

## THE IMPACT OF DIVIDENDS' POLICY ON THE COST OF EQUITY OF ENEA S.A.

Anna Wrycol\*

### Summary:

The article is an attempt to depict the procedures and regulations accompanying the policy of dividends in a company with a particular emphasis which is put on Enea S.A. The purpose of the empirical part is to analyze and assess the effectiveness of applying discounted dividends model to calculate the cost of equity for the company. It juxtaposes advantages and impediments in using the model, as well as infers if Gordon model is adequate in estimating the cost of equity for the presented company.

Key words: dividends' policy, the cost of equity, discounted dividends model.

JEL Class: G00, K00.

### INTRODUCTION

The cost of equity interweaves with dividend policy. In the process of planning the company's development it can be perceived as a springboard for the realization of assumed purposes. The level of dividend paid depends on the chosen policy of paying dividends.

The procedure of paying dividends, thus the earning for the owners of shares in the company is established by the corporate meeting. It regulates such

---

\* Master Degree, SFW Energia Sp. z o.o..

issues as the level of the dividends, the date of paying them or the circle of interested parties who are expected to receive the payment.

The dividends' policy is pivotal in calculating the cost of capital with discounted dividends model. Therefore, the article analyzes and assesses the effectiveness of applying discounted dividends model and the dividends' policy to calculate the cost of equity for the company. It juxtaposes advantages and impediments in using the model, as well as infers if Gordon model is adequate in estimating the cost of equity for the presented company.

## 1. THE PROCEDURES AND TYPES OF DIVIDENDS' PAYMENT

The procedure can be accomplished by paying the dividends at the constant level for the longer period of time, raising the level of dividends by the same percentage each forthcoming year or decreasing the amount of dividend each following year. It happens that dividend is distributed unevenly. Two or three years it is increased rapidly, subsequently, the growth is slow or none. Therefore, one can enumerate such models of paying the dividends [Brigham and Gapenski 2000: 498–503]:

- The policy of residual dividends;
- Constant amount per share;
- Constant amount per share with additional dividend;
- Constant percentage of dividend payment;
- Target index of dividend payment.

The first model, namely the policy of residual payments means that the dividend proceeds after executing the intended investments' plans. The dividend gives place to investments. Paying dividends entails only the part of the profit which remains free. The policy of residual dividends is characteristic for new companies which have rather unstable position in the market, because they have not yet developed its brand. In this case the needs for investing cover the generated profits entirely. However, this type of policy is not a common practice among the managers, since it appears to be too labile, which consequently does not present the company as reliable from the part of the investors.

If the company is inclined to remain stable level of the dividend payment it follows the policy of constant amount of dividend per share. Albeit multifarious benefits of this policy, it may occur to be too risky for the company. In the case of financial difficulties, the company will not be able to keep the indicated level of dividend. The sum of dividend is dependent on the level of the worked out profit. In the case of financial hardships, the company is obliged to find other source of capital which supplements the means that are indispensable for realizing the capital investment plans. Otherwise, the strategy implies that the investment projects are procrastinated, making decisions about issuing new

shares or decreasing the earnings per share. Nonetheless, Sierpińska assures that the repercussions following the policy of stable level of dividend are accepted better in the case of postponing the investment decisions than diminishing the level of dividends.

The company may also decide to pay the dividend with additional sum. This policy is usually adopted by the companies which do not gain a stable profit. In order to maintain constant level of dividend, the company considers paying additional dividend. This activity allows the company to avoid a negative reverberation in the market. In the case the profit generated by the company is lower than anticipated, the company suspends paying additional sum. Frequently, the dividend in this model is established on such a low level that it is not problematic to pay it even if the company has temporary financial difficulties. The shareholders are supporters of such a strategy, owing to the fact that they receive stable part of the earnings and the additional dividend may give the signal of the company's performance and financial liquidity.

The policy of constant index of dividends assumes that the dividends are paid in the amount determining constant part of the earnings. Due to the fact that the model is basing on the index, the value of dividend oscillates along with an increase or decrease in the earnings per share. This strategy does not have avid advocators, since it builds uncertainty concerning the future level of dividends. Target index of dividend payment may constitute a modification of this model. The companies accept a long-term index of dividends, allowing for dividend fluctuations in short-term period meanwhile. This operation is feasible when the companies locate the surpluses from the periods of propitious conditions into liquid securities and subsequently compensate the payments in the periods of worse profitability. Choosing the proper policy of dividends is dictated by various determinants such as the development phase of the company, predilections of shareholders, accessibility of investment projects, taxation rate, legal regulations.

The policy of dividend payment is dependent on the phase of development the company is currently in. In the initiative stage, allocating huge amount of the generated profit into paying dividends is not attainable, since the company has to confirm its position in the market and implement new investment projects. Moreover, the investments has to be usually financed from own sources, which definitely restrains the possibility to pay dividends. In the phase of the company's maturity, the investments plans are not so complex and numerous as it was in the beginning. Therefore, the earnings in the shape of dividend can be paid. Also the preferences of shareholders are important. Some investors are inclined to pay the generated profits as dividends, while the others are concentrated on boosting the company's value and allocating the profits for investments.

Elaborating own model of dividend policy, but also the fact the dividend exists in the company are received in a positive way by the investors. As Ickiewicz maintains, the policy of dividends fulfils informative function [Ickiewicz 2004: 39]. It delivers information about the company's performance, its financial condition and the prospects for future profits. Data concerning the efficiency of the company's management and confirming the validity of development paths are successively used by the investors. Therefore, the most favourable policy that the company can adopt is to pay the dividend which presents growing trend, even in the smallest extent.

## 2. LEGAL REGULATIONS CONCERNING DIVIDENDS' POLICY

One of the most necessary procedures regulating the sphere of dividend payment and the structure of equity pertains to the law of taxation. The tax regulations frequently determine the decisions that are made by the shareholders about the paid dividends and retained profit. In Poland, dividends are charged with 15% rate of taxation for natural and legal persons. The capital gain tax is not imposed on natural persons. Therefore, the natural persons while making the choice are oriented towards capital gains which are free from taxation. Legal persons, in turn, bear a duty to incur tax payment from dividends and capital gains. As a consequence, the legal persons do not have this choice while implementing the policy of dividends.

Tax regulations may frequently intensify the effect of clientele. It is the phenomenon of allocating by the investors financial means into the shares of the companies which covey the policy of paying dividends at the optimal level.

Another legal restriction implicating the particular policy of companies regarding equity is paying dividends in cash. The regulations forbid paying dividends which will jeopardize the company by diminishing the basic capital of the company. According to the Code of Commercial Companies, the sums for distribution between the shareholders, cannot exceed the profit for the last accounting year, increased by the profit from reserve capital (the funds created for this purpose in previous years, decreased by the incurred losses and the sums in reserve capital formed in accordance with the act or rules and regulations which cannot be allocated for paying dividends. For the purpose of paying dividends, one can allocate the profit from reserve capitals which have been created in the period within the last three accounting years.

### 3. THE COST OF CAPITAL WITH THE USAGE OF DISCOUNTED DIVIDENDS METHOD

The adopted policy of paying dividend is crucial for estimating the cost of capital by applying Gordon model. Discounted Dividends Method is possible only in the case the company pays dividends. Firstly, such specialists as M. H. Miller, F. Modigliani, J. Lintner and M. Gordon studied the relations between the prices of shares, the level of dividends and the policy of dividends [Czerwonka 2012: 519]. The model is used for estimating the cost of equity. However, A. Damodaran lays a charge on this model. The aim of this article is to analyze its applicability and justification for using it [Damodaran 2012: 323].

The investors anticipate double flow of monetary means, from the dividends and the expected price of shares at the end of the period. The value of shares is determined by the value of future dividend flow. Owing to the fact that dividends are not restricted by the particular date of redemption, they can be paid indefinitely. Therefore, the value of shares is presented [Duliniec 1998: 86].

$$P_0 = \frac{DIV_1}{(1+r_e)^1} + \frac{DIV_2}{(1+r_e)^2} + \dots = \sum_{t=1}^{\infty} \frac{DIV_t}{(1+r_e)^t} \quad (1)$$

where:

- $DIV$  – dividend,
- $P_0$  – the price of shares,
- $r_e$  – the rate of return.

There arises an assumption that the rate of return on the investment is equal to the present profitability of shares.

$$r_e = \frac{DIV_1}{P_0} \quad (2)$$

The significant point in calculating the cost of capital with this method is the fact that it does not consider risk and estimating risk free rate. In order to calculate the cost of capital with discounted dividends method, Gordon model is used. It is applied to estimate the value of the company which has rather stable position on the market. It is also necessary that the company pays dividends at the growing level. In this model the cost of capital may be presented as following [Damodaran 2012: 324].

$$c_e = \frac{DIV_1}{P_0} + g \quad (3)$$

For the purpose of estimating the cost of equity with Gordon model, one has to determine such factors as the market value of shares, present dividend from the generated profits, the rate of dividend growth.

Estimating the rate of dividend growth, it is necessary to bestow attention on particular issues. First of all, the rate of growth has an indefinite terminableness, which implies that that the measures of the company's performance like for instance profits will be growing in the termless way. Therefore, if the company has a stable position, replacing the expected rate of growth with the anticipated constant rate of growth of profits will give similar effect.

Another contentious issue to be solved is the comprehension of the constant rate of growth. According to analysts, the rate should be lower or equal to the rate of growth of the economy which the company operates within [Damodaran 2012: 324]. Nonetheless, there are certain discrepancies in assessing this rate. It stems from at least three factors [Damodaran 2012: 324].

To commence with, the indices of anticipated inflation and the actual growth of economy is uncertain. The specialists can accept distinct data concerning the output rates. In addition, it is not peremptory and obvious that the rates will have the increasing tendency. Some analysts allow to temporary departure from the constant rate of return. If the company is inclined to maintain the rate of return exceeding the constant level, it can add a kind of premium to the constant rate of return in order to reflect the extracurricular rate. However, the constant rate cannot exceed 2% over the economic rate of return. If the rate of return is higher, it is necessary to implement the two- or three grade model.

Two methods are usually used to calculate the rate of growth. These methods are establishing rate of growth basing on historical average rate of growth or the volume of retained profit [Duraj 2002: 116]. J. Gajdka and E. Walińska distinguish 5 aspects which characterize the methods used for the cost of equity calculation [Gajdka and Walińska 1998: 136–140].

Firstly, if one estimates the index of dividend growth on the basis of historical data, the caesura of time is crucial. The length of historical data series can amount to 25, 15, 10 or 5 years [Brigham and Gapenski 2000: 286]. In regards to specificity of Polish economy, this criterion is narrowed to several years.

The average historical rate of growth can be calculated by means of arithmetical or geometrical mean. Moreover, this can be also done by applying the following methods:

- From point to point which assumes that the rate of growth is the compound rate between the two points in time;
- Average to average which allows for indicating the arithmetical average value in the given time intervals;
- Least-squares method is regarded as the most effective method basing on the logarithmic-linear regression and considering all data in the series, thus it the most thorough method.

Another practical method of calculating the rate of growth comprises the retained profit. In order to find the index of equity growth, the formula has been accepted [Wrzosek 2008: 138].

$$g_e = P_r \times ROE \quad (4)$$

where:

- $g_e$  – the growth rate,
- $P_r$  – the retained profit,
- $ROE$  – the rate of return on equity.

The formula states that the growth of dividend is analogical to the growth of equity. Equity, in turn, increases as the result of retaining part of the profit and its future reinvestment according to the internal rate of return that is higher than the market rate.

#### 4. PROFITS AND IMPEDIMENTS OF USING DISCOUNTED DIVIDENDS MODEL

The Gordon Model appears to be quite easy and comfortable way tool for measuring the value. As S. Wrzosek argues, it is one of the most commonly used techniques of calculating the cost of equity [Wrzosek 2008: 138]. Regarding the fact of its simplicity and strong theoretical fundamentals, it plays significant role in assessing the investment and estimating the cost of equity.

The discounted dividends model may contribute to the false estimation of the cost of equity. The situation in which dividends are not paid at all does not have to be tantamount to the decrease in prices of shares and the cost of equity equal to zero. It cannot be assumed that the prices of shares are below zero when the estimated rate of return is lower than the pace of dividend growth. Using the formula for discounted dividends growth implied such results.

The management of the company should cherish the company's development in order to maintain the growing tendency. This will cause the prices of shares to keep the increasing trend, which will fulfil investors' expectations to attain satisfying rate of return.

One of the shortcomings of discounted dividends model is the fact that the model does not consider risk. Risk is significant in the cost of equity estimation, therefore eliminating this element may disturb the effects of calculating the cost of equity.

Moreover, not all companies have the propitious conditions to implement this model while calculating the cost of equity. It can be used in companies with strong position in the market. The policy adopted by such companies should rely on the proportional payment of dividends in relation to the generated profits.

## 5. THE COST OF EQUITY WITH GORDON MODEL USAGE

The informational note of Enea S.A. which refers to the policy of paying dividends establishes that dividends will be paid proportionately to the generated profit and the financial situation of the company. The value of disbursed profit cannot disturb the financial liquidity of the company and cannot be paid at the expense of the capital needed for future investments. According to the published data, the management board of the company intends to pay dividends amounted from 30% to 60% of the net profit [Enea S.A., retrieved: 15.11.2014]. Distributing the profit in the shape of dividends will be, though, postponed in the case when the means necessary for the realization of investment and development projects preponderate over free financial means.

Table 1. Financial data of Enea S.A.

Year	2008	2009	2010	2011	2012	2013
Earnings per share (PLN)	0,57	0,69	0,83	0,8	1,18	1,89
Book value per share (PLN)	22,00	22,27	22,75	23,12	23,78	25,27
Weighted average number of shares (in thousands)	359 016	441 443	441 443	441 443	441 443	441 443
Net profit (TPLN)	203 785	305 414	364 386	352 834	522 680	833 465
Dividend per share (PLN)	0,46	0,38	0,44	0,48	0,36	0,57
Total value of dividend (TPLN)	203 064	167 748	194 235	211 893	158 919	251 623

Source: Author's calculation on the basis of Enea's financial statements.

Enea S.A. distributed in 2009 as dividends 99,6% of net profit for the year 2008, which amounted to 203,06 million PLN. The following year the company committed itself to pay dividend at the level of 0,38 PLN per share. It means that the company distributed the sum of around 167,75 million PLN as dividend for the year 2009. In 2011 the sum of dividend has been increased in comparison to



2010. The company paid about 194,23 million PLN as dividend for the year 2010. The year 2012 has brought the higher level of dividend per share at the level of 0,48 PLN. It implies that the amount of 211,89 million PLN has been allocated for dividend payment from the profit for 2011. In 2013 the level of dividend per share decreased to 0,36 PLN per share. However, in 2014 the company has decided to pay 0,57 PLN per share, which has been the highest level since it has been listed on the stock exchange.

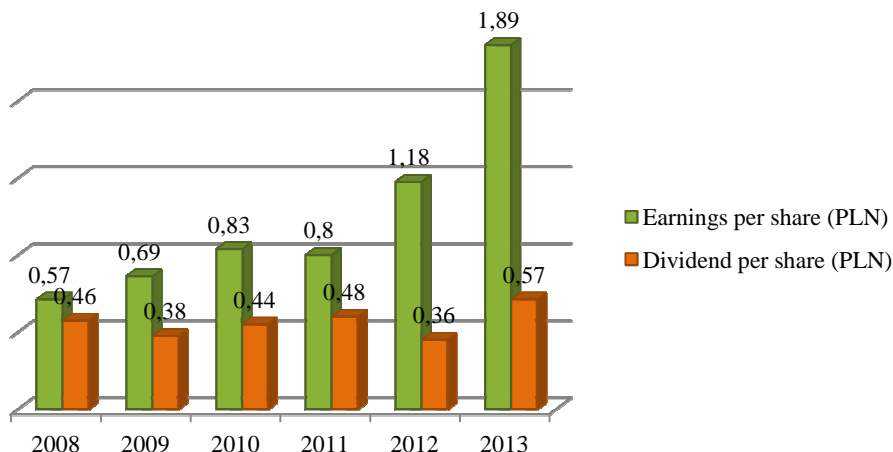


Figure 1. Enea's earnings and dividends per share 2008–2013

Source: Author's calculation on the basis of Enea's financial statements.

According to data provided by Enea S.A from its annual statements, one can calculate data which are necessary to estimate the rate of dividend growth which is required for the cost of capital calculation.

Table 2. Indices used for the cost of equity calculation 2008–2013 [%]

Year	2008	2009	2010	2011	2012	2013
ROE	2,10	3,70	4,10	3,80	5,30	7,50
Retention ratio	19,30	44,93	46,99	40,00	69,49	69,84
Rate of growth	0,41	1,66	1,93	1,52	3,68	5,24

Source: Author's calculation on the basis of Enea's financial statements.

For the purpose of a better presentation of the rate of growth, the figure has been created.

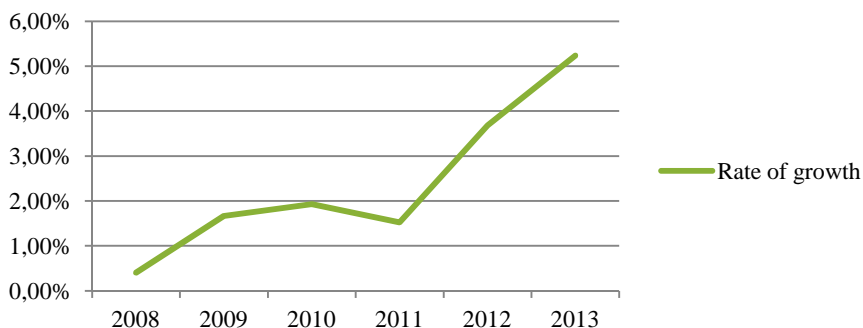


Figure 2. Rate of growth of dividends of Enea S.A. 2008–2013

Source: Author's calculation on the basis of Enea's financial statements.

Since the first dividend payment in 2008, its significant growth has been perceptible. Dividend for 2011 is the turning point. This decrease has been probably caused by the general exacerbation in the global financial markets. It also is the confirmation of still not entirely stable position of the company which financial situation and performance is dependent on the fluctuations of the external market. If one treats the situation from 2011 as single and the policy of the company will not change, Gordon model allows for calculating the cost of equity. In this case, the results are presented.

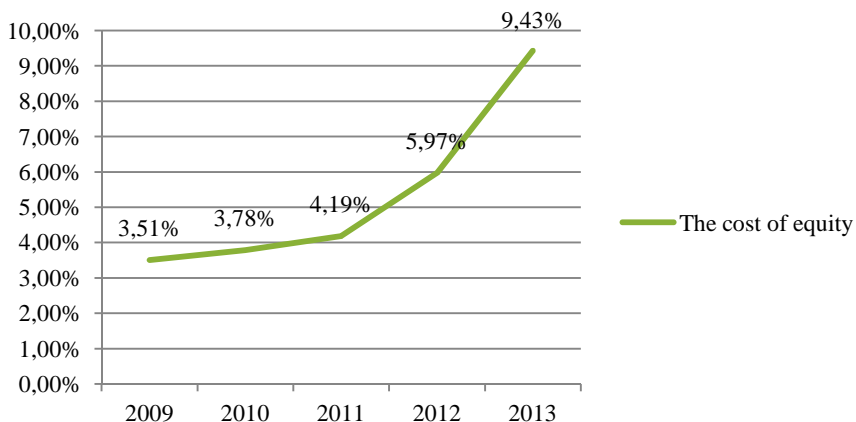


Figure 3. The cost of equity for Enea S.A. in years 2009–2013

Source: Author's calculation on the basis of Enea's financial statements.

## CONCLUSION

On the basis of the conducted analysis and research, it can be concluded that Gordon model allows for calculating the cost of capital in the case of Enea S.A. However, the results need to be verified by future dividends policy. If the policy of dividends payments is constant and there are no fluctuations or destabilization in the company's performance, it may constitute the alternative method to CAPM of calculating the cost of equity. The company has to pay dividends in systematic way in the future. The company which operates in rather steady sector, has firm background to maintain stable in the light of the unsettled situation in the financial markets. However, if the discounted dividends model is to be used successfully, the analysis has to be performed once again in a few years to confirm whether the achieved results are reliable and effective.

## REFERENCES

- Brigham E. F., L. C. Gapenski, 2000, *Zarządzanie finansami*, t. 1, Polskie Wydawnictwo Ekonomiczne, Warszawa.
- Czerwonka L., 2012, *Ocena Spółek w kontekście możliwości zastosowania modeli zdyskontowanych dywidend*, [in:] D. Zarzecki (ed.), *Czas na pieniądź. Zarządzanie finansami*, „Zeszyty Naukowe”, no. 690, Szczecin.
- Damodaran A., 2012, *Investment Valuation. Tools and Techniques for Determining the Value of Any Asset*, John Wiley & Sons, New Jersey.
- Duliniec A., 1998, *Struktura i koszt kapitału w przedsiębiorstwie*, Wydawnictwo Naukowe PWN, Warszawa.
- Duraj A. N., 2002, *Czynniki realizacji polityki wypłat dywidendy przez publiczne spółki akcyjne*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.
- Enea S.A., [www.ir.enea.pl](http://www.ir.enea.pl) [retrieved: 01.12.2014].
- Gajdka J., E. Walińska, 1998, *Zarządzanie finansowe: Teoria i praktyka*, t. 1, Fundacja Rozwoju Rachunkowości w Polsce, Warszawa.
- Ickiewicz J., 2004, *Pozyskiwanie, koszt i struktura kapitału w przedsiębiorstwach*, Szkoła Główna Handlowa. Oficyna Wydawnicza, Warszawa.
- Sierpińska M., 1999, *Polityka dywidend w spółkach kapitałowych*, Wydawnictwo Naukowe PWN, Warszawa–Kraków.
- Ustawa z dnia 9 czerwca 2000 o zmianie ustawy o podatku dochodowym od osób prawnych*, DzU 2000, nr 60, poz. 700.
- Ustawa z dnia 15 września 2000, Kodeks Spółek Handlowych*, DzU 2000, nr 94, poz. 1037, art. 348.
- Wrzosek S., 2008, *Ocena efektywności inwestycji*, Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław.

## WPLYW POLITYKI DYWIDEND NA KOSZT KAPITAŁU WŁASNEGO NA PRZYKŁADZIE ENEA S.A

Artykuł jest próbą przedstawienia procedur oraz regulacji towarzyszących polityce wypłacania dywidend na przykładzie spółki Enea S.A. Celem części empirycznej jest analiza i ocena

efektywności stosowania modelu Gordona do obliczenia kosztu kapitału własnego spółki. Artykuł zestawia korzyści oraz ograniczenia w stosowaniu modelu, a także przedstawia wnioski co do adekwatności modelu Gordona w estymacji kosztu kapitału własnego na przykładzie wybranej spółki.

Key words: polityka wypłaty dywidend, koszt kapitału własnego, model Gordona.