

Impact of the dividend policy of joint-stock companies on the regulation of the stock price in the Republic of Uzbekistan

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Abstract. The article reveals the mechanism of market pricing shares, provides methods of calculating market values shares, illustrates dependence of share formation prices on the chosen dividend policy. The proposals on the calculation of the capital cost, improvement of dividend policy, disclosure of information by joint-stock companies in terms of dividends are given

1 Introduction

Modern financial changes in the Republic of Uzbekistan made it important to pay attention to the problems of corporate governance. The level of quality of corporate governance influences the decision-making on the possibility of investing in a company and is a characteristic of its capitalization. In this regard, an important element of corporate governance is the company's dividend policy aimed to optimize the proportions among consumed and capitalized profits in order to maximize market value of the company [1-4].

The success of the reforms carried out in the Republic of Uzbekistan is largely determined by the pace of development of the basic sectors of the economy. As the President of the Republic of Uzbekistan Sh. Mirziyoyev noted, "This year, access to international financial markets has expanded, for the first time state Eurobonds in national currency for 2 trillion soums were placed at low interest rates." Achievement of this goal presupposes a radical restructuring of all sectors of national economy, which, in turn, requires significant investment. Therefore, the issues of attracting investments in this economy are particular relevant [5-8].

2 Methods

When preparing this article, the methods of a systems approach, fundamental and technical analysis of economic grouping, comparison and synthesis were used. The experience of developed countries illustrates that the main source of investment resources is the funds of the population (up to 70% of the invested funds), mobilized through the securities market. In the Republic of Uzbekistan, it also seems expedient to create the necessary economic

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conditions and an adequate mechanism for involving the population's funds in investment projects. This requires the solution of a number of necessary issues to reorient the economy towards an ordinary investor:

- creation of a full-fledged and efficiently operating infrastructure of the investment market;
- creation of economic incentives for investment and protection of funds and rights of investors;
- simplification and acceleration of organizational procedures and actions for the legal registration of property documentation;
- ownership rights, etc.

In addition to the legislative framework, it is necessary to create economic mechanisms for managing cash flows, which ensured the attractiveness of investment projects. We are talking about the profitability of investments in corporate securities, primarily in shares.

3 Results

The general indicator for assessing the company's activities in modern conditions of economic development is the indicator of growth in the value of business. For joint-stock companies in countries with developed market economies, this indicator is considered to be the growth in the value of shares on the market. The versatility of this indicator is that it reflects the profitability of the company, taking into account the impact of all influencing factors, both on the current state of the company and on its profitability in the future.

This versatility is inherent in the very nature of the stock pricing mechanism, which has a number of specific features:

1. The basis of the market value of share, as a rule, is its par value (the price indicated on the share itself), however, the sale on the market of shares at par is an accident. The denomination serves as the basis for the formation of the authorized capital and the basis for determining the price of the initial offering (underwriting price). In countries with market economies, the primary market price is determined on a contractual basis, which, as a rule, is below par (the difference between the par and the subscription price is the estimated income of the underwriting company). This is due to the fact that subscribers must have their own specific financial interest (profit) from the subscription. The subsequent sale of shares is made in the secondary market, where its value is determined based on supply and demand for it. However, this process does not occur spontaneously, but according to certain laws.

The market price of shares is determined on the basis of calculating their book value as the ratio of the company's total equity capital to the number of its shares. Book value or estimated value shows the amount of the company's capital attributable to each share outstanding. Shares purchased by the company itself are not taken into account.

From the above, we can conclude that any share has four types of value: nominal, calculated or book value, the price of the initial placement (underwriting) and the price of the secondary market, or, which is also called the market price.

For the investor, the last listed price or the price of the secondary market is important, the basis for determining which is the estimated price. In its most general form, the calculation of the market price is based on the book price, but for a number of reasons the market price deviates from the calculated one.

The main difference is that the book value of shares reflects the number of assets per share at their purchase price, while the market price of a share is calculated based on the market prices of assets.

Factors such as the company's participation in court as a defendant, obsolescence of equipment reduce the market value, but do not affect the book value of the shares. At the

same time, a good reputation, successfully completed scientific and technical research, successful acquisitions of other companies or their brands increase the market value of shares without changing the balance sheet.

Other factors that increase the market value of stocks include:

- improving the financial condition of the company and the growth of its profits, as it ensures the growth of dividends, and, consequently, the yield of shares;

- financial reserves of the company, which serve as a guarantee of dividend payments and a source of capital increase by joining it;

- financial transactions of a company (merger with another company or its takeover, announcement of a new issue of shares or issue of bonds), which, even without increasing the estimated value of a share (bond), cause an increase in its rate in the market.

2. Improving the quality of management, which is taking a special place in the share price system. If a company hires a new manager who having worked in another company in the past, doubled the value of the shares of that company, then investors can expect that the shares of this company will double in price over time.

3. On the secondary market, the share price is determined based on the share's rating. The higher the rating of the shares, the higher their price on the market (in relation to their par value). In modern practice, the rating of a share is its invariable attribute.

4. The share price changes due to rumors. In the stock markets, trading is carried out according to the principle: "Buy rumors - sell facts", ie. The share price pre-sets the expected changes, both in external and internal factors.

This method of determining the market value of shares is called fundamental. In practice, it is used only by specialists (consulting, brokerage companies, news agencies, etc.) and is quite costly. The disadvantages of the fundamental method for calculating the market value of shares are:

- the impossibility of taking into account all factors influencing the price and determining the magnitude of the price change;

- the lack of information about the real current price, which at the moment may be too high or low, does not allow us to accurately predict the direction of its further movement.

The calculation of market value of shares was simplified after the discounted dividend model (DDM) was developed, which is based on the fact that the value of a share is calculated as the present (discounted) value of expected dividends:

$$P_0 = \frac{D_1}{1+k} + \frac{D_2}{(1+k)^2} + L = \sum_{t=1}^{\infty} \frac{D_t}{(1+k)^t}, \quad (1)$$

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P_0 – market price of a share;

D_t - expected dividend per share in year t ;

k – discount factor (cost of capital)

4 Discussion

Now let us consider a situation when an investor plans to buy a controlling stake in a company. Such investors are not concerned about the calculation of future dividends, since they themselves can choose how much of the profit to use to pay dividends. In such cases, a different one is used when valuing shares based on the calculation of the net present value. Its essence lies in the analysis of the expected profit and investment opportunities of the corporation. Focusing on profits and investment decisions rather than dividends helps

analysts focus on the underlying business drivers of stock prices. The amount of dividends paid by the company is not such a major factor.

Suppose that company c has the same profit from the beginning as company a, but it reinvests 60% of its profits each year in expanding production at a rate of return up to 20% per year (i.e. 5% more than the market discount rate of 15%). As a consequence, the dividend on company C's shares in the first year is lower than the dividend on company A's shares. Instead of paying a dividend per share of \$ 15, as company a does, company c will pay only 40% of the \$ 15. (or \$ 6 per share). The remaining 9 USD earnings per share are reinvested to achieve a 20% rate of return.

Although entity c's dividend per share rate is lower than entity A's, it will increase over time. Therefore, the price of share of company c in the market will be higher. In order to understand why, let's calculate the growth rate of its dividends and then apply the dividend discounting model using formula 3, since there will also be a constant growth rate of dividends, only the value of g is calculated as:

$G = \text{profit retention rate} \times \text{rate of turnover on new investments}$

For company c we get:

$G = 0.6 \times 0.2 = 0.12$ or 12% per year.

To estimate the current price of a share of company c, we applied formula for calculating a constant growth rate of dividend:

$P_0 = 6 / (0.15 - 0.12) = 6 / 0.03 = 200$ usd.

The value of net present of c's future investment would be \$ 100. (200 usd - 100 usd).

It is important to understand here that the reason why company c's share price is higher than company c's share price is not essentially because of the growth in the company's investments per se, but because its reinvested earnings have raised the rate of return above the market discount rate. - 20% per year versus 15% per year. In order to focus on this statement, consider the situation with company d, which implements a reinvestment policy similar to company c, only the rate of return on its future investments was 15% per year instead of 20%.

For company d, the value of g will be:

$G = 0.6 \times 0.15 = 0.09$, or 9% per year.

Applying the formula for this model of discounting dividends with a constant growth rate, we determine that the price of a share of company D is $P_0 = 6 / (0.15 - 0.09) = 6 / 0.06 = 100$ c.u.

Share prices are the same as company A, although the expected dividend per share increase is 9% per year. This is explained by the fact that the higher growth rate of dividends of company D fully compensates for its initially lower dividends. Simply put, having a yield of 15%, and reinvesting funds at the same 15%, the investor will receive an increase in future yield of the same 15%.

Based on the above, we can summarize:

- the value of the company's shares on the market depends on the correctly chosen dividend policy;

- the expected growth in earnings, dividends and share prices alone does not directly lead to an increase in current share prices. The main factor influencing the rise in share prices is the availability of such investment opportunities for the reinvestment of profits by the company, which will lead to the fact that the rate of return on new investment projects of the company will exceed the level of profitability prevailing in the market (market discount rate, k).

In the Republic of Uzbekistan, the indicator of capital cost is not calculated, and therefore it is difficult to determine the market value of shares, and, therefore, to expect the formation of market relations in the stock market. However, the whole paradox of the situation lies in the fact that, according to the totally accepted model of market value of

capital (CAMP), the cost of capital is calculated on the basis of stock quotes and extrapolation of their prices relative to the general price movement in the market.

The essence of the model lies in the assumption that the value of any share in market conditions is defined as a risk-free rate of return and risk payment. The resulting amount is called capital cost and calculated with using this formula:

$$k = r_f + \beta_a(r_m - r_f) \quad (2)$$

where r_f - risk-free rate of the return;

r_m - total market portfolio return

β_a - the systemic risk coefficient, which shows the marginal contribution of the yield of a given security to the variance of the yield of total market portfolio.

In accordance with the multivariate model for determining the cost of capital, the standardized risk indicator beta is calculated using the formula:

$$\beta_a = \frac{\text{Cov}(r_a, r_p)}{\text{Var}(r_p)} \quad (3)$$

and is the standardized covariance coefficient of the asset,

Obtained by dividing the covariance of the return on any asset (a) and the return on the aggregate portfolio by the standard deviation of that portfolio.

We see the solution to this problem in recalculating the value of the discount coefficient determined by the CAPM method in developed countries for Uzbekistan, using the method of calculating the cost of capital based on country risk. At the same time, the total risk premium for equity investment will be equal to the sum of the equity investment risk premium in developed countries and the additional country risk premium in the Republic of Uzbekistan, minus the country risk in the country, in which the cost of capital indicators are used for calculation. The calculation itself must first be done in US dollars, since country risks are indicated in this currency, and then converted into national currency, taking into account the current ratio of the capital cost and the risk-free rate of return on hard currency and the sum.

The dividend policy of joint-stock companies should be developed taking into account the relationship between share prices and the amount of dividends paid, and it should be considered as one of the tools for implementing the company's long-term development strategy.

To introduce market-pricing mechanisms in the stock market of the Republic of Uzbekistan, it is important to publish the values of the following indicators:

- the capital cost, which is understood as the rate of return at which investments in these shares make sense (become expedient). This rate of return is differentiated by type of business and is used to calculate the efficiency of investment projects;

- the cost of the company's capital, calculated as the arithmetic average weighted by the specific weights of the company's business types in the structure of its assets. This indicator reflects the minimum return on the company's shares and is used to calculate the market value of its shares;

- the calculated average cost of capital by sources of asset formation (WACC), which characterizes the minimum return on all investments in a company and serves to determine the value of the company in the market.

5 Analysis

The scientific literature discloses the essence of this method in sufficient detail, so I would like to draw attention to two important conclusions that follow from this formula:

1. If a company wants to ensure an increase in the value of shares on the market, it needs to reinvest its profits in new projects, the profitability of which (r_{new}) is higher than the cost of capital ($r_{\text{new}} > k$).

2. Such factors as tax incentives, reinvestment policy and information support of market participants are secondary, i.e. Will have a positive effect if the conditions specified in the first paragraph are met.

Let us explain this with specific examples and at the same time show modifications of the above formula used in calculating the market value of shares in certain situations that arise depending on the chosen development policy of the company.

If a company is in poor financial condition or intends to reduce its business, then the total amount of its investments will be less than what is required to replace completely the existing capital: net investment will be negative and, therefore, production capacity will decline over time. For a simple reproduction company, the gross capital investment usually matches the replacement needs exactly: the net investment is zero, and production capacity remains constant over time. For an actively developing company, the gross capital investment will exceed the need to replace the retired means of production: the net investment will be positive, and the production capacity will grow over time.

Consider the example of company *a*, which has a net eps of \$ 15. The company invests an amount each year just enough to replace the retired production facilities, and therefore its net investment is zero each year. Therefore, this company pays all of its profits as dividends and there is no growth here. However, if the company's dividends always remain unchanged, then formula one is modified into the formula for calculating the cost of a lifetime annuity:

$$P_0 = d/k \quad (4)$$

Suppose that, the cost of the capital in this business is 15%, then the share price of company *a* will be equal to 100 usd:

$$P_0 = 15 \text{ usd.} / 0,15 = 100 \text{ usd.}$$

Consider a situation where a company pursues a policy of increasing dividends at a constant rate (*g*). Suppose, for example, that the dividend per share of company *b* will grow at a constant rate of 3% per annum, and the dividend for the first year is \$ 15.

The expected flow of the future dividends will be:

D_1	D_2	D_3	Etc.
15 \$	15,45	15,91	Etc.

Substituting the predicted value of dividends $d_l = d_1(1+g)^{l-1}$ into formula 1 and simplifying the expression, we find out the present value of an infinite stream of dividends characterized by a constant growth rate:

$$P_0 = \frac{D_1}{k-g} \quad (5)$$

Then the market value of company *b* shares will be:

$$P_0 = 15 / (0,15 - 0,03) = 125 \text{ y.e.}$$

In this case, \$ 25. Represent the present value of future dividend gains.

We would like to highlight some of ddm's provisions with a constant dividend growth rate. If the values of *d*, and *k* are unchanged (they are constants), then the larger the value of *g*, the higher the stock price. However, as the value of *g* approaches the value of *k*, the

model begins to "explode" those. The share price tends to be infinite. Therefore, this model is valid only when the expected growth rate of dividends is less than the market discount rate (k). Another consequence of a ddm with continuous growth is that the price of a share will rise at the same rate as its dividend.

6 Conclusion

According to our proposal, the following types of additional disclosed information should be included in the standard regulation on the dividend policy of a joint-stock company:

- plans of the company for the implementation of expansion, reconstruction and technical re-equipment, implemented in the form of investment projects with an indication of the expected net profit;

- if available, information on stock quotes, as well as the results of fundamental and technical analysis, comments and forecasts of specialists, experts and consultants;

- if available, the value of the capital cost by type of business of the company and the weighted average cost of the capital of the company with justification of the values of these indicators.

However, as our research has shown many societies have not yet understood the importance and necessity of this information. We hope that the above share pricing mechanism will provide a different perspective on the need to disclose such information.

In addition, given that investing in stocks is a long-term investment, then investors should have basic statistical data and forecasts for the development of a joint-stock company for the long term. We are talking about such information from society as the main parameters of the long-term strategy, the main indicators of the medium-term business plan, the expected return on new investments, the production diversification program, the introduction of innovations, etc. In order to provide investors with the opportunity to make the right investment decision, societies could supplement this information with data on macroeconomic indicators: inflation rate, volume of production of goods and their saturation of markets, dynamics of the exchange rate of major currencies against the sum, etc. The information and statistical base should be based on reliable statistical data for the past years, accurate planned indicators for the next 3-5 years and forecast data for 10-15 years. At the same time, companies should not only publish forecast indicators, but also submit reports on how they are being implemented.

The published information should be easily perceived and, accordingly, allow quick decision-making. For this, it seems appropriate:

- the amount of dividends paid should be shown in absolute terms, and not as a percentage of the par value of shares. The investor is interested in the profitability of his investments in shares, which is calculated as the ratio of dividends to the purchase price of shares. Determining the profitability of shares through the amount of dividends to par requires a double calculation, which can scare off a potential investor;

- provide information on stock quotes in the form corresponding to generally accepted international practice, taking as a sample the form of publishing quotes by the Walt street journal newspaper, with the obligatory coverage of the P / E indicator values. This indicator characterizes the ratio of price to profit of the company and, in essence, is the inverse indicator of profitability. It is used to simplify calculations of the market value of a stock. The formation of data in this form should be carried out by the agencies responsible for informing participants in the securities market, which are obliged to prepare and disseminate such information to all participants in the stock market no later than the morning of the next day after the next auction.

In addition, the information published by the JSC should allow information agencies to supplement information on quotations with data from fundamental and technical analysis, comments and forecasts of specialists, experts and consultants.

Fundamental analysis involves assessing market dynamics based on economic indicators, political events, rumors and informational sentiment of market participants. Technical analysis is based on the study of graphical and mathematical patterns in the movement of prices and volumes of transactions.

Technical analysis, due to its versatility, can be used for any market. Therefore, the training of specialists in this area can be carried out according to a single program. The main requirements for specialists in this area are the ability to use economic and mathematical methods and a good knowledge of the main figures of classical graphical analysis, as well as combinations of trend models. For training and practical work, a computer with a network connection is required to obtain information about market movements (prices, volumes of concluded transactions and volumes of open positions on transactions) and software for it (at present, many different programs have been developed for analysis based on moving averages and oscillatory forecasting method). Knowledge of the main specific features of a particular market (foreign exchange, stock, commodity or futures market) makes it easy for a technical analyst to adapt to work in this market

The problem of training specialists capable of fundamental analysis seems to be more complicated. This analysis is based on knowledge of all the features of a particular market and the ability to identify the main (decisive) factors under the influence of which price fluctuations occur and new trends are formed. Fundamental analysis assumes a narrow specialization not only in the context of individual markets, but also within each one.

The work in the stock market can be effective if traders specialize not only in types of securities, but also in the sectoral context (when working with corporate shares and bonds). For a correct assessment of the market value of a share, a trader needs to analyze macroeconomic and industry factors and evaluate the financial performance of a particular issuer. Such work involves the processing of a huge amount of statistical and other necessary information that is collected from official and unofficial sources.

Unfortunately, in the universities of the republic, students are taught only about types of securities and very little attention is paid to the issues of the market pricing, calculations of level of capitalization of shares, calculations of the synergy effect and the skills of fundamental and technical analysis. Knowledge of these issues at a professional level is necessary not only for corporate consultants (secretaries) of joint stock companies, but also for specialists of rating companies, without whose conclusions the financial market is incomplete.

Knowledge of the basics of analyzing financial markets is necessary not only for specialists, but also for ordinary investors, which potentially include every person who has even temporarily free funds. Operations in financial markets are not so much means of protecting against the depreciation of money under the influence of various risks, they also provide additional income.

In our opinion, the implementation of the above proposals will interconnect the information and dividend policies of companies, add integrity to the entire development strategy, contribute to an increase in investor activity and a greater revival of the national securities market, as well as provide an even greater growth in investments in the economy of our republic.

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