAAR development in event window (positive surprises)

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The direction of reaction of the two markets to negative surprises is similar, though. Nonetheless, in Russia investors treat this type of event more negatively compared to the Indian investors. This is vividly seen on the graph, on which by the end of event window CAAR measured for the Russian market falls much deeper than CAAR measured for the Indian market: -1.3971% against -0.1209% (Fig. 7).
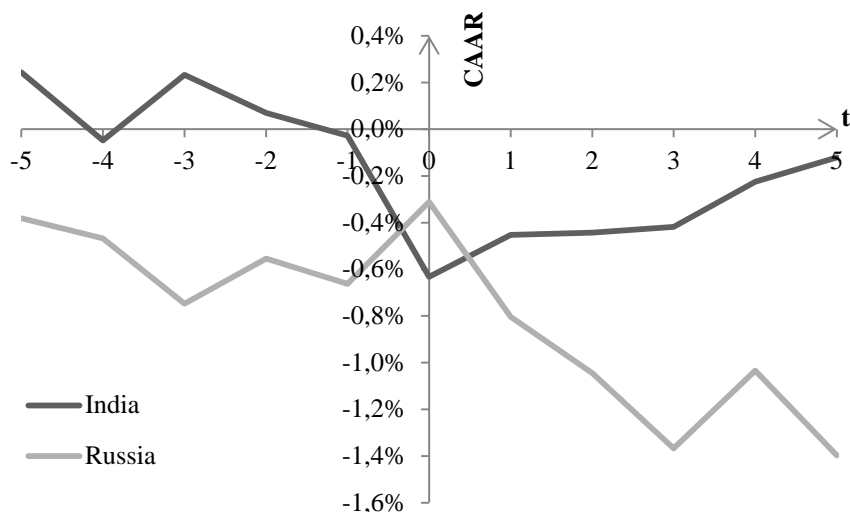

Figure 7. CAAR development in event window (negative surprises)

To sum up, reactions of the two analyzed emerging markets to dividend surprises appeared to be very different, which is mainly explained by the specific characteristics of the markets and differences in investors behavior at two markets. Results of the study are summarized below.

	Reaction to good dividend surprises	Reaction to bad dividend surprises	Reaction to no-surprises dividend news
Russia	Negative	Negative	N/A
India	Positive	Negative	Negative

Discussion

This paper investigates average reaction of the Russian and Indian stock markets to dividend surprises and provides testing of signaling theory of dividends. The fact that in the study dividend surprises were considered instead of dividend changes per se means that the problem was examined from the different perspective. The idea behind this approach is that market participants' expectations about dividend payments are assumed to be formed by publicly available consensus dividend forecasts. In the dividend announcements academic literature, analysts' expectations-based approach to measure unexpected component of a dividend announcement is still rarely applied, especially in the context of emerging markets. To date, this study is the first attempt to investigate reaction of the Russian and Indian markets to dividend surprises. This adds extra value to the current research.

It has to be pointed out that findings of the study for the Russian market, in which dividend surprises approach was used in general coincide with the results obtained in the previous studies, in which "naïve" dividend change approach was followed. Namely, negative reaction to both types of announcements – of positive as well as negative nature – was found in the studies by (Berezinets et al., 2015; Rogova, Berdnikova, 2014; Teplova, 2008; Teplova, 2011). This can be attributable to the fact that in the post-crises period Russian investors are very conscious and stay quite suspicious about aggressive dividend policy (both positively-

aggressive and negatively-aggressive). For the Indian market obtained results in general correspond with the signaling theory (only reaction to no-news surprises goes beyond it) and with the previous studies by (Mallikarjunappa, 2009; Taneem, 2011; Berezinets, Bulatova, Ilina, 2013; Kumar, Singhal, Kamboj, 2011), which were conducted with the use of "naïve" model.

The fact that Russian stock market on average reacted negatively to positive dividend surprises can be explained by several factors. First, this pattern may be associated with the specific expectations of investors in the period 2010-2014, which is considered to be post-crisis. Secondly, negative reaction to positive dividend surprises can be linked to the behavioural finance concept: such unconventional results can be reasoned by general negative mood of Russian investors, their accumulated pessimism and lack of trust in the country's future economic development. In addition to that, Russian stock market is very much dependent on the fluctuations on the commodities market. During the period 2010-2014 several considerable negative changes and events in the oil&gas sector have taken place, which also could have affected the attitude of investors, levered their pessimism and alertness. On top of that, negative reaction of the Russian market to positive dividend surprises can also be explained by the sample characteristics. Additional results of the study, conducted on two subsamples of the Russian companies – oil&das and utilities separately from "other industries" - support the fact that dividend surprises are perceived positively by investors in companies, which belong to the oil&gas and utilities sectors. On the contrast, reaction of the Russian market to positive dividend surprises, associated with the companies of other sectors, was revealed to be negative.

Positive reaction of the Indian market to good dividend surprises can be, firstly, explained by the fact that in the ownership structure of the Indian firms a big share falls on the foreign institutional investors, who are usually interested in high dividend payments with the aim of control strengthening from the side of capital markets over the actions taken by managers. Additionally, on the Indian market there is a big share of mature family conglomerates, which are usually characterized by high level of profitability and solidness. Investors usually expect high dividend yields on such kind of shares. Finally, positive reaction of the Indian stock market to the dividend surprises of a good nature can be driven by the factor of taxation. As it was investigated from the analysis of the Indian market, in India the tax rate on capital gains may reach the level of 40%, whereas dividend income in most cases is entirely exempt from taxation.

Considering the negative reaction of the Indian market to no-news dividend announcements, this fact can be linked to the behavioral pattern. The thing is that human nature in general very often tends to hope for the better-then-predicted outcome. This means that it can be possible that shareholders were still hoping to receive slightly higher-then-predicted by the analysts dividend and that is why overreacted to the no-news dividend events.

This study provides an evidence in favor of the fact that Russian companies should try not to go far from the market expectations when deciding upon dividend payments and follow the forecasts provided by the analysts in order not to ruin its value. This should be more preferable strategy of the Russian companies in terms of dividends, at least until the Russian economy enters a confident growing phase. From the side of investors, while deciding on the trading strategy, it is also important to take into account market movements around the dividend announcement date. Findings of the study have shown that for investors it is possible to benefit from excess returns on the stocks of Russian companies when trading sensibly. Reaction of the Indian market to dividend surprises gives the grounds to make an assumption that aiming at maximizing the shareholders' value Indian companies should announce higher-then-expected dividends because such an action on average creates value for the company and is perceived positively by the market.

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