SELECTED DIVIDEND POLICIES IN NATURAL MONOPOLY

Alena BAŠOVÁ

Abstract

The dividend policy may affect the capital structure, too because if, for example, the enterprise determines a high level of yearly paid off dividends, subsequently the enterprise should reasonably maintain the low share of foreign capital in the capital structure to be able from the achieving an operating profit (profit from operating activities) covers not only its interest obligations, as well as the same level of dividends expected by investors. The dividend policy should not only be only a "remainder" that will be a rest after the investment and financial decisions of the company, but should be the equivalent part of them. The main advantage for applying a stable dividend policy is that the company would pay higher dividends to its owner company in this way. However, the main disadvantage of a stable dividend policy is the desire not to reduce the dividends paid; this may be a problem if the company's sales were negative.

Key words

dividend policy, tax burden, Lintner model, future investments, dividends, Public investors.

JEL Classification: L25, L26, G32

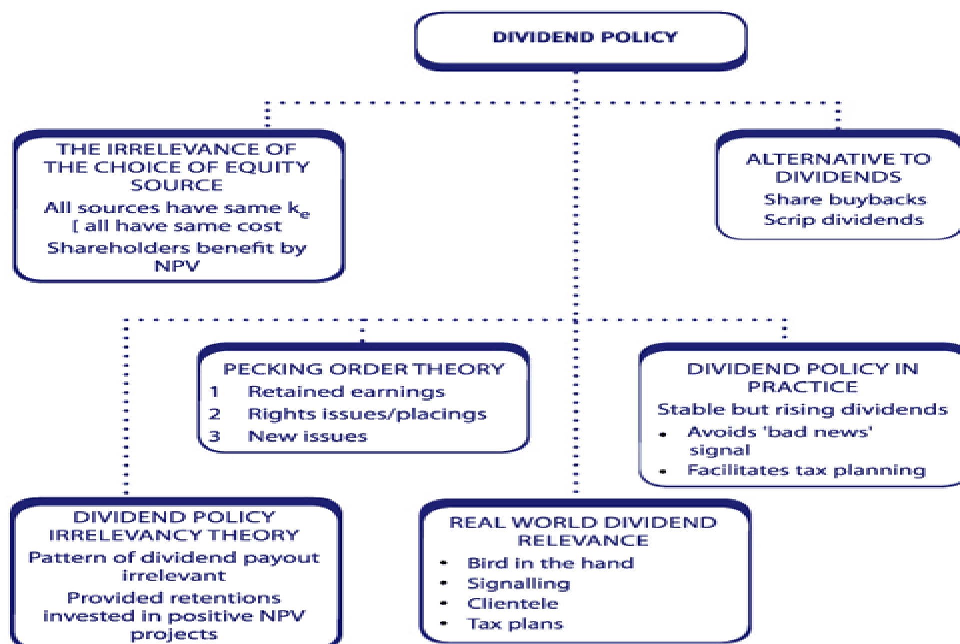
Introduction

Enterprise decisions concerning dividends are closely related to other financial and investment decisions. The dividend policy may affect the capital structure, too because if, for example, the enterprise determines a high level of yearly paid off dividends, subsequently the enterprise should reasonably maintain the low share of foreign capital in the capital structure to be able from the achieving an operating profit (profit from operating activities) covers not only its interest obligations, as well as the same level of dividends expected by investors. Reduction or drop of dividends investors would consider as a negative signal. With higher of financing costs will be less advantageous the investment projects. As we know from the theories of weighted average cost of capital we compare internal rate of return (hereinafter IRR) of investment projects with weighted average cost of capital (hereinafter WACC) and we have chosen only such project, which IRR was higher than WACC. In addition, the method of financing of the new investments will affect the capital structure of the company. From this point of view follows that decisions about dividends are closely related to decisions about the capital structure. The dividend policy should not only be only a "remainder" that will be a rest after the investment and financial decisions of the company, but should be the equivalent part of them.

1. Theories approaches to dividend policy

Theoretical approaches to dividend policy issues can be divided into 3 groups. The models are divided into three groups. The first group are the models, in which the dividend policy has no effect on value of the company. This group includes: Theory about the irrelevance of dividend policy and Theory of clientele’s effect. To the second group are models in which the relationship between the amount of dividends and the company's market value has direct correlation. They belong here Theory of a difference in the tax burden. Third group involves Theory of the "bird in the hand", Theory of signalling through dividends includes the Lintner model, too. There are models, according in which the relationship between the amount of dividends and the company's market value is indirectly. These approaches can be shown on next scheme.

Fig. 1. Dividend policy



Source: Own processing ***by*** *PRASANNA, Chandra. Financial Management. 8. Vyd., New Dehh: Tata McGraw-Hill Education, 2011. 1090s. ISBN 0-07-107840-1*

1. Irrelevant dividend policy

Irrelevant dividends policy is explained by M.H. Miller, F. Modigliani (1961) In their study from 1961 where they suppose perfect capital market, the dividend policy has no effect on the market price of shares of the company, neither the market value of the company and its overall cost of capital has no effect on market value of companies. That means that the optimal dividend policy does not exist.

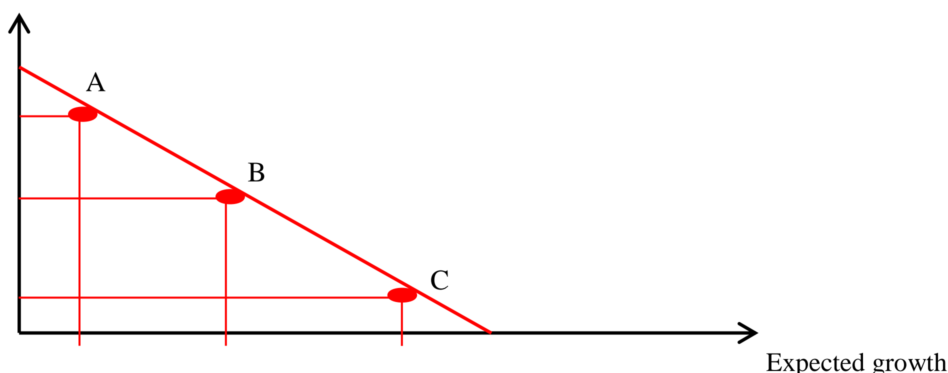
Assumption of this model is perfect capital market:

1. The investment policy of the company is given and does not depend on the dividend policy,
2. The company's dividend policy has no effect on cost of equity,
3. The absence of taxes, emission and other transaction costs, that means: no taxes, no emission and no other transaction costs
4. Investors and managers have the same information about future investment opportunities of the company.

Reasoning, the firm‘s value depends only on its investment policy rather than on how profits equals earnings are split between dividends and retained earnings.

Fig. 2. Explaining theories of M&M

Expected dividend



Source: Own processing by BESNIK, Livoreka a kol. Theories on Dividend Policy

Figure 2 shows the relationship between the expected dividends and the expected growth of the company. In this case, the business entity decides whether or not the profit is used to pay dividends or retains it as retained earnings. Alternatively, it may use a combination of dividends and retained profits. Point A shows a situation where a company uses a larger portion for dividends and leaves less for future investments (does not expect the company to grow). In point B, it divides dividends and retained earnings of 50:50, in this case it expects possible growth. Point C shows a situation, where the company pays a small part of the reached profit for dividends and leaves a larger part for investment as it expects high growth in the future. Assuming perfect capital market, M&M excluded a number of factors that in practice (on imperfect capital market) can influence dividend policy, so the conclusions of this theory may not be valid in real economic world.

2. Tax differential dividend policy

This theory was created in the USA even under the tax legislation applicable in 1986, under which the dividends were ultimately taxed by higher rates than capital gains from the reinvestment retained profits. The capital gains has an another tax advantage, because there were taxed only in their implementation, in the moment capital gains delay to a later date. Longer the investor waits it is lower the present value of paid taxes, which must be from the corresponding capital gains pay.

Conclusions of this model is that**,** investors prefer low dividends, a firm should reinvest its earnings to achieve capital gains. Than the lower dividends than the higher is the firm‘s value, that means optimal dividend policy, which maximizing the firm's value is paying minimal or zero dividends.

Next group of dividend models is the „Bird-in-the-hand“ theory and Signalling hypothesis. The „Bird-in-the-hand“ theory was defined by Gordon and Lintner in 1963. Assumption of this model is contention, that dividends are more valuable and are less risky than expected capital gains. Investors can be more sure about receiving dividends payments than the incomes from capital gains which should result from retained profits. Investors valuated expected dividends more highly rates than expected capital gains. This theory of the "Bird in the hand", whose authors are Gordon and Lintner (see Gordon, 1963), suppose, that cash dividends are more certain than uncertain future capital gains and therefore investors discount them at a higher rate than certain dividends. On the contrary the Signalling model indicated by means of dividends based on the assumption of asymmetry of information's, which means, that managers have about the company and its financial situation more

information than investors. Public investors have less information about the future prospects and future amount of dividends than managers. They even cannot credibly give positive information to investors, and investors would not believe them. High dividends or dividends increase is a credible signal to investors that the firm's management expects a good future financial situation (firms with low earnings or even with losses could not afford it). A way in which "good" firms can differentiate themselves from "bad" firms, it is the more costly a signal and the more credible, too. A simple newspaper article telling that a firm is "good" would not be credible enough to the investors of a "bad" firms would have no problem to duplicate it. So high dividends are the signal, that is enough costly, because a firm must have enough cash to be able to regularly pay high dividends. This relation is called "informational or signalling content of dividend". According to this theory the high dividends are credible signal of good future earnings, what is the „information content of dividends" There is a risk that the company due to the high dividend payout will not have enough cash to be able to realize the benefits of investment opportunities. Importance of information content of dividends may be different for different companies. These differences are mainly a given by the rate of participation of shareholders in corporate governance. In general can be expected that in the case of complete separation of ownership and control over the activities of enterprise is an information gap between managers and shareholders is the largest, for example if there are a large number of small shareholders. Second factor is the general availability and reliability of information about the company. If the company publishes less information, respectively the less reliable the information is published, the greater is the need to have profitable businesses send out signals to investors in the form of higher dividends.

3. Selecting a suitable dividend policy

At the same time, when choosing a dividend policy, the company must have its future plans in mind. As mentioned above, three primary schools of dividend policy and their view of profit distribution. The anti-dividend school prefers the idea of no pay off dividends, especially because of dividend taxation. The main reason for applying anti-dividend policy is that the potential projects of the company will want to implement in the future. A company that wants to realize all intended projects in the future should not use the entire profit for paying dividends, as it would not have the sources to implement advantageous projects itself. This situation would mean an increase costs and indebtedness of the company.

The application of anti-dividend policy is appropriate for the following companies:

1. The companies are new on the market and need to profit from the potential development of society;
2. The companies have shareholders willing to keep their shares despite the fact that the company does not pay dividends
3. For businesses wishing to avoid paying taxes.

The school of dividend neutrality states that dividends do not affect the company's market value. As we have already mentioned, the assumptions of this theory do not reflect the real market situation. Dividends fulfil a signalling significance for a company that is neutral to dividends. Increase dividend paid out may be a positive signal for shareholders, as may believe that the company prospers.

Companies applying a pro-dividend policy try to keep the same level of dividends, respectively, annually increase dividends. An enterprise that pays high dividends, or a high share of net profit paid to shareholders may be a problem if a crisis period occurs. Any reductions or cancellations of dividends in such an undertaking could cause discontent among shareholders, or they could try to sell their share in the company.

4. Application of dividend policy in natural monopoly

Eustream was established in 1970 under the name Transitive Gas Pipeline, Prague. The company was closely associated with the construction of a gas pipeline that transported gas to Western Europe. This project was put into operation on 28.12.1972. Since then, the company and its facilities have been constantly modernizing and improving. The first major change in the company occurred after the split of the Czechoslovak Federal Republic and the

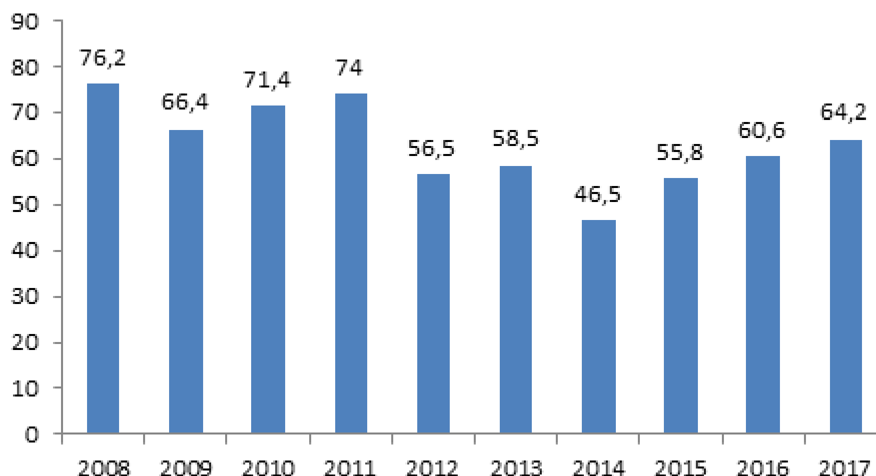
subsequent establishment of the Slovak Republic in 1993. The Slovak part of the Transit Gas Pipeline Prague was transformed into a joint-stock company under the name of Slovtransgaz, Slovenský plynárenský priemysel, a.s. . Another change came in 2006 and the result was the creation of an independent transmission network operator called SPP - preprava a.s. In 2008, unbundling was implemented in accordance with European Union policy, and Eustream, a.s. was established.

Eustream is a company that deals with the transport of natural gas through the territory of Slovakia to other European countries. It represents an important link between the countries of the European Union and the Russian Federation. Their transport routes are connecting with lines in Ukraine, Hungary, Austria and the Czech Republic.

The main task of the company is to care for safe and efficient transport of natural gas. This requires constant monitoring and modernization of transit systems. Modernization involves increasing the safety, reliability and efficiency of natural gas transport. At the same time, it is necessary to reduce negative impacts on the environment; therefore it is necessary to adopt new environmental technologies. In 2017, Eustream transported 64.2 billion m3, respectively 678.66 TWh. The company employed 647 employees as of 31.12.2017 (Annual report of Eustream, a.s. in year 2017).

The main enterprises' activity of eustream a.s. is gas transportation at international level. The company's revenues are almost exclusively from the sale of transportation services. Interest expense is the most significant of the financial costs.

Fig. 3. Volume of exchanged gas drafted by Eustream a.s.



Source: own processing according to annual reports of Eustream

From Figure 3 we can see that the maximum amount of gas transported by the company was between 2008 and 2011, the averaged 72 billion cubic meters, representing 678.66 TWh. Between 2012 and 2014, the company recorded a relatively significant drop in transport, which was stopped until 2014 and since that year the volume transported has been growing.

An important factors that affect shipping volume include:

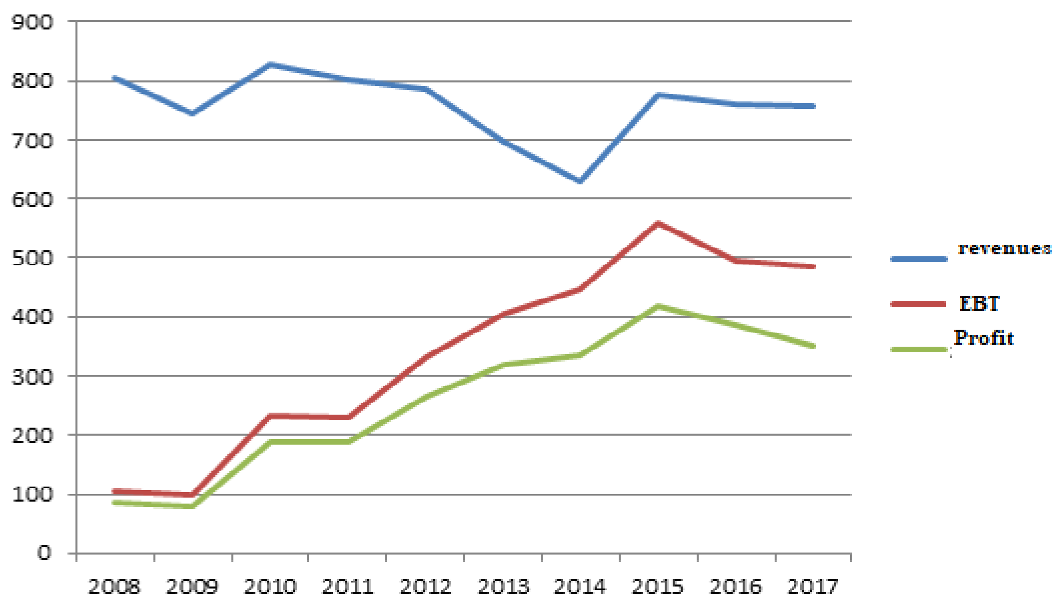
1) The market price of natural gas,

2) Demand for natural gas in target countries,

3) The geographic and political conditions of Central and Eastern Europe,

4) The need for natural gas in both industrial and domestic areas.

Fig. 4. Development of Revenue, EBIT and Profit (EUR millions)



Source: Own processing according to annual reports of Eustream

From Figure 4 we can see that Eustream a.s., earn approximately 800 million Euros a year. The exception is the period between 2012 and 2014, when the company recorded a significant drop in the volume of gas transported. We can also see from the chart that both EBT and net profit were not affected by the slump between 2012 and 2014, but until 2015 there was a growing trend again (Annual reports of Eustream).

Dividend policy of Eustream, a..s.

As we mentioned in the historical development of the company, from March 11, 2019, Eustream had only one shareholder who owned a 100% share. It is SPP Infrastructure in a common nominal value of EUR 282 928 727.09. The following table shows the share structure as of 31/12/2017.(Newer data was not available)

Table 1. Structure of the Company's Shares, as of 31.12.2017

				Sum
Nominal Value	3 319	82 895 533	200000000	282 928 727
Number of shares	10	1	1	12
Share on basic capital	0,001%	29,302%	70,697%	100%

Source: Own processing by Obchodný register SR

As we mentioned above, Eustream, a.s. is 100% owned by SPP Infrastructure Eustream is a subsidiary. This fact has to be taken into account when evaluating the dividend policy, because Eustream management is subject to SPP Infrastructure decisions.

Table 2. Net profit and paid dividends (million EUR)

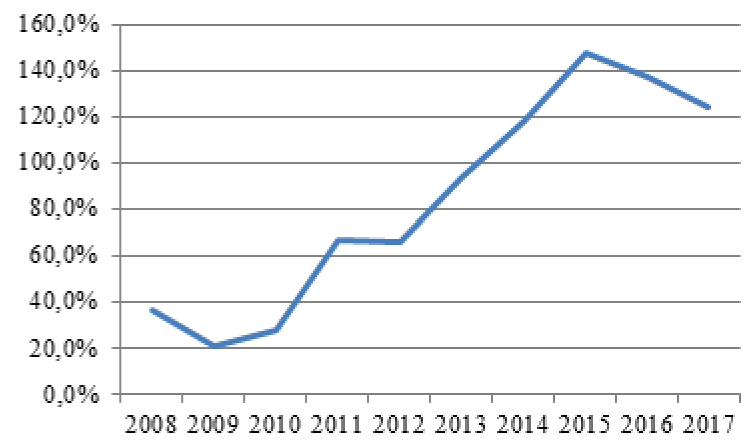
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Net profit	85,25	78,67	188,29	187,06	265,94	319,36	334,00	418,27	387,43	352,39
Payed Dividends	102,08	58,25	78,67	188,29	187,06	265,94	334,00	418,27	387,43	351,00

Source: Own processing by annual reports Eustream, a.s..

From this table we can „say“, that Eustream since year 2014 payed off 100% of net profit on dividends. During 2008 to 2013 the company paid the dividends are always 100% of net income from the previous calendar year. An exception is 2009 when the company paid out dividends of 58.25 mil. EUR, which represents 68.33% of net profit for 2008.

From these results, we can state that Eustream, a.s. prefers a pro-dividend policy because it pays almost 100% of its net profit on dividends. This is confirmed by the following chart, which shows how the dividend yield has been developing since 2008. At the same time, we can say that this is a permanent dividend policy. The Company does not pay extraordinary dividends. Until 2013, the company paid dividends in the amount of net profit from the previous accounting year.

Fig. 5. Company's dividend yield for 2008 to 2017



Source: Own processing by annual reports Eustream, a.s..

As we can see from Figure 5 the dividend yield in 2017 was more than 120%, peaked in 2015 when it reached 147%. We can say that with such dividend yields, it is very advantageous to be the shareholder of that entity. The dividend yield calculation was based on the nominal value of the share and the dividends paid. In the case of Eustream, all shares are registered and are not publicly traded. Therefore, we used a revised formula to calculate the dividend yield in which we replaced the market value with the nominal value.

Dividend yield = (dividend per share / nominal value of share) x 100 (1)

Stable dividend policy is the easiest and most used in business practice. It is mainly used by companies with a high number of shareholders; the basic rule is to pay dividends equally and regularly. The amount of dividend paid is the same, even if it achieves low profits. In particular, the benefit for shareholders is stable income paid on a regular basis (mostly every year). A fixed dividend policy is sometimes called a constant dividend because it pays a certain portion of the profits to shareholders in the form of dividends. Thus, the amount of the dividend is directly proportional to the profit achieved.

In calculating a stable dividend policy, we have taken into account the rate of revenue growth. The arithmetic average of the year-on-year increase in revenues for the period 2008 to 2017 was 11.36% per annum. We calculated the amount of dividend paid as follows:

$$Dt = \text{Net income} * (1-.1136) \qquad (2)$$

If the net profit was lower than the net profit of the previous period, we did not reduce the dividend paid, but we kept it at the current level, as we can see in the chart Nr. 8 in 2016 and 2017.

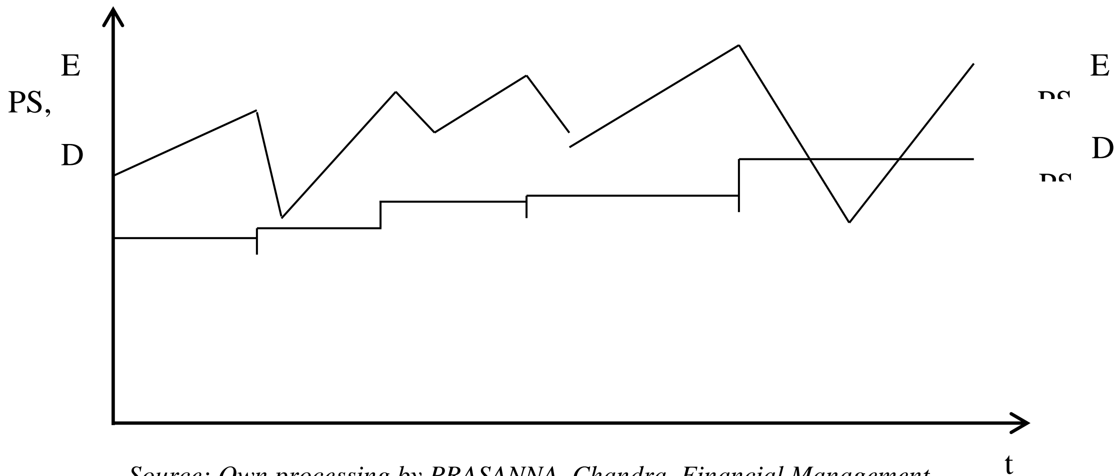
Table 3. Permanent and stable dividend policy (mil. Eur)

Rok	Zisk	Stabilná DP	Stála DP
2008	85,25	75,57	102,076
2009	78,67	75,57	58,248
2010	188,29	166,91	78,669
2011	187,06	166,91	188,285
2012	265,94	235,74	187,059
2013	319,36	283,09	265,94
2014	334	296,07	334,004
2015	418,27	370,77	418,27
2016	387,43	370,77	387,428
2017	352,39	370,77	351
Spolu	**2616,66**	**2412,15**	**2370,98**

Source: Own processing by annual reports Eustream, a.s..

In the case of our proposed stable dividend policy, the company would pay a total of 2,412 mil. EUR for dividends of 41.17 mil. More than in the case of a permanent dividend policy. The chart shows the relationship between profit per share (EPS) and dividend paid per share (DPS).

Fig. 6. The relationship between EPS and DPS

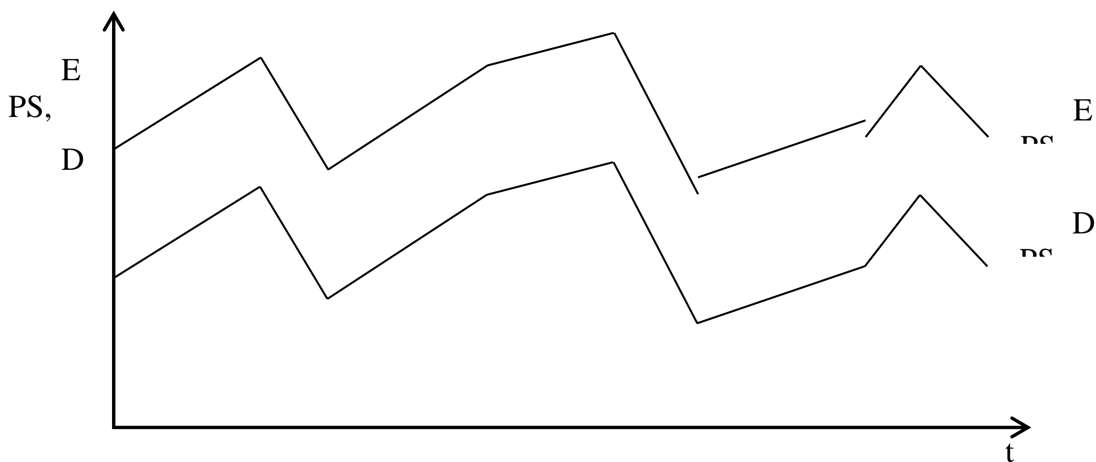


Source: Own processing by PRASANNA, Chandra. Financial Management.

The chart shows that the DPS will only increase if EPS increases and the business considers this increase to be long-term. If it considers the increase to be extraordinary, it will not apply an increase in the payment of dividends. Also, we can see on the chart that the DPCS will not decrease if the business entity achieves extremely lower profits.

A permanent dividend policy is appropriate for companies whose shareholders are willing to adapt to the company's volatility. The following graph shows the payout of dividends per share (DPS) depending on the amount of earnings per share (EPS) at time t.

Fig. 7. The relationship between EPS and DPS in a stabile dividend policy



Source: Own processing by PRASANNA, Chandra. Financial Management.

From chart Nr. 7 we can see how the EPS and DPS curves are copying with each other. In other words, in the case of higher profit (EPS) dividends (DPS) will grow directly. The dividend payment in this case is based on a certain ratio that is retained in any profit achieved. The amount paid dividends we could write using the following formula:

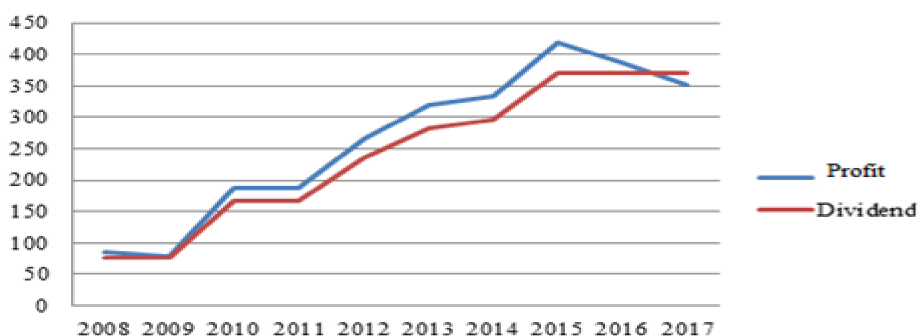
Dt = (EATt x Payout Ratio) / Number of Shares (3)

After editing, we could write the relationship as follows:

Dt = EPS x payout ratio (4)

Where Dt represents the amount dividend at the end of the period to be paid per share. The amount of the dividend paid depends on the profit after tax, respectively earnings after taxes (herein after EAT) and a defined payout ratio.

Fig. 8. Profit and dividends by applying a stable dividend policy



Source: Own processing according annual reports

In calculating a stable dividend policy, we have taken into account the rate of revenue growth. The arithmetic average of the year-on-year growth in revenues for the period 2008 to 2017 was 11.36% year-on-year. We calculated the amount of dividend paid as follows:

Dt = Net income x (1- 0.1136) (5)

If the net profit was lower than the net profit of the previous period, we did not reduce the dividend paid, but we kept it at the current level, as we can see in chart Nr. 8 in 2016 and 2017. By common comparing both ways of dividend policy together, we can state that the differences between them are minimal. In the case of our proposed stable dividend policy, the company would pay a total of 2.412 mil. Eur for dividends of 41.17 mil. It means more than in the case of a permanent dividend policy. The main advantage for applying a stable dividend policy is that the company would pay higher dividends to its owner company in this way. The main disadvantage of a stable dividend policy is the effort not to reduce the dividends paid, this may be a problem if the company's sales were negative. In this case, it would not be possible in the long term to keep dividends at one level, as they would have to be paid out of sources other than net profit. These sources could be mainly company reserves and retained profits of previous periods.

Conclusion

From the common comparison of both ways of dividend policy, we can see that the differences between them are minimal. In the case of our proposed stable dividend policy, the company would pay a total of 2.412 mil. EUR for dividends of 41.17 mil. More than in the case of a

permanent dividend policy. The main advantage for applying a stable dividend policy is that the company would pay higher dividends to its owner company in this way. However, the main disadvantage of a stable dividend policy is the desire not to reduce the dividends paid; this may be a problem if the company's sales were negative. In this case, it would not be possible in the long term to keep dividends at the same level, as they would have to be paid out of sources other than net profit. These sources could be mainly company reserves and retained earnings of previous periods.

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Contact

Ing. Alena Bašová, PhD.
Dept. of Finances,
Faculty of National Economy
University of Economics in Bratislava
Dolnozemská cesta 1
852 35 Bratislava
e-mail: alenkabaso@gmail.com