Dividend policy and major shareholding profitability

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Abstract
The empirical research results of dividend policy of Russian companies from different branches for the period from 2006 till 2010 are presented in the article. The results of work showed that not so much information asymmetry as specific interest of major shareholders associated with earnings receiving from goodwill are the cornerstone of future dividend policy. It will define more complex association between dividend payments and shares price; the association will not be direct as it assumes discounting of dividends flow, but mediated by deviations of dividend payments coefficient and course profitability from the required values.
Key words: INFORMATION ASYMMETRY, GOODWILL, DIVIDEND POLICY, MAJOR SHAREHOLDERS

Introduction

The dividend policy represents one of problems of the financial theory. Despite the abundance of the publications devoted to this subject, the situation was changed only slightly in comparison with 1976, when F. Black noted that dividends are "puzzle", and the more we study, the more difficult it becomes. [9]

In the article, we will try to present, on the one hand, the dividends as the result of financial policy of firm management, and on the other hand, the capital market conditions of the country and its competition degree.

Dividend policy and cost of firm: theory

In economic science, the cornerstone of dividend policy was laid by the research published by J. Lintner in 1956. On the basis of 28 firms in the USA, the author came to conclusion that the large enterprises, which growth potential is considerably limited, have a big tendency to dividends payment. They pay dividends regularly, and their value is corrected from year to year slightly. [21] On the basis of this work, first of all, two theories of dividend policy (agency and signaling) began to develop.

S. Ross (1977) and S. Bhattacharya (1979) are considered to be original authors of works on signaling theory. They claimed that the dividend policy can be used as the alarm mechanism for investors in order that they could distinguish financially sound companies from the enterprises with unstable cash flow. J. Stern considered the signaling theory costly affair to an excessive degree for the enterprise. [22; 23] Grullon, Michaely and Swaminathan have made a hypothesis of the enterprise maturity; this theory assumed that the company, having entered a maturity phase, reduces the investment opportunities, thereby, releasing the funds, which can be directed on dividend payments. [5]

Pettit was the first who was engaged in studying of connection of dividends and the share price. He showed that the announcement of increase in dividends amount leads to the essential increase in the share price of the companies, and the reverse announcement of decrease in size of dividends causes the considerable falling of the share prices. [25] The following researchers confirmed Pettit's statements [7]

In 1976, M. Jensen and W. Meckling formulated the agency theory consisting in the conflict of interests between shareholders and managers. F. Easterbrook proved that payments of higher dividends leads to the fact that the highest management work becomes more transparent for shareholders of the company, and respectively, control increases possibility. [12] In the cases of "weak" shareholders, the highest management

of the organization can start solving of own problems, perhaps, even theft, instead of increase in capitalization of the company and prosperity of its shareholders. [18] The possibility of the conflict between shareholders and creditors was proved empirically in the papers of Handjinicolaou and Kalay in 1984. [4, 5] 5 years after J. Lintner's article, the famous work of two future Nobel laureates in economics M. Miller and F. Modigliani was published; it was proved that at the perfect capital market, the dividend policy has no impact on the company capitalization, therefore, there is no sense to pay dividends. It is obvious that the capital market is imperfect, and in this case, M. Miller and F. Modigliani consider that the companies can pay dividends using the residual principle after a defraying of all the investment outlay. [24] On the basis of this research, the theory of an irrelevancy of dividend policy began to develop.

Having continued scientific researches of J. Linter, Gordon M. defined that investors, on the basis of the risk minimization, will prefer the current constant dividend yield than possible future profits in the form of an increase in the enterprise value. M. Gordon and J. Walter created the classical theory of dividends preference. They believe that the dividend and investment policy of the company are interconnected. [16; 17; 26] However, E. Fama and K. French revealed that in the USA from 1978 to 1999, the share fraction of emitents paying dividends constantly decreased from 66.5% to 20.8%. [13] Thereby, they called into question the theory of dividends preferences in its classical form.

In 1974, Black and Sholes expressed an opinion that the announcement of payment and the dividend size can have short-term impact or even no impact on the shares price in the future. [10] It is considered that there is a short-term impact on a shares price in the USA, as after passing through the dividend cut-off, the shares value, at which they were evaluated before change of dividends value, is reached in rather short terms [3]. Other researchers maintain that the data on the value and payment of dividends affect significantly the level of the share price if the news nature (good or bad) is contrary to the market direction. [11] The ultrahigh capital concentration and insignificant free-float on the stock exchange market play a significant part. [6]

In 1979, R. Litzenberger and K. Ramaswamy's work was published; they claimed that from the shareholders point of view, the capitalized profitability, but not dividend, is of priority importance. This fact was explained by means of American Internal Revenue Code, which established a tax rate on the incom from capitalization below a withholding tax rate. [22] In the 2000th, this dilemma was resolved for investors in the American security papers as a tax on dividends and income from a capital increase are imposed at the identical rate. [3]

In the scientific community, a number of attempts of optimum dividend policy building were performed. On the basis of a settlement and analytical method, Vorob'yev A.G formed the optimum dividend policy for the Russian joint stock corporations in view of industry branches (Table 1).

The researcher formulated that the conservative type is optimum for 70% of the industrial enterprises, and aggressive type of dividend policy is optimum for 0.4% of industrial firms only. Moreover, the monetary form of dividends payments is preferable for 85% of the enterprises, and 15% prefer the payment by shares. For comparison, in the USA, the enterprises of coal (87%), gas (71%) and nonferrous metallurgy (60%) pursue aggressive dividend policy. The light industry, building materials and oil-processing industry companies enforcing conservative and moderate dividend policy are more "greedy". [3]

1. Dividend yield and Market capitalization.

In the analysis of dividends influence on market capitalization of firm, we will proceed from two standard assumptions: on the one hand, investors seek to maximize the expected profitability of the investments, on the other hand – seek to avoid risk. On the basis of these assumptions, we will show the nature of connection, which must exist between dividends and capitalization, and then will check the force of this connection.

The establishment of the expected profitability of assets in the capital market is presented within the model CAPM. However, two problems are assosiated with its use. First of all, the empirical researches show impossibility of its direct use for real data explanation (the review of the corresponding researches refer to [14]). Secondly, in the conditions of the existing opportunities, the CAMP model is not checked in strict sense, as a so-called market portfolio building is difficult.

The CAMP "failure" concerning real data is interpreted in two ways. Some researchers point to an incorrectness of pricing model restriction with only one factor [15]. Others denote that the investors behavior in relation to risk is not so rational as CAMP supposes. For example, investors will give more preference to firms with the smaller relation of balance value to market one [20]. I.e. dependence between return on asset and its market risk does not need to be linear.

Table 1. [3] Optimum dividend policy for the enterprises of industrial branches

Branch	Optimum type of dividend policy	Optimum subtype of dividend policy	The optimum size of dividend payments to net profit	Optimum form of dividend payments
Gas	Conservative	Payment of the fixed return dividends	10-20%	Money payments
Light industry	Moderate	Payment of the fixed return dividends and extra dividend	20-50%	Money payments / share payments
Mechanical engineering and metal working	Conservative	Payment of dividends according to the residual principle	0-10%	Money payments
Coal mining	Aggressive	Payment of constant dividends according to profit	50-100%	Money payments / share payments
Nonferrous metallurgy	Conservative	Payment of dividends according to the residual principle	0-10%	Money payments
Ferrous metallurgy	Conservative	Payment of dividends according to the residual principle	0-10%	Money payments
Electric-power	Moderate	Payment of the fixed return dividends and extra dividend	20-50%	Money payments / share payments

However, our purpose does not consist in the improvement of CAMP. We will use its basic heuristic ideas with the purpose to explain not so much a difference in the expected profitability of various firms as behavior of profitability of particular firm. The last must depend on the value of riskless profitability and a difference between profitability of a market index and riskless one. Formulas 1.1.-1.4 are developed together with Vinokurov S.S. [2] Let ussay that majority shareholders are guided by the full profitability of actions considering also profitability from goodwill: Let us assume that the majority shareholders are geared to the full profitability of shares considering also profitability from goodwill:

$$r_G = \frac{np_1 - NA_1}{NA_0} \quad (1.1)$$

where r_G - profitability from goodwill; n – shares number; NA – net assets.

The profitability generation from goodwill is associated with risk, however, this risk cannot be considered as market, because first of all, it is defined by executive management activity, but not by connection between general market or general industry processes.

The expected profitability associated with goodwill will depend on own risk only; in particular, it is possible to present it by linear dependence of the form:

$$\bar{r}_G = h + g\sigma_G \quad (1.2)$$

where σ_G - mean square deviation of profitability from goodwill.

If the enterprise works with return on net assets r_{NA} and pays the profit share δ in the form of dividends,

$$NA_1 = (1 + r_{NA}(1 - \delta))NA_0 \quad (1.3)$$

Hence, we can define the dividend payments coefficient, which corresponds to the expected profitability from goodwill:

$$\delta = \frac{(1 + h + g\sigma_G + r_{NA})NA_0 - np_1}{r_{NA}NA_0} \quad (1.4)$$

The defined share of dividends in profit corresponds to expected profitability from goodwill. In the current time, it may deviate in larger or smaller degree. For example, the managers can consider expedient to compensate to shareholders the insufficient course profitability, or on the contrary, to "cool" the share market reducing the dividend payments.

2. Dividends, goodwill, leverage

Empirical testing

We have considered the data from 2006 till 2010 on the following eleven Russian companies: "LUKOIL", "Gazprom", "Surgutneftegas", "Rosneft", "Novatek", "Magnet", "Norilsk Nickel", "Rostelecom", "Severstal", "Magnitogorsk Metallurgical Plant", "NLMK".

Let us build the following factorial model: [2]

$$\bar{r}_p = a + br_f + c(\bar{r}_M - r_f) + , \quad (2.1)$$

$$r_d = \frac{D}{P_1} \quad (2.1)$$

where $\bar{r}_p, \bar{r}_M$ - the expected price profitabilities of a share and market portfolio respectively; r_f - profitability of a riskless asset; $\bar{r}_d$ - the expected dividend profitability of shares; , a, b, c, d – regression coefficients; D – cumulated dividends; P_1 - share price at the end of the period. We will not load the reader with numerous tables in this work as they are already published by us earlier in the following works. [1; 2]

(2.1a)

3. Tendencies and their explanations

In this section, we will try to interpret some tendencies in behavior of dividend payments, which were found by other authors, from our approach standpoint. V. Aivazian, L. Booth, Sh. Cleary defined the factors influencing the selection between the policy of dividend payments smoothing and dividends payments according to the residual principle on the basis of empirical research [8]. According to the results, the debt quality is the major factor defining dividend policy. If the firm resorts to public borrowing in the open market, it pursues the dividend payments smoothing policy; if it resorts to banks, the dividends are payed by the residual principle. As an explanation, the hypothesis that borrowings in the open market increase the importance of dividends as signaling instrument is suggested.

There was no information asymmetry in an explicit form in the model, which was considered by us in the previous paragraphs; therefore, the search of an alternative explanation is interesting. Smoothing assumes that there is a noticeable autocorrelation of a share of dividend payments; secondly, the firms target the size of dividend payments on a long-term outlook.

We saw that deviations of dividend payments coefficient from the necessary value are associated by negative dependence with deviations of the necessary value of shares course profitability. But the deviation of course profitability from the necessary value shows an error of factorial model. Hence, the autocorrelation between dividend payments can be observed in case of factorial model heteroscedasticity only.

Can the heteroscedasticity of factorial model be associated with public borrowing? The floatation of bonds involves two consequences. First of all, it is noticed that the behavior of the bonds price is more rational than behavior of share price. In this regard, profitability of bonds can fulfil functions of some kind of reference point for the investors making investments in the firm shares. Secondly, placing shares in the market, the firm obtains a credit score. If there

are rating agencies enjoying sufficient confidence of investors, it can be as one more reference point for the investors investing in shares. Such reference points specify a trend, where there is oscillation, deviations become coordinated, and the homoscedasticity of factorial model is broken. On the contrary, the fluctations become more scholastic with a lack of reference points.

Thus, the source of borrowing can affect the dividend policy. Respectively, the factors influencing a borrowing source selection will affect the firm dividends. Aivazian and co-authors show that the big debt size conduces to payments smoothing and their small value. [8] The smaller value of net assets and interest in public sources of borrowed funds can serve as an explanation for this. It is shown that major and profitable companies will pay big dividends; however, fast-growing firms will pay smaller dividends. In our opinion, it follows directly from a formula (1.4). Profitable firms will have the big value of net assets at the beginning of the period (when the rest being equal). Fast-growing firms will have a wider gap between the current market value and net assets value at the beginning of the period. The compatible facts determining the amount of dividend payments are called by E. Fama and K. French when analyzing of falling of dividend payments share of the American firms during the period from 1978 to 1999. [13] These factors are the following: the small size, the low income, considerable investments in relation to the income, and also the high ratio of market value to the cost of assets and heavy expenses of research and development. These factors are quite coordinated with the factors determining the value of the necessary dividends and are associated with this value by negative dependence.

It should be noted that from a position of a formula (1.4), own assets profitability effect may be estimated in two ways. The current value of this size does not influence directly the required value of dividends; however, it may have the mediated impact on the current market capitalization. In this case, the current value of net assets profitability can show negative correlation with share of dividends in profit. On the other hand, financial leverage can increase profitability of net assets. If its value reflects rather long-term structure of the enterprise liabilities when other things being equal, it will lead to the increase in value of net assets at the beginning of the period, and to the large dividend payments. Such contradictory influence of the enterprise net assets profitability on the dividend payments coefficient reflects S. Kania and F. Baker's research [19].

Conclusion

We have defined more complex association between dividend payments and shares price; the association will not be direct as it assumes discounting of dividends flow, but mediated by deviations of dividend payments coefficient and course earning yield from the required values. These conditions of often irrational behavior of portfolio investors become clear: often they should "guess" about future value of goodwill and about compensation in the form of dividends which will be considered as necessary in the case of its insufficient value, or on the contrary, about necessary reduction of dividend payments in the case of the excess value of goodwill.

In that case, the irrational behavior does not look such irrational. Too wide fluctuations, which are noted by R. Schiller, serve as a guarantee of dividends change direction: the "overheated" market will give excess goodwill, and the coefficient of dividend payments will be reduced; the "oversold" market, on the contrary, will work towards decrease of yield from goodwill and will force managers to increase dividend payments. Certainly, it is possible to argue in favour of that the shareholders will be not always favorable to achieve the maximum dividend payments in the current period, and to investigate the factors influencing the current selection between course and dividend profitability. It is also possible to reason that for one reason or another, some investors possess very limited knowledge; and therefore, to a greater or lesser degree, they rely on the general market trend specified by large portfolio investors. Respectively, the existence of "leaders" and "followers" in stock market is an interesting problem, especially, if considering that they often will be anonymous in this market.

Subject to the foregoing, it is possible to make the assumption that the more rational the stock market in the usual sense is, the less inequality between shareholders is there. How far it is compatible to the market modern development assuming a large number of the portfolio investors, who have no impact on the course of affairs at the enterprise, is controversial problem, which can become a subject of further researches.

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