

# Theoretical Background of Dividend Taxation

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**Abstract**—The article deals with dividends and their distribution from investors from a theoretical point of view. Some studies try to analyze the reaction of the market on the dividend announcement and found out the change of dividend policy is associated with abnormal returns around the dividend announcement date. Another researches directly questioned the investors about their dividend preference and beliefs. Investors want the dividend from many reasons (e.g. some of them explain the dividend preference by the existence of transaction cost; investors prefer the dividend today, because there is less risky; the managers have private information about the firm). The most controversial theory of dividend policy was developed by Modigliani and Miller (1961) who demonstrated that in the perfect and complete capital markets the dividend policy is irrelevant and the value of the company is independent of its payout policy. Nevertheless, in the real world the capital markets are imperfect, because of asymmetric information, transaction costs, incomplete contracting possibilities and taxes.

**Keywords**—dividend distribution, taxation, payout policy, investor, Modigliani and Miller theorem

## I. INTRODUCTION

Dividends may be in the form of cash, stock or property. Most secure and stable companies offer dividends to their stockholders. Their share prices might not move much, but the dividend attempts to make up for this. A distribution from a company is anything that the company gives to one of its shareholders without the shareholder giving full payment in return. The most common type of distribution is a dividend, a cash distribution of the company's profits.

Dividend payments are considered ordinary income and are taxed as such, the same as if the taxpayer had earned the income working at a job. In many jurisdictions, the government requires the company to withhold at least the standard tax, paying this to the national revenue authorities and paying out only the balance to the shareholders. Depending on the jurisdiction dividend income along with interest income, collected rents, or other may also be taxed and is the subject of recurring debate as to whether or not these taxes should be eliminated. Some who want to keep the dividend tax as-is claim it is unfair from a social policy standpoint to tax generated through active work at a higher rate than generated through less active means.

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Proponents make the related point that reducing or eliminating dividend taxes helps the wealthiest individuals who can afford to buy large quantities of stock, as they could feasibly live off the dividend payments without any income tax on their earnings. There are also worries that companies may not have paid their full share of income tax due to legislated tax preferences.

The paper is structured in the following way. First of all, we review the existing literature with focus on theoretical background of dividend distribution. The following section describes the Modigliani-Miller Dividend Irrelevance Theorem and firm's payout policy and taxation with the clientele effect. Finally, the last section concludes the paper and state final remarks.

## II. THEORETICAL BACKGROUND

Businesses find dividends obvious', whereas 'economists find dividends mysterious [18]. The dividend in the business dictionary is defined as "share of the after-tax profit of a firm, distributed to its shareholders/stockholders according to the number and class of shares/stock held by them". From business point of view, the dividend is obvious. As concluded by the survey-based research the managers believe the investors have dividend preference [10]. The same may be concluded from investor's point of view, thus the investors want dividend [16]. On the other hand the economists consider the dividend controversy to be "one of the 10 unsolved problems in finance" [11].

*Dividend distribution* : For decades, US companies have tremendously preferred to pay out cash in the form of dividends. In the US, during the period 1973-1996, the total amount of dividends distributed to shareholders was continually increasing and in 1996 reached the level of 297,7 billion (in US dollars) sent in France. The French companies are more and more generous with their shareholders. According to the INSEE study (2008) the proportion of dividends as percentage of gross operating income has grown from 18% in period 1995-2001 to 25% in 2007. In general, the total dividend payout ratio does not decline. Within the years 1972-1998 it happened only twice, in 1992 and 1998. This phenomenon is called the dividend smoothing.

*Dividend distribution from investors point of view* : Different studies have been performed in order to answer the question, if the dividends are important for investors. Some of them analyzed the reaction of the market on the dividend announcement [10], [1], [13] and found out the change of dividend policy is associated with abnormal returns around the dividend announcement date. Moreover they concluded the investors react positively if the dividend increases, but

negatively if it drops down. Another researches directly questioned the investors about their dividend preferences and beliefs. The best known survey-based studies are those conducted by [12] on the sample of Dutch investors and by [26] on the Greek sample. The key findings of these studies may be summarized up as follows [2]:

- The most strongly held belief is that the investors appreciate the dividend and want to receive it. However a sizable minority of shareholders does not want dividends or is indifferent to dividend payments.
- The dividend increase provides positive signal, whilst the decrease provides the opposite one. It confirms the conclusion of the previous studies of [10], [1] and [13].
- Dividend seems to be relevant, but the rational for dividend preference differs.

So a question remains: Why do the investors want the dividend?

Various theories were developed on this subject. Some of them explain the dividend preference by the existence of transaction costs. An investor, who has the option to choose between the stocks paying dividend and stocks non paying dividend, should choose the first option. The reason is the lower transaction cost of cashing in the dividends compared to regular selling of the part of his/her portfolio- Another explanation relies upon the uncertainty of future capital gains from questionable investment, the Bird-in-the-hand theory. According to this theory, the investors prefer the dividends today, because they are less risky. The next explanation developed by behavioral finance; "behavioral life cycle" of dividends; is based on self-control. Shefrin and Statman [32] argue, the investors want to restrict their present consumption and postpone it for retirement, when they have no labor income and are more dependent on their securities holdings.

The agency cost theory underline the role of dividends as a useful tool for shareholders to control the overinvestment problem (According to the overinvestment theory of [19], managers tend to expand the size of the firm, and therefore may take on negative NPV projects instead of paying dividends). Easterbrook [14] proclaims that dividends reduce the overinvestment problem because their payment heightens the frequency with which companies have to go to equity markets in order to raise supplementary capital. In the process of "equity acquisition", firms subject themselves to the monitoring of these markets.

One of the dominant explanations is the dividend signaling theory. This theory implies the managers have private information about the firm, so they know more about the company's true value than do its investors. The game-theoretic literature suggests various signals, which the managers can use to convey this information to the market [25]. The signaling theory formalized by [5] or [21] implies that growth in dividend value is a credible signal that the firms perspective has ameliorated. Dividend distribution from companies point of view,

#### *The Lintner model*

One may distinguish 2 different approaches to the dividend payout policy:

- *Dividend policy being residual decision of the company:*  
In abeyance with this theory the dividend policy is subordinated to the investment policy. Thus the firm invests in all investment projects having NPV greater than zero and only the remaining cash flow is distributed to the shareholders.
- *The real dividend policy:*  
The dividend policy is considered as very important for some companies. The firms behaving according to this theory endeavor after the stable and rather increasing dividend policy. Consequently some of the possible future investments have to be financed by debt issuance, instead of free cash flow.

However, the empirical studies show that the most of the firms adopt the second approach. Labour and Dementia (1992) conducted a dividend study on the sample of 4,200 French companies during the period 1982-1986 and found out the size and the profitability of the company have strong influence on the payout policy decision. His research discovered that 9 of 10 companies with high profitability pay dividend.

Moreover as already mentioned the firms in general increase the dividends and rarely cut them, the so called dividend smoothing. Lintner [24] was the one who showed this phenomenon is widespread. In his study he created a list of 15 observable characteristics and factors, which might be expected to have an important impact on dividend policy. From 600 listed companies, he selected 28 for detailed investigation, such that there was a minimum of 3 firms within each major group of each of these characteristics.

The most important finding of his research is that "dividends represent the primary and active decision variable in most situations". In general nearly all managers are convinced that the shareholders appreciate stable and increasing dividend policy. They strongly believe the market puts a premium on firms with a stable or gradually growing dividend policy. Hence the management tries to avoid considerable changes in the payout policy. Only when the change is considered to be necessary, the managers are obligated decide how large it should be. Nevertheless Lintner found no instance in which such a decision was considered without regard to the existing rate of dividend payment.

Secondly he showed the current net earnings were the most important factor determining the change in dividends. The management needed to explain to investors the reason for its actions and needed to establish its explanations on the simple and perceptible factor. Current net earnings meet this condition better than any other indicator.

Lintner's third finding was that dividend policy was determined by management on the first place. Other policies were subordinated and adjusted, taking dividend policy as given.

Lintner formalized the following model, which captured the most important elements of firms' dividend policies. For firm i,

$$D_t - D_{t-1} = a_i + c_i (D_{it}^* - D_{i(t-1)}) + u_{it} \quad (1)$$

$$D_{it}^* = \alpha_i E_{it} \quad (2)$$

Where for firm i

$D_{it}^*$  is desired dividend payment during period t

$D_{it}$  is actual dividend payment during period t

$\alpha_i$  is target payout ratio

$E_{it}$  are earnings of the firm during period t

$a_i$  is a constant relating to dividend growth

$c_i$  represents partial adjustment factor

$u_{it}$  is error term

His model was able to explain 85% of the dividend changes in his sample of companies.

Later on the model was tested by other researches who confirmed the Lintner model performed well. The most famous research is the one of **Error! Reference source not found.**

#### a. Modigliani-Miller Dividend Irrelevance

##### Theorem

The best know and perhaps the most controversial theory of dividend policy was developed by [29]. They demonstrated in the perfect and complete capital markets the dividend policy is irrelevant and the value of the company is independent of its payout policy, the Modigliani and Miller Dividend Irrelevance Theorem. In their framework the investors are indifferent between share repurchases and dividends because the investors can replicate any desirable payout either by selling holdings in the companies that don't pay dividends or by reinvesting their dividends [20].

In contrast with the previous subchapter, from Modigliani and Miller point of view the dividend payout ratio is not considered as important for the companies and the amount of dividends distributed by the company has no impact on the wealth of the shareholders. Each payout policy is equivalent, because none of them may increase (or decrease) the value of the company. They pointed out that what really counts is the company's investment policy. As long as it does not change, altering the mix of payout and retained earnings will not affect the value of the firm.

The key assumptions of Modigliani and Miller's theory are:

- *Perfect markets*: In a perfect capital markets no buyer or seller is enough strong to influence the market price and the investors have perfect information. This world is free of transaction costs and of brokerage fees. Moreover no taxes and tax differentials between distributed and

undistributed profits and between dividends and capital gains exists.

- *Rational behavior*: Rational behavior means that each investor prefers more wealth to less and he is indifferent to form (cash payments or increase of holding of his shares) of the wealth he receives
- *Perfect certainty*: The perfect certainty may be compared to an assurance on each future profit of corporation or all future investment. As a consequence, there is no need to distinguish between bonds and shares as a source of financing.

Under these assumptions the "fundamental valuation principle" may be written as:

$$\frac{d_i(t) + p_i(t+1) - p_i(t)}{p_i(t)} = \rho(t) \quad (3)$$

$$\Rightarrow p_i(t) = \frac{d_i(t) + p_i(t+1)}{1 + \rho(t)} \quad (4)$$

Where

$d_i(t)$  denotes dividend per share paid by firm i during the period t

$p_i(t)$  is the share price (ex any dividend in t-1) of firm i at the start of period t

$\rho(t)$  denotes rate of return independent of i

That means the price of each share has to be such that the required rate of return on every share will be the same across the whole market over each interval of time. In other way, the owners of low-return (high-priced) stock could increase their wealth by selling these shares and purchasing shares with higher rate of return. This process will bring down the price of low-return shares and push up the prices of high-return shares.

The effect of dividend policy may be seen more easily if the equation (4) is restated in terms total value of the firm.

$$V(t) = \frac{D(t) + n(t)p(t+1)}{1 + \rho(t)} \quad (5)$$

$$\Rightarrow V(t) = \frac{D(t) + V(t+1) - m(t+1)p(t+1)}{1 + \rho(t)} \quad (6)$$

Where

$n(t)$  denotes the number of shares at the start of period t

$m(t+1)$  denotes the number of new shares issued during the period t at the ex-

dividend closing price  $p(t+1)$ , so that

$$n(t+1) = n(t) + m(t+1)$$

$V(t) = n(t)p(t)$  the total value of the firm

$D(t) = n(t)d(t)$  the total amount of dividend paid to the shareholders at the record date

The equation (5) illustrates very well how the current dividends may affect the current market value of the enterprise  $V(t)$ :

- The current dividend will clearly affect the  $V(t)$  via the first term  $D(t)$
- The current market value may be influenced as well indirectly via the second term  $V(t+1)$ , the new ex-dividend market value. Anyhow Modigliani and Miller assume the future dividend policy is known and given for the period  $(t+1)$  and is independent of current dividends  $D(t)$
- The third term  $m(t+1)p(t+1)$  has an impact on the  $V(t)$  too. The higher dividend payout in any period has to be compensated by the raise of capital from external sources in order to maintain any desired level of investment.

Therefore the market value of the company is affected by two contradictory factors. Taking into account the assumptions we did at the beginning "*the two dividend effects must always exactly cancel out so that the dividend policy to be followed in  $t$  will have no effect on the price at  $t$* " [42].

Let's express  $m(t+1)p(t+1)$  as function of  $D(t)$ :

$$m(t+1)p(t+1) = I(t) - [X(t) - D(t)] \quad (7)$$

Where

$I(t)$  is the given level of company's investment during the period  $t$

$X(t)$  is the firm's net profit for the given period

Substituting (7) in equation (6) we get

$$V(t) = \frac{X(t) - I(t) + V(t+1)}{1 + \rho(t)} \quad (8)$$

The term does not appear anymore in the equation, therefore we can conclude the dividend policy has no effect on the firm's current market value.

#### b. Firm's payout policy and taxation

Modigliani and Miller [42] demonstrated the value of the company in the perfect and complete capital markets is independent of its payout policy. Nevertheless, in the real world the capital markets are imperfect, because of asymmetric information, transaction costs, incomplete contracting possibilities and taxes.

Moreover the empirical observations show positive correlation between the volume of dividend payments and stock price, thus the dividends do matter **Error! Reference**

**source not found.** Much of the literature has tried to clarify the pattern in firm's payout policies.

The taxation plays crucial role for the company's and investor's decisions. Heterogeneous taxes for the assets conduce to discrepancies between their immediate pre-tax market prices; therefore the taxation has an impact on asset pricing. The investor's dilemma can be expressed as: is the value of a CZK 1 of taxable dividend higher or lower than the value of a CZK 1 of capital gain? The investors confronting higher taxation on dividends relative to the taxation of capital gains may call for higher pre-tax returns on high dividend yield securities [23]. The firm's face the question how to distribute the profit among the shareholders.

In the nearly perfect world, that is no transaction costs, no information asymmetry, but with diverse tax rates on capital gains and dividends, the companies should choose the payout policy, which is the most tax effective. From a tax perspective, there is an evident incentive for companies to replace dividends by share repurchases due to their more favorable tax treatment [18].

But as the empirical evidence shows, the companies still distribute huge amount in the form of dividend payments. Why do they do so? Much of the empirical literature has tried to solve the phenomena of *dividend puzzle*, and it seems to be still unexplained. Recently, the researchers documented, that the companies avoid making extreme changes in their payout policy as it may induce changes in the structure of ownership, and consequently negatively affect the share price [8]. The detailed discussion about the dividend puzzle is out of scope of this diploma thesis. In more details, only the explanation related to the fiscal effect will be discussed in the next subchapter. An excellent overview of dividend theories may be found in [27].

On the other hand, the empirical evidence suggests some kind of linkage between the taxes and dividend policy. It seems the companies started to change the dividend payout as a consequence of changes in relative dividend rate. In the works of [17] or [18] one can find a documentation of an increase in the share repurchases payout accompanied by decrease of firms paying dividends. Although the huge and already established companies had not reduce the dividend payments, the growth rate in dividend payout have been much lower than it used to be, and the amount of stock repurchases have grown significantly [18].

### III. CONCLUSION

Different studies have been performed in order to answer the question if the dividends are important for investors. Some of them analyzed the reaction of the market on the dividend announcement and found out the change of dividend policy is associated with abnormal returns around the dividend announcement date. Another researches directly questioned the investors about their dividend preference and beliefs. Lintner was the one who showed phenomenon that in general increase the dividends and rarely cut them. The most important finding of the Lintner's model is that dividends

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