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MASTER

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MASTER'S FINAL WORK

DISSERTATION

DOES CEO TURNOVER INFLUENCE DIVIDEND POLICY?

PEDRO JOSÉ INÁCIO DA COSTA SANTOS

OCTOBER - 2019

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SUPERVISION:

PROFESSOR DOUTOR VICTOR BARROS

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Abstract

In this research, we aim to assess whether CEO turnover influences firms' dividend policy.

This work is motivated by the extensive conceptualisation and empirical research that CEO turnover and dividend policy have been subject to throughout the years. However, to the best of our knowledge, there is no empirical literature that links CEO turnover and dividend policy, so far. Therefore, with this study we intend to clarify whether and how CEO turnover influences firms' dividend policy and, consequently, contribute to an unexplored topic.

The data used in this study contains 394 firms listed in the *S&P 500 Index* with a sample period between 2004 and 2017. The empirical evidence suggests that CEO turnover increases firms' dividend yield by 0.2%. Moreover, CEO turnover that occurs during 2008 and 2012 has a positive effect on the dividend yield of 0.5%, although it leads to a decrease in the dividends paid by firms. During the financial crisis stock prices are more volatile, therefore, when a firm announces a CEO turnover, the market reacts less smoothly and may lead to even lower stock prices, increasing, even more, the dividend yields. Also, during the same period (2008-2012) firms have more incentives to retain their earnings. Therefore, CEOs decide to pay fewer dividends. Evidence also indicates that CEO turnover has a positive effect on dividend per share and dividend yield after the financial crisis.

Thus, this work contributes to practice since evidences, for the first time, that CEO turnover has a significant impact on firms' dividend policy, contributing to the existing literature of both CEO turnover and dividend policy.

JEL Classification: G32; G35; G40

Keywords: CEO turnover, Dividend Policy, Dividend Yield, Dividend Per Share, Dividend Payout Ratio

Resumo

Neste estudo pretendemos estudar se as mudanças de CEO influenciam a política de dividendos das empresas.

Este trabalho é motivado pela extensiva conceptualização e análise empírica de que as mudanças de CEO e a política de dividendos têm sido alvo ao longo dos anos. No entanto, a nosso conhecimento, não existe até agora literatura empírica que relacione mudanças de CEO com política de dividendos. Por isso, com este estudo pretendemos clarificar como é que as mudanças de CEO influenciam a política de dividendos das empresas e, consequentemente, contribuir para um tópico que ainda não foi estudado.

Os dados usados neste estudo contêm 394 empresas cotadas no *S&P 500 Index* com um período de amostra entre 2004 e 2017. Os resultados da análise feita sugerem que mudanças de CEO aumentam o rendimento dos dividendos das empresas em 0.2%. Além disso, mudanças de CEO que ocorrem entre 2008 e 2012 têm um efeito positivo no rendimento dos dividendos de 0.5% e levam a uma diminuição dos dividendos pagos pelas empresas. Durante esta crise financeira, o preço por ação é mais volátil, por isso, quando uma empresa anuncia a mudança de CEO, os mercados vão reagir de uma forma mais drástica, resultando num preço por ação ainda mais baixo, aumentando, ainda mais, o rendimento dos dividendos. Ainda durante este período, as empresas têm mais incentivos para reter os seus ganhos, por isso, os CEOs decidem pagar menos dividendos. Os resultados também referem que a mudança de CEO tem um efeito positivo nos dividendos por ação e no rendimento dos dividendos depois da crise financeira.

Assim, na prática este trabalho evidencia, pela primeira vez, que a mudança de CEO tem um impacto significativo na política de dividendos das empresas, contribuindo assim para a literatura já existente sobre mudança de CEO e política de dividendos.

Classificação JEL: G32; G35; G40

Palavras-chave: Mudança de CEO, Política de Dividendos, Rendimento dos Dividendos, Dividendos Por Ação, Rácio de Pagamentos de Dividendos

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List of Abbreviations

DPS – Dividend Per Share

DY – Dividend Yield

DPR – Dividend Payout Ratio

EBIT – Earnings Before Interest and Taxes

EBT – Earnings Before Taxes

ROE – Return on Equity

NPM – Net Profit Margin

FE – Fixed Effects

RE – Random Effects

CEO – Chief Executive Officer

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1 Introduction

CEO turnover and dividend policy have been studied by academics throughout the years. However, to the best of our knowledge, the relationship between these two topics have never been studied. Therefore, in this empirical research it will be studied what the influence of CEO turnover in firms' dividend policy is.

In past studies, the relationship between CEO turnover and corporate performance has been a predominant topic. Empirical evidence found that support for a negative relation between firms' performance and CEO turnover (Puffer & Weintrop, 1991; Kang & Shivdasani, 1995; Huson et al., 2004). Such effect is even more negative if performance is measured relative to firms' peers (Kang & Shivdasani, 1995; Jenter & Kanaan, 2015).

Despite the large focus on performance, other factors can also influence the frequency of a CEO being dismissed from its role. According to Brickley (2003), the CEO's age can also be an important factor in explaining CEO turnover. Murphy and Zimmerman (1993) stated that the probability of a CEO turnover happening is higher when the CEO's age is 64 or 65. Such results are expected as such is considered to be a "normal retirement age". Murphy (1999) results also suggested that CEOs were most likely to be dismissed at such ages. Consequently, this variable allows researchers to distinguish whether a CEO turnover is forced or occurs due to retirement reasons. Likewise, the composition of the Board of Directors can also influence CEO turnover. As independent or outside directors are added to firms' boards, the independence towards the CEOs increases. Consequently, the probability of a CEO being replaced increases (Hermalin & Weisbach, 1998; Brickley, 2003).

Dividends are a portion of the firm's earnings that is distributed to its shareholders. Nonetheless, firms' management can decide to retain such earnings. Miller and Modigliani (1961) argued that in perfect capital markets conditions, dividend policy does not affect firms' valuation. However, current markets are not perfect, containing market imperfections that can affect a firm's dividend policy. Consequently, the existence of asymmetric information, a market imperfection, suggests that firms may pay dividends to mislead, and attract new investors. Additional studies indicate that paying dividends may reduce conflicts of interest between stakeholders, and thus, reduce agency costs within a firm structure.

Finally, a predominant market imperfection in today's world is the existence of taxation. Dividends are seen as a return for shareholders and usually face higher tax rates than capital gains. However, shareholders still prefer to receive dividends as a form of compensation.

Thus, in this dissertation, we intend to clarify whether CEO turnover influences dividend policy. This work will contribute in understanding an unexplored topic and provide a clearer insight into how CEO turnover and dividend policy are related.

In this research, we considered companies that were listed on the *S&P 500 Index* over the period 2004-2017. The data related with CEO turnover was subject to manual adjustments using CEOs' biographies and news which will be explained in detail in further sections. Several variables were selected to represent different factors that can influence both CEO turnover and dividend policy. A detailed description of these variables will be shown in further sections.

The empirical evidence suggests that CEO turnover increases firms' dividend yield by about 0.2%. Moreover, CEO turnover that occurs during 2008 and 2012 has a positive effect on the dividend yield of 0.5%. Also, during the same period (2008-2012) firms have more incentives to retain their earnings. Therefore, CEOs decide to pay fewer dividends. Evidence also indicates that CEO turnover has a positive effect on dividend per share and dividend yield after the financial crisis.

Thus, this work contributes to practice since evidences, for the first time, that CEO turnover has a significant impact on firms' dividend policy, contributing to the existing literature of both CEO turnover and dividend policy. This dissertation is organized as follows: in section 2 the most relevant literature regarding dividend policy and CEO turnover is reviewed. Section 3 contains the research hypotheses. The data, methodology, and regression models considered in our empirical analysis are shown in section 4. The results obtained from the econometric models are displayed and discussed in section 5. Finally, section 6 contains the main conclusions and limitations of our work, as well as proposed future researches.

2 Literature Review

2.1 Dividend Policy

The theory of dividend policy is grounded in the research of Lintner (1956) and Miller and Modigliani (1961). Miller and Modigliani (1961) argued that in perfect capital markets conditions, i.e., markets with the absence of taxes, transaction costs or other market imperfections, dividend policy does not affect a firm's value. However, since the current market is not perfect in practice, several market imperfections can influence firms' dividend policy.

The market imperfections displayed in this dissertation are mainly taxation, agency costs and asymmetric information. In this research, taxation has a predominant effect since dividends and share repurchases face different tax implications, and, therefore, investors will face different tax rates whether they receive dividends or repurchase shares. Black (1976) focused on why corporations pay dividends. Investors see dividends as a return for risking their wealth in a firm. Therefore, corporations continue to pay dividends to reward their shareholders and to encourage others to invest in their firm. However, dividends and share repurchases have different tax implications as investors face different tax rates. By repurchasing shares, shareholders will be taxed at the capital gain tax rate, whereas, if the corporation pays cash dividends, shareholders will be taxed according to the dividend tax rate. Usually, cash dividends are taxed at a higher rate than capital gains. Thus, logically, shareholders would prefer to repurchase shares instead of receiving dividends, if they act rationally. An additional tax advantage in share repurchases is that taxes on capital gains can be deferred until shares are sold, while taxes on dividends must be paid immediately. However, besides all the tax's disadvantages for investors, corporations continue to pay dividends. This is called *the dividend puzzle* (Black, 1976).

Another market imperfection that influences dividend policy concerns agency costs. Jensen (1986) pointed out that conflicts of interest between managers and shareholders take place when the firm obtains an excess free cash flow. Managers can then use the excess free cash flows to pay dividends, rather than waste it in projects that may yield a low return. Jensen (1986) also documented that agency costs can be reduced by using debt. The use of debt leads to a decrease in the cash flow available for spending at the discretion of managers, therefore, minimizing agency costs within a firm. Thus, the author concludes that debt and dividends can be seen as substitutes. Fewer dividends are paid out to shareholders, as more debt is used.

The existence of asymmetric information in current markets is another market imperfection. Asymmetry is considered a market imperfection since firms can decide to pay out

dividends in order to mislead investors. According to the Dividend Signalling Theory, when a company announces that will increase in the level of dividend, investors take that as an indicator of positive future growth opportunities. Therefore, since managers' information about their firm and its prospects is far more superior than the information obtained by outside investors, they can mislead investors by paying out dividends in order to attract new capital.

2.2 CEO turnover

Over the past years, the Board of Directors and CEO turnover has been the subject of extensive conceptualisation and empirical research. For most entities, having a Board of Directors is a legal requirement that must satisfy several regulations. A Board of Directors can be considered a financial institution that helps to solve an agency problem within most organisations. CEOs tend to satisfy their interests (compensation and other benefits), and the Board of Directors has the role of ensuring that shareholders' interests are satisfied (Puffer & Weintrop, 1991). However, in order to achieve their organisational goals, an understanding of the role of the other is crucial to succeed. The Board of Directors must maintain its independence to monitor the CEO's decisions effectively, and whether decide to replace or to keep him as CEO.

A model was developed related to the Board of Directors that takes into consideration both CEO and board perspectives (Hermalin & Weisbach, 1998). Hermalin and Weisbach, (1998) documented that a board's independence depends on the CEO's bargaining power inside the board. When CEOs perform well, the board's independence declines. Otherwise, outside members are added to the Board of Directors, increasing the board's independence, which implies a higher probability of a CEO being dismissed. Therefore, board composition can influence the frequency of CEO turnover.

An additional study was made regarding the performance-turnover relation, in which evidence was found that performance is more relevant in the early stages of a CEO tenure (Dikolli et al., 2014). Furthermore, the tenure of departing CEOs influences firm operational performance since if a departing CEO's tenure is too short, the firm may not have completely recovered from the previous turnover (Shen & Cannella, 2002). Evidence was also found that deteriorating firm performance leads to a management turnover (Huson et al., 2004), as the results show that financial performance tends to decrease before top management turnovers.

The uncertainty behind a CEO's quality decision making creates a demand for considerable performances in order to diminish such uncertainty. Thus, the higher the CEO tenure, the lower is the level of independence of the board (Dikolli et al., 2014). Such evidence supports Hermalin and Weisbach (1998) model results.

Based on the model created by Hermalin and Weisbach (1998), the following results were found: CEOs who perform poorly have a higher likelihood of being replaced; CEO turnover is more sensitive to corporate performance when the board has a higher level of independence; outside independent members are added to the board after poor performances; board independence diminishes over a CEO tenure; accounting performances are better indicators of management turnover than stock prices performance; a CEO that is fired on private information basis should cause an adverse reaction in stock-prices. Alternatively, a CEO that is fired based on public information should have a positive impact in stock-prices; CEO's compensation should be insensitive to previous bad performances but sensitive when CEOs perform exceptionally well.

As previously mentioned, a higher number of outside directors leads to higher independence of the Board of Directors, which causes an increase in the probability of CEO turnover. Empirical research also concluded that the sensitivity of CEO turnover to corporate performance increases with more outsiders in the boardroom (Brickley, 2003).

An additional study was made in which it was examined if corporate performance, measured as the difference between actual performance and boards' performance expectations, was a better indicator of CEO turnover. The results showed a negative relation between corporate performance and CEO turnover. Using performance measures that reflect the board's expectations, the relation is even more negative (Puffer & Weintrop, 1991). Also, Puffer and Weintrop (1991) documented that there is a turnover when annual reported earnings per share fall short of Board of Directors' expectations.

Regarding executive compensation, analyses have shown that payment levels are higher and are less sensitive to corporate performance in larger corporations (Murphy, 1999). Moreover, evidence was found that upcoming CEOs take a "big bath" since market-adjusted account accruals are lower in the fiscal year in which the CEO is replaced by his or her successor (Murphy & Zimmerman, 1993). Additionally, research and development (R&D), advertising, capital expenditures expenses and accruals are lower during actual CEO turnover than in years -5 to -2 and years +1 to +5. CEOs have incentives to decrease these expenses in their last years in the role to increase reported accounting earnings and inflate their compensation (Murphy & Zimmerman, 1993).

CEOs also have other incentives to boost compensation. They can distort their firms reported financial statements by using accounting procedures to create statements that reflect an overly positive view of the firm's current financial position. These mechanisms of earnings management take advantage of how accounting rules are established and creates financial reports with inflated earnings. Hence, earnings management is strongly associated with subsequently

forced CEO turnovers, but it is not significantly associated to voluntary turnovers (Hazarika et al., 2012).

Such results indicate that earnings management is negatively related to CEO tenure (Hazarika et al., 2012). Earnings management leads to a higher likelihood that the CEO will be fired over the short-run. Under the same statistical testing, similar results were found for CFOs (Hazarika et al., 2012).

There are additional factors that can explain CEO turnovers. Evidence was found that low stock returns in the firm's industry and market increase the likelihood of a forced CEO turnover (Jenter & Kanaan, 2015). Additionally, it was found that peers' performance influences the turnover of CEOs that are underperforming their competitors (Jenter & Kanaan, 2015). The same results were documented for Japanese firms, in which top executive turnover is negatively related to corporate performance and more negatively associated if performance is measured relative to its peers (Kang & Shivdasani, 1995). Also, nonroutine turnovers are significantly associated with industry-adjusted return on assets, excess returns and negative pre-tax earnings (Kang & Shivdasani, 1995). Such authors found improvements in firms' performances after a forced turnover, but no evidence was found relative to routines turnovers. Another factor that can influence the probability of CEO turnover is CEO overconfidence. CEOs with low and high levels of optimism face a greater risk of being dismissed than moderately optimistic CEOs do (Campbell et al., 2011). Low-optimism CEOs have a 50% to 112% higher probability of facing a forced turnover than moderately optimistic CEOs have, whereas, high-optimism CEOs have a 28% to 99% greater probability of a forced turnover compared with moderately optimistic CEOs.

Furthermore, other variables seem relevant to explain CEO turnovers. Evidence was found that the age of the CEO is statistically significant in explaining CEO turnovers (Murphy, 1999). The research was conducted from 1970 until 1995 and concluded that CEOs were most likely to leave their corporations at ages 64/65. Such results are expected since ages 64/65 can be considered "normal retirement ages". Moreover, evidence was found that underperforming executives tend to leave at younger ages: 34% of CEOs who were underperforming left the company before age 60. It was also documented that CEOs had a higher likelihood of being replaced by outside hires rather than internal promotions. The results suggest that the likelihood of CEO turnover is higher when the CEO's age increases, and when it reaches its normal retirement age (Murphy & Zimmerman, 1993).

In most recent years, a study was made regarding CEO turnover behaviour from 1992 to 2007 for a sample of large US firms (Kaplan & Minton, 2012). Between 1992 and 1999, CEO turnover increased to 12.6% resulting in an average CEO tenure of, approximately, 8 years.

Whereas, since 2000, CEO turnover has increased to 16.8%, implying an average tenure of almost 6 years (Kaplan & Minton, 2012).

Another stream of literature examined internal and external monitoring mechanisms from the 1970s until the mid-1990s (Huson et al., 2001). Evidence was found that forced CEO turnover and the outside succession have increased throughout the sample period. As expected from the previous study (Kaplan & Minton, 2012). Also, these results show that the sensitivity of forced turnovers to corporate performance did not change over the period in question.

A more recent study was made regarding CEO turnover and performance sensitivity in both private and public firms. Evidence shows that public corporations tend to have higher CEO turnover and more performance sensitivity to the turnover compared with private firms (Gao et al., 2017). The authors concluded that the reason for such difference was investor myopia. In public firms, investors tend to focus more on short-term outcomes instead of being long-term oriented. They prefer short-term earnings rather than an increase in firms' long-term value. Thus, the results provide an insight that public firms fire CEOs earlier than the optimal, implying that public CEOs suffer a more demanding short-term performance.

A CEO turnover can also signal changes in future corporate decisions. Non-voluntary management changes, initiated by the Board of Directors, and normal retirement at age 65 lead to divestitures of poorly-performing assets (Weisbach, 1995). Likewise, an investment made that does not fit the current firm's assets could lead to CEO turnover.

Once a CEO turnover happens, there are 3 types of successors: contenders (executive that has the support and approval of the board); followers (successors who follow a CEO's ordinary retirement to continue and follow the existing strategies); outsiders. A negative association between outsider successor and post-succession operational performance (measured by ROA) was found (Shen & Cannella, 2002). The results indicate that senior executive turnover is positively associated with firms' ROA after a contender succession but negatively related following outsider successions. The results show that CEO succession does not influence companies' market performance in the long-run.

2.3 Main determinants of Dividend Policy

2.3.1 CEO Overconfidence

The relation between CEO and dividend policy is a topic that has not been extensively studied. Nevertheless, Deshmukh et al. (2013) develop a model of interaction between CEO overconfidence and dividend policy. The results indicate that an overconfidence CEO views

external funding as costly and, therefore, prefers to increase the firm's financial slack for future investment needs by lowering the current dividend payout (Deshmukh et al., 2013). Thus, the level of dividend payout is lower in firms managed by overconfident CEOs. However, the reduction in dividends related to CEO confidence is higher in firms with lower growth opportunities and lower cash flows. In addition, a positive market reaction to a dividend-increase announcement is higher for firms with greater uncertainty about overconfidence.

2.3.2 Control Variables

Lintner (1956) was the pioneer of the modern understanding of dividend policy. He developed a theoretical model of corporate dividend behaviour, in which it is observed that the target payout ratio is a variable which affects payout decisions. He documented that dividends distributed are a result of net income and dividend payout policy. Also, firms are averse to reducing their dividend payout ratio even when they face an environment of scarcity (Lintner, 1956).

The model was later adjusted to examine the determinants of dividend payments by individual firms (Fama & Babiak, 1968). The results suggest that dividends and some measure of current profits are relevant variables in explaining dividend changes. It is documented that net income seems to be a better measure of profits than either cash flow or net income and depreciation as separate variables in the model.

Later on, Rozeff (1982) focused on growth, beta and agency costs as determinants of dividend payout ratios. He found that dividend payout is a significantly negative function of the firms' past and expected future growth rate of sales. Also, evidence suggests that DPR is a significantly negative function of its beta coefficient and percentage of stock held by insiders. While the dividend payout ratio is positively associated with the firms' number of common stockholders. Additionally, the future predicted growth variable is more important than past realized growth (Rozeff, 1982). The results suggest that companies with higher investment have lower dividend payout ratios as they use their excess earnings in growth opportunities rather than distribute it to shareholders as dividends.

Thereafter, additional research was conducted regarding the determinants of corporate dividend policy (Alli et al., 1993). Results suggest that dividend payout ratios are negatively related with the cost of external funds (equity and debt), expected investment outlays and growth. Such results support Rozeff (1982)'s findings. It is also documented that a firm with a significant portion of their shares held by institutional investors has a higher payout ratio. Additionally, it was found that ownership dispersion does not affect corporate dividends. The argument that

dividends can be used to mitigate agency problems is also supported (Alli et al., 1993). Instead, companies with greater capital structure flexibility, i.e., that have easier access to capital markets are able to pay higher dividends (Alli et al., 1993). Although firms usually prefer to increase their financial slack rather than paying dividends.

Another market imperfection that influences dividend policy is investor protection. When investor protection is high, cash needs is more relevant in explaining dividend payout. Whereas, when there is poor investor protection, liquidity appears to be more critical than cash needs (Boţoc & Pirtea, 2014). The results also indicate that firm size and corporate governance are associated with higher dividend payouts. Liquidity and debt ratio have a positive effect on dividend payout, while cash need has a negative effect (Boţoc & Pirtea, 2014).

Furthermore, short-term investment horizons are negatively related with future propensity to pay dividends (Chang et al., 2016). The propensity to pay dividends increases with an increase in firm size, fixed assets ratio, firm age or profitability and decreases with an increase in leverage, cash ratio, sales growth or firm risk. While, the dividend payout ratio is positively related to firm size and cash ratio, and negatively associated with leverage, firm risk and profitability. These results support Botoç and Pirtea (2014) findings mentioned above.

In earlier empirical research, Ahmad et al. (2018) examine the determinants of dividend policy in *Euronext 100* firms. Ahmad et. al (2018) measured dividend policy as the dividend yield. The results indicate that dividend yield is not related with firms' profitability (contrary to expectations). Therefore, dividend yield may be higher for less-profitable firms. The results also suggest that firms' growth is significant and negatively associated with dividend yield, and dividend yields are lower for larger firms (negative relation between dividend yield and firms' size) (Ahmad et al., 2018). Ahmad et. al (2018) argue that leverage has a negative effect on the dividend yield of firms with a stable dividend payout ratio over time, while leverage may positively affect the dividend yield of firms with stable dividend per share.

Later studies were developed focusing on asymmetric information theories. The existing literature indicates that investors believe that when a company reports positive results and pays a substantial amount of dividends, this is a sign of an increase in future earnings (Dewenter & Warther, 1998). The results suggest that stock prices of Japanese firms react less strongly to dividend omissions and initiation announcements compared with US stock prices. Furthermore, Japanese firms tend to cut dividends in response to poor corporate performance more quickly than US firms.

Dividends and share repurchases are taxed at different tax rates (Lintner, 1956), and the relevant market imperfection to take into consideration in this dissertation is taxation. Chkir and Samir (2008) examined the relationship between taxation and corporate dividend policy, using two tax events that occurred in Canada. The first event accounted for the capital gains exemption that was reduced in 1987 from $500,000 to $100,000 and eliminated in 1994 (second event). The reduction of capital gains exemption was timid to boost the average dividend payout. However, the elimination of the capital gains exemption in 1994 had a considerably higher effect in increasing the level of dividend payouts. Chkir and Samir (2008) argued that taxation has an impact on corporate dividend policy and the changes in the tax reform proves the existence of a dividend clientele.

In Appendices are presented Table 15, Table 16, Table 17 and Table 18 with a more detail analysis regarding the papers used in the literature review and the main conclusions documented. Table 15 and Table 16 depict theoretical studies, while Table 17 and Table 18 show empirical researches used in this dissertation.

3 Research hypotheses

As the objective is to test the impact of CEO turnover in corporate dividend policy, it is crucial to select the independent variables to use. The selection of explanatory variables was based on previous literature and on data availability. There is not, to our knowledge, literature directly relating CEO turnover and firms' dividend policy. However, the test hypotheses considered in this study are as follows:

A CEO turnover will most likely lead to changes in firms' stock prices that will impact their dividend policy. Thus, we expected a positive association between CEO turnover and DY.

H_1: CEO turnover is positively related with DY

Additionally, we expect a negative association between CEO turnover and dividend payments, DPS and DPR due to the use of "big bath accounting". According to Murphy and Zimmerman (1993), future CEOs tend to boost future earnings by writing off unwanted operations and unprofitable divisions. Consequently, the earnings will drop, leading to a lower payout ratio.

H_2: CEO turnover is negatively associated with dividend payments, DPS and DPR.

Also, during a financial crisis, usually, firms have more incentives to maintain resources rather than paying dividends to surpass a more difficult financial period, thus, leading to lower values of DPS and DPR. Additionally, during financial crisis periods stock prices tend to fall, which leads to higher dividend yields.

H_3: Financial crisis is negatively associated with dividends paid by firms, DPS and DPR, and positively related with DY.

The literature is not consensual regarding the effect of leverage on dividend policy. According to Boţoc and Pirtea (2014), the debt ratio is positively related with DPR, since as more debt is used, more profit a firm gets and, consequently, more dividends can be paid. Whereas Chang et al. (2016) documented that leverage and dividend policy are negatively related. According to Jensen (1986), debt and dividends can be seen as substitutes by managers.

In this study, we decided to follow Chang et al. (2016) findings since their research focuses on US firms, whereas, Boţoc and Pirtea (2014) focus on emerging countries.

H_4: Leverage is negatively related with firms' dividend policy.

According to Chkir and Samir (2008), taxation has an impact on corporate dividend policy. However, the existing literature is not consensual regarding the exact effect of a tax rate in the dividend policy. Therefore, the effective tax rate can be positively or negatively associated with dividend policy.

H_5: Tax Rate is positively or negatively related with firms' dividend payments, DPS, DPR and DY.

4 Empirical Analysis

4.1 Data and Methodology

The study focuses on companies listed on the *S&P 500 Index*. The initial sample was composed of 505 companies, with a sample period from 1992 to 2018. The data was extracted using financial datasets within *Wharton Research Data Services (WRDS)*. For CEO turnover, it was used *Compustat – Capital IQ*, whereas, financial data was extracted from *CRSP/Compustat Merged*. Financial ratios were collected using *Financial Ratios Suite by WRDS*. After the data management, the sample used in this dissertation contains 394 firms between 2004 and 2017, equating up to 4,155 firm-year observations. Adjustments were made to CEO turnover data by using CEOs' biographies present on *Bloomberg* and news available online[1].

[1] A CEO turnover was not considered in companies that had co-CEOs, and one co-CEO was dismissed from its role in the following period. CEO turnover was also disregarded from the observations for firms with one CEO, co-CEOs in the next period and, thereafter, a unique CEO, with a common CEO in the periods in question.

4.2 Variables

4.2.1 Dependent Variables: Dividend Policy

The main goal of this dissertation is to answer the question: *"Does CEO turnover influence dividend policy?"*, therefore, various dependent variables were chosen in order to represent firms' dividend policy fully.

Firstly, we aim to test the relationship between CEO turnover and a firm paying or not dividends, as in other studies (Chang et al., 2016). Consequently, we set the dependent variable as a dummy that equals one if firms pay dividends and zero otherwise.

Secondly, we aim to estimate how CEO turnover is related to the amount of cash dividends paid by each firm. The dependent variables in the second specification are dividend yield (DY), dividend per share (DPS) and dividend payout ratio (DPR). These variables were already extensively used in empirical papers with similar goals, namely, Rozeff (1982), Alli et al. (1993), Chkir and Samir (2008), Boţoc and Pirtea (2014), and Ahmad et al. (2018).

Furthermore, we aim to analyse the level of dividends paid by corporations following CEO turnover. Therefore, additional dummy variables were created to represent the level of dividends, such as DPS Regular that equals one if the DPS is equal to the DPS from the previous period, and zero otherwise. DY Regular and DPR Regular were also created using the same method as DPS Regular.

Finally, as CEO turnover can have a delayed impact on corporate dividend policy, an additional analysis was carried out using lagged variables for the main dependent variables.

Table 5 shows a more detailed description of the dependent and independent variables used in this dissertation.

4.2.2 Descriptive statistics

The sample used for this dissertation contains about 487 CEO turnovers that occurred in the 394 firms included in our sample. The variable *CEO* was defined as a dummy variable, which takes the value one if there was a CEO turnover during the actual year of turnover and zero otherwise.

Additionally, Figure 1 shows how CEO turnover has behaved throughout the sample's period. The vertical lines represent the financial crisis period, defined as previously mentioned (2008-2012). As seen in Figure 1, CEO turnover has been increasing during the last years and reached its all-time high in 2017.

In our study *CEO* takes the value one in the year of the turnover. However, in additional analyses the variable takes the value one for the years after the turnover (T+1 or T+2) to account for the fact that CEOs may not decide the future dividend policy immediately after the turnover. Also, in robustness checks, the variable *CEO* takes the value one from the year of the turnover onwards.

Before moving to the next section, we look at some descriptive statistics for our dataset, available on Tables 3 and 4. Table 4 presents the descriptive statistics for the independent variables. The high values of the Market-to-Book ratio correspond to firms that have a low reported book value of equity and net income, indicating that they are facing financial difficulties and near bankruptcy. Table 3 shows the descriptive analysis of dependent variables.

4.3 Regression Models

4.3.1 Principal Research

The data used in this dissertation is unbalanced panel data, in which we have to decide whether to use a fixed-effects model (FE) or a random-effects model (RE). Hence, the Hausman test was performed. For the models which have DPS and DY as dependent variables, the fixed effects model is recommended. Although, in order to have a completed comparison between all measures of dividend policy, FE and RE estimators will be used for each model, and the respective results will be presented.

Afterwards, to assess the joint significance of independent variables in our models, the Wald test was performed. The test concludes that the chosen explanatory variables are significant in explaining the behaviour of the dependent variables.

Additionally, the Ramsey and Specification link tests were performed to confirm if there were no omitted variables, and a p-value of zero was obtained. Therefore, our models appear to be biased by omitted variables. Results that we were expecting since we did not control for either corporate governance nor the CEO's age. According to Murphy and Zimmerman (1993), Brickley (2003) and Huson et al. (2004) CEO's age can be considered a significant variable in explaining CEO turnovers since would allow us to distinguish between forced turnovers and if the respective CEO left due to retirement reasons. We encourage further researches to include this variable as a control variable, although due to data availability, such was not considered. Also, due to lack of data, variables that control for corporate governance (e.g., institutional ownership) were not included in our models.

After that, in order to have unbiased results, we also tested for the presence of heteroskedasticity in our models. The Breusch and Pagan test was performed, to understand

whether the variance of the errors differs across observations [Var ($\varepsilon_i|x_i$)]. In order to have better-estimated results, we adjusted for heteroskedasticity by using robust standard errors.

Table 1 in the Appendices shows all test results performed during this dissertation. As seen in Table 2 in the Appendices, there is no multicollinearity in our models since there is no high degree of correlation between the independent variables used. VIF tests also support that there is no multicollinearity in the models used.

For those variables that are defined as a dummy, i.e., that equal one if a determined condition is true and zero otherwise, a Probit and Logit model will be used. A Probit and Logit model allows us to accurately measure the impact of the independent variables on a dummy variable. The major difference between both models lies in the assumption on the distribution of the errors. In the Logit model, the errors are assumed to follow the standard logistic distribution, whereas, for the Probit model, it is assumed that the errors follow a Normal distribution. In general, both models tend to lead to similar results, but both will be presented in order to have more accurate conclusions. Initially, we want to test the impact of CEO turnover on a firm paying or not dividends, thus, the following model was created:

$$D\_dividends_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it} \quad (1)$$

Where $D\_dividends_{it}$ is a dummy variable defined as one if a firm pays dividends and zero otherwise.

An additional model was created using the regression (1), by creating an interaction between *CEO* and *FinCrisis* instead of controlling these variables separately. The variable referred is *CEO_crisis,*

We used the same approach when testing the impact of *CEO* in *Dividends,* which may be captured by either *DPS* or *DY*:

$$Dividends_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it} \quad (2)$$

In order to test if CEO turnover influences a firm's dividend policy before, during and after the financial crisis period, we ran three different regression models for each measure of corporate dividend policy (DPS and DY). To test the impact of a CEO turnover before the financial crisis, we ran the model for years before 2008. To test the effect during the financial crisis, we set the years between 2008 and 2012. Finally, to test the impact of *CEO* after the crisis, we ran the model for years after 2012.

As mentioned in section *4.2.1*, we want to estimate the impact of CEO turnover in dividends' stability level. Thus, *Dividends_regular* dummy variable was defined, which represents either *DPS_regular* or *DY_regular*.

$$Dividends\_regular_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it} \quad (3)$$

Moreover, CEO turnovers can have a delayed impact in a firm's dividend policy, since upcoming CEOs just know the company and its current financial situation and, therefore, dividends can only shift in the following periods. We test this hypothesis by creating two final regressions for each dependent variable, replacing *D_dividends, Dividends (DPS and DY)* with lagged versions of first and second order.

Finally, in order to fully test whether CEO turnover influences firms' dividend policy from the year of the actual turnover onwards, the variable *CEO_* was created and defined as a dummy variable that equals one from the year that the turnover occurred onwards and zero otherwise.

5 Results

5.1 Principal Research

In this section, by observing the estimation results obtained through our regression models, the question *"Does CEO turnover influence dividend policy?"* will be answered. Tables 6-14 show the results that will support such conclusions.

Firstly, Table 6 and Table 7 present the results for the regressions models (1) and (2), respectively. The results show that CEO turnover is statistically significant in explaining the behaviour of firms' DY (Table 7). More precisely, CEO turnover will increase corporate DY by about 0.2%. This may be justified by market stock prices adjustment once a CEO turnover takes place, i.e., stock prices may decrease after a CEO turnover, leading to an increase in dividend yields. However, a CEO being replaced does not have a statistical influence on the dividends paid by firms and DPS (Table 6 and 7, respectively). Table 6 also displays that the natural logarithm of total assets (*proxy* for company size) is positively related with dividend payments, which supports the findings from previous studies. Mature firms may not find good projects to invest that add value, therefore, they decide to pay dividends instead. Leverage is also positively associated with firms paying dividends which means that companies pay dividends using cash from leverage events, contrary to our expectations (Table 6).

The period of the financial crisis is statistically significant at all significance levels and seems to have a negative effect on *D_dividends* and DPS (Table 6 and 7, respectively), and a positive effect on firms' DY (Table 7). As mentioned in section *3*, these results are expected since corporations tend to have more incentives to retain resources rather than paying to shareholders during this period, and their stock prices tend to suffer a negative shift during a stressful financial period. Leverage is also statistically significant and has a positive impact in DPS and DY behaviour (Table 7), supporting the trade-off theory of capital structure (the more debt is used, the more profit the firm generates, and more dividends can be paid), contrary to our expectations.

Additionally, as stated in the previous section, it was created an interaction between CEO turnover and the financial crisis period. The purpose is to test the exact influence of a CEO turnover during the financial crisis, in a period where, usually, corporations face a more demanding financial period. Table 7 shows that CEO turnovers occurring during 2008 and 2012 are statistically significant and increase the DY by 0.5%, while, decreasing the dividends paid by corporations (Table 6). By comparing both results, it is concluded that CEO turnovers more than doubled its effect on dividend yields, during the financial crisis. Even though the dividends paid by corporations decrease, CEO turnover leads to an increase in DY. This is expected since, during a financial crisis, stock prices are considerably more volatile and, therefore, CEO turnovers lead to even lower stock prices.

Afterwards, it was tested how CEO turnover influences dividend policy across different periods in our sample. We decided to test it in three events: before the financial crisis took place, during the financial crisis and after it. Table 8 suggests that CEO turnover is statistically significant and has a positive effect on DPS and DY after 2012.

Since we already study the influence of CEO turnover in DPS and DY, we decided to cover the impact of CEO turnover in the stability of DPS and DY. The reason why we created two additional dummy variables, *DPS_regular* and *DY_regular*, was previously explained in section *4.2.1*. Tables 9 and 10 display the estimated results for the regression model (3). We conclude that CEO turnover has no influence on dividend per share and dividend yield stability levels, in all the sample time frame and its sub-periods.

Additionally, we also study the hypothesis of whether there is a delayed effect of CEO turnover in firms' dividend policy. A CEO turnover could not have an immediate effect and take longer to have an impact on how dividend policy is managed. We test this hypothesis by replacing the dependent variables with lagged versions of it, of first and second order, respectively. The estimation results suggest that there is no delay influence of CEO turnover on how dividends are managed (Table 12 and 13). As mentioned previously, we also test the influence of CEO turnover

in firms' dividend policy from the year of the actual turnover onwards and the results show that CEO turnover has no effect on how firms managed their dividend policy in the years following the turnover (Table 14).

5.2 Additional Research

5.2.1 Methodology

We decided to present DPR as an additional analysis section since there are some statistical limitations regarding its respective regression model.

The same method was used as in the previous analysis. Firstly, it was performed a Hausman test, and it was concluded that a RE estimator would provide more accurate estimates. However, both FE and RE models will be shown as in the previous section.

Thereafter, the Wald test was computed, suggesting that the independent variables have some limitations in explaining firms' DPR behaviour. This is the reason why we decide to include DPR as an additional analysis while reinforcing that the results will likely be biased.

The Ramsey and Specification link tests were also performed in this section. For DPR statistical evidence was also found that supports the existence of heteroskedasticity. Therefore, robust standard errors will be used to adjust for heteroskedasticity.

The dividend payout ratio is the proportion of earnings paid out as dividends to shareholders. Therefore, for this additional analysis, we decided to use a different approach. We wanted to test how CEO turnover influences firms' DPR in special cases. Consequently, variables were created to represent when a firm's DPR is negative, between zero and one, and higher than one.

5.2.2 Results

As additional research, we decided to test if CEO turnover influences DPR in special cases, i.e., when DPR is negative, between zero and one, and higher than one. However, we reinforce that this particular study has some statistical limitations.

Table 11 shows that CEO turnover is statistically significant and has a positive effect when DPR is negative and higher than one. Such results can be explained by the existence of dividend clientele. Even though firms generate negative earnings, they keep paying out dividends to avoid changing their dividend policy due to the existence of dividend clientele. Consequently, when DPR is negative, CEO turnover leads to an even lower DPR.

Likewise, a DPR higher than one suffers an increase when a CEO turnover takes place. A DPR higher than one means that the firm is paying out more to its shareholders than the earnings coming in. These corporations want to maintain their DPS regular due to the existence of dividend

clientele and, therefore, avoid changing how they manage their dividend policy. The existence of dividend clientele alongside the focus on restructuring the firm, leads to paying more as dividends than the earnings received. Moreover, when there is a stable DPR (between zero and one), CEO turnover has negative effects on firms' DPR. However, bear in mind that these are biased estimation results and, thus, these conclusions may have some limitations.

6 Conclusions and Future Research

The purpose of our research is to identify whether CEO turnover influences firms' dividend policy. We focused on firms listed on the *S&P 500 Index* with a sample period between 2004 and 2017 and with up to 4,155 firm-year observations. About 487 turnovers occurred in the 394 firms included in our sample.

Based on past studies regarding CEO turnover and dividend policy, several variables were chosen as explanatory variables. The remaining explanatory variables served to control for some firms' characteristics like size, growth opportunities, corporate profitability and the effective tax rate that the respective firms faced.

In this dissertation, we intend to clearly understand how CEO turnover influences firms' dividend policy. To do so, we used Logit and Probit models when testing for a dummy variable and a FE and RE models otherwise.

Evidence was found that CEO turnover is statistically significant and increases firms' DY by about 0.2%. Such shift can be explained by market price adjustments when a CEO turnover occurs, i.e., stock prices will decrease once a CEO turnover occurs, leading to an increase in dividend yields. No evidence was found that supports the existence of an association between CEO turnover and either the dividends paid by firms and their DPS.

We, additionally, confirmed that the financial crisis is significant and has a negative effect on DPS and in dividend payments, while, a positive effect on DY behaviour which is consistent to our expectations. We expected these results since during this period companies tend to have more incentives to retain its earnings; therefore, a negative impact on the dividends. Also, during financial stressful periods, firms stock prices tend to be lower and more volatile, increasing the dividend yields.

Evidence was also found that CEO turnovers that occurred between 2008 and 2012 have an even higher positive effect on DY and lead to a decrease in the dividends paid. As explained above, during the financial crisis stock prices are more volatile, therefore, when a firm announces a CEO turnover, the market will react less smoothly and lead to even lower stock prices, increasing, even more, the dividend yields. Also, it is also expected that between 2008 and 2012, CEOs decide to pay fewer dividends.

Thereafter, as explained in the previous section, we decided to display how CEO turnover influences dividend policy across sub-periods in our sample. Three events were defined: before

2008, during the financial crisis and after 2012. The estimation results suggest CEO turnover is statistically significant and has a positive effect on DPS and DY after the financial crisis.

We then decided to identify the effect of CEO turnover in DPS and DY stability, i.e., in DPS regular and DY regular. We concluded that CEO turnover is not statistically significant in explaining DPS and DY stability. Likewise, the results show that there are no delay effects of CEO turnover in dividend policy, i.e., CEO turnover does not take longer to impact how firms manage their dividend policy.

Finally, since there are some limitations regarding DPR evidence, we decided to include it as additional research in this dissertation. We took a different approach and test how CEO turnover influences DPR in three special cases: negative DPR, between zero and one, and higher than one. The results display that CEO turnover is statistically significant and has a positive effect when DPR is negative due to the existence of dividend clientele as corporations avoid changing their dividend policy even if they generate a net loss. Furthermore, when there is a more stable DPR (between zero and one), CEO turnover has a negative effect on firms' DPR. Finally, when the DPR is higher than one, a CEO turnover will lead to an increase in the dividend payout ratio, i.e., firms will pay out more to its shareholders than the earnings obtained. These results are also explained by the existence of dividend clientele and the focus on restructuring the firm, leading to paying out more as dividends than the earnings generated. Nevertheless, we reinforce that since these are most likely biased results, such conclusions may have some limitations.

Thus, this work contributes to practice since evidences, for the first time, that CEO turnover has a significant impact on firms' dividend policy, contributing to the existing literature of both CEO turnover and dividend policy.

We suggest that future researches on this particular topic use the CEO's age and variables to represent firms' corporate governance as control variables. According to previous studies, the CEO's age is a significant variable in explaining CEO turnovers. And, such variable would allow distinguishing turnovers between forced turnovers and turnovers that occur during a CEO "normal retirement age". We invite future research to include both variables; however, due to data availability, such were not included in our research. Also, we encourage future research to analyse in detail the impact of financial crisis in both CEO turnover and firms' dividend policy. Additionally, an alternative to our approach would be to use a negative binomial regression, as most dependent variables have values near zero. It would be interesting to investigate this further and compare the results between the two approaches.

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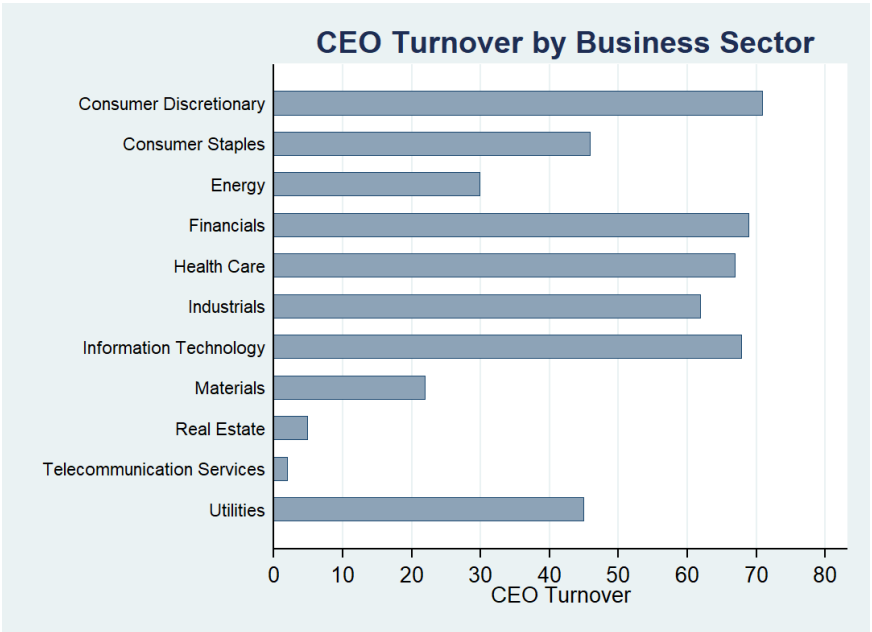
8 Appendices

Figure 1 – CEO turnover by year

Source: Author

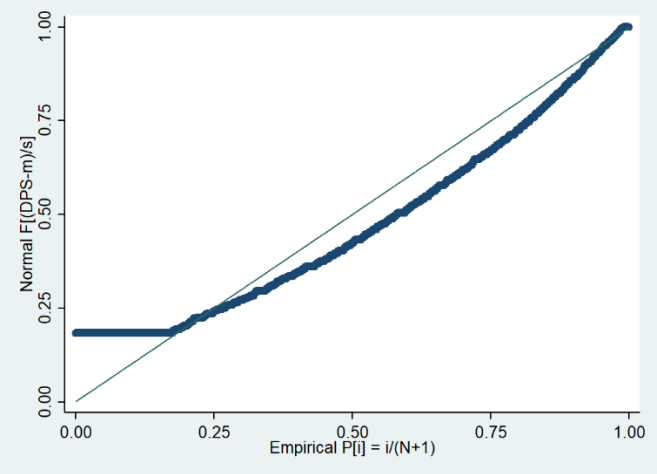
Figure 2 – CEO turnover by Business Sector

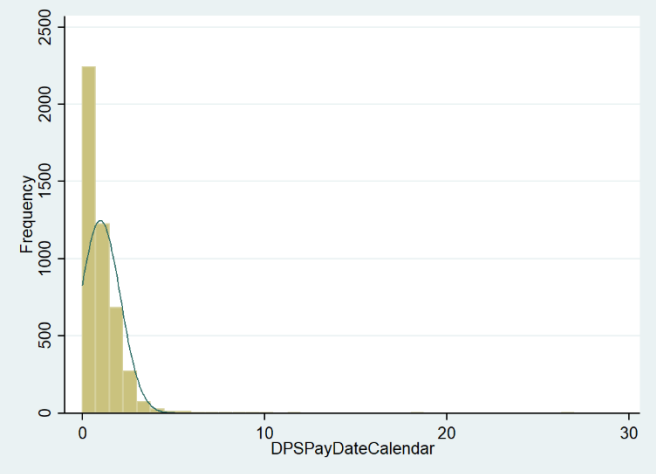


Source: Author

Figure 3 – Dependent Variable analysis: DPS

Figure 3 presents the standardised normal probability plot and histogram of dependent variable Dividend Per Share (DPS).



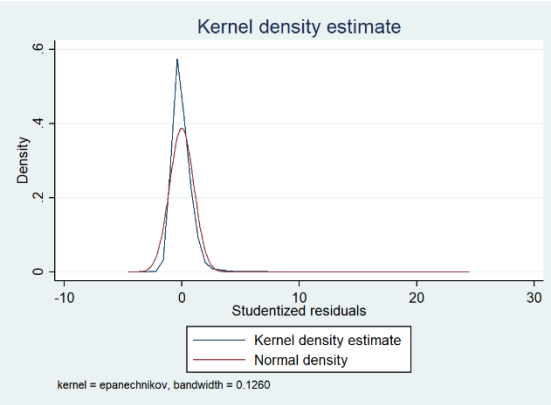


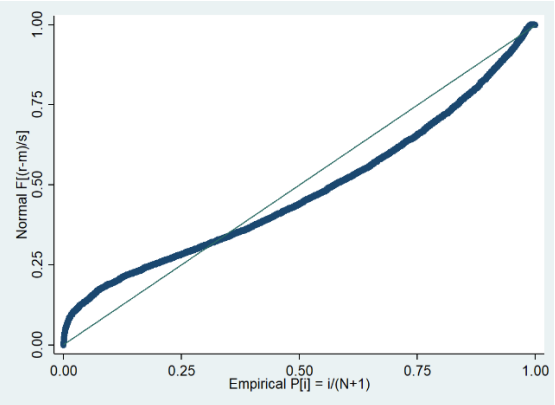
Source: Author

The behaviour of the standardised normal probability plot is explained by a considerable amount of observations with lower values of DPS.

Figure 4 – Residuals analysis: DPS

Figure 4 shows the Kernel density estimation on the squared residuals as the normal density and the residuals' standardised normal probability plot.

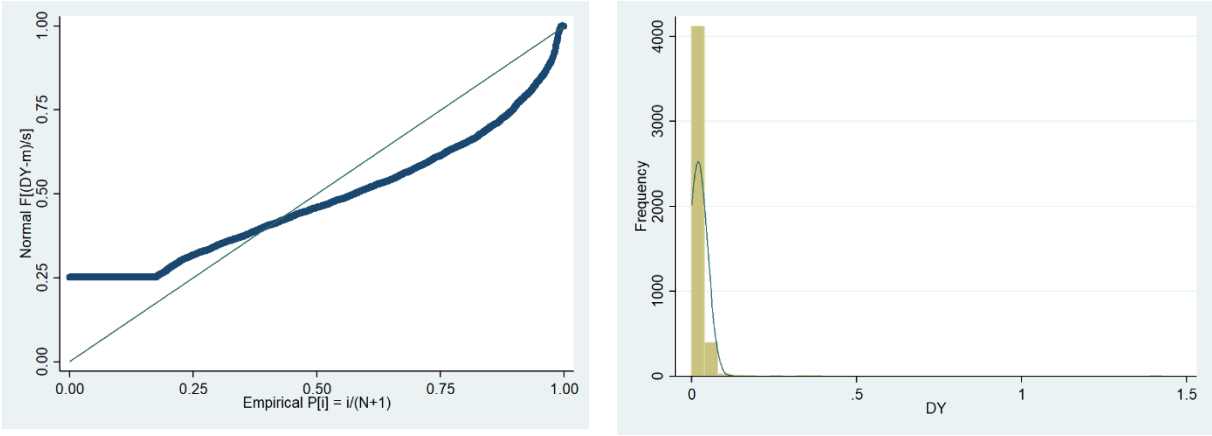




Source: Author

Figure 5 – Dependent Variable analysis: DY

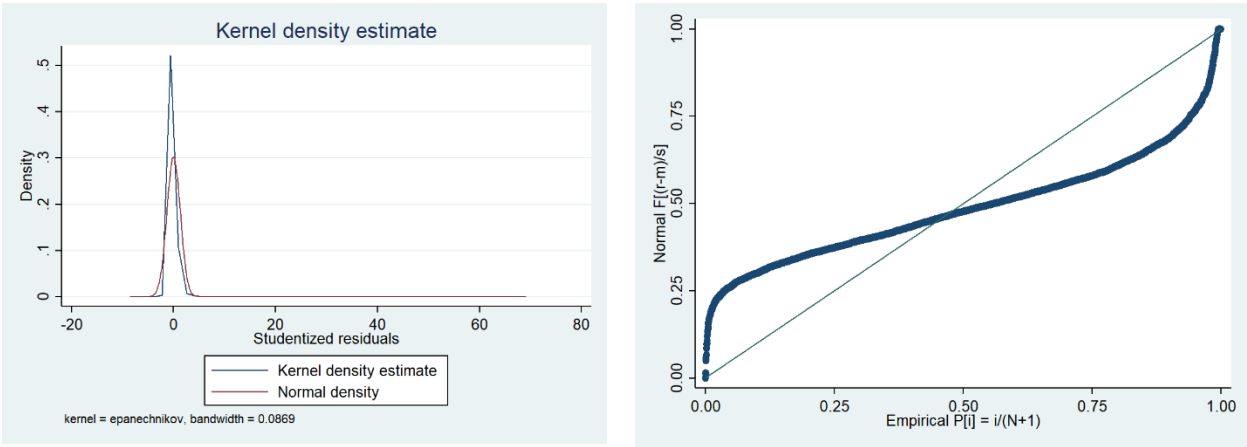
Figure 5 presents the standardised normal probability plot and histogram of dependent variable Dividend Yield (DY).



Source: Author

Figure 6 – Residuals analysis: DY

Figure 6 shows the Kernel density estimation on the squared residuals as the normal density, and the residuals' standardised normal probability plot.



Source: Author

Table 1 – Tests

Test	DPS	DY	DPR
Wald	0.000	0.000	0.286
Hausman	0.000	0.003	0.330
Ramsey	0.000	0.000	0.115
Specification	0.000	0.000	0.084
Heteroskedasticity	0.000	0.000	0.000

In the table above it is shown the p-value for each test with DPS, DY and DPR as dependent variables.

Table 2 – Correlation Matrix

	CEO	CEO_	ln_Assets	ROE	FinCrisis	NPM	Lev	MBR	TaxRate
CEO	1.000								
CEO_	0.640*	1.000							
ln_Assets	0.012	-0.037*	1.000						
ROE	-0.010	0.004	-0.024	1.000					
FinCrisis	-0.036*	-0.021	-0.044*	-0.050*	1.000				
NPM	-0.033*	-0.005	0.118*	0.468*	-0.062*	1.000			
Lev	0.004	0.008	0.059*	0.003	-0.050*	-0.082*	1.000		
MBR	-0.002	-0.010	-0.241*	0.369*	-0.131*	-0.089*	0.107*	1.000	
TaxRate	0.013	0.001	0.018	0.007	-0.001	0.005	0.010	-0.005	1.000

* $p < 0.1$

Table 3 – Dependent Variables Descriptive Statistics

Variable	Obs	Mean	Std.	1st Q	Median	3rd Q	Min	Max
D_dividends	4,508	0.824	0.381	1.000	1.000	1.000	0.000	1.000
DPS	4,508	0.981	1.091	0.210	0.770	1.460	0.000	27.030
DY	4,508	0.019	0.029	0.006	0.016	0.027	0.000	1.428
DPR	4,507	0.317	2.075	0.047	0.260	0.468	-49.000	89.000
DPS_regular	4,508	0.256	0.436	0.000	0.000	1.000	0.000	1.000
DY_regular	4,508	0.149	0.356	0.000	0.000	0.000	0.000	1.000
DPR_regular	4,508	0.149	0.356	0.000	0.000	0.000	0.000	1.000
DPR_negative	4,508	0.046	0.209	0.000	0.000	0.000	0.000	1.000
DPR_0and1	4,508	0.908	0.289	1.000	1.000	1.000	0.000	1.000
DPR_more1	4,508	0.046	0.210	0.000	0.000	0.000	0.000	1.000

Table 4 – Independent Variables Descriptive Statistics

Variable	Obs	Mean	Std.	1st Q	Median	3rd Q	Min	Max
CEO	4,508	0.108	0.310	0.000	0.000	0.000	0.000	1.000
CEO_	4,508	0.228	0.420	0.000	0.000	0.000	0.000	1.000
ln_Assets	4,508	9.799	1.449	8.730	9.701	10.668	4.407	14.761
ROE	4,508	0.152	0.184	0.083	0.140	0.208	-2.198	2.345
FinCrisis	4,508	0.360	0.480	0.000	0.000	1.000	0.000	1.000
NPM	4,508	0.077	0.204	0.048	0.085	0.133	-4.038	0.573
Lev	4,505	0.241	0.150	0.132	0.231	0.339	0.000	0.960
MBR	4,508	3.429	4.270	1.460	2.484	4.000	0.175	100.000
TaxRate	4,157	0.316	2.156	0.220	0.321	0.392	-70.167	56.413

Table 5 – Variables Description

Variable	Description
	Dependent variables
D_dividends	It is a dummy that equals one if firms pay dividends and zero otherwise.
DPS	DPS is the dividend per share.
DY	Dividend yield is the ratio between the dividend per share and firms' stock price.
DPR	The dividend payout ratio is the ratio between dividend per share and earnings per share.
DPS_regular	Dividend per share regular was defined as a dummy that equals one if the dividend per share in year *t* is the same as in the year *t-1*.
DY_regular	Dividend yield regular was defined as a dummy that equals one if the dividend yield in year *t* is the same as in the year *t-1*.
DPR_regular	Dividend payout ratio regular was defined as a dummy that equals one if the dividend payout ratio in year *t* is the same as in the year *t-1*.
DPR_negative	The negative payout ratio was defined as a dummy variable that equals one if the firms' dividend payout ratio is negative and zero otherwise.
DPR_0and1	This payout ratio was defined as a dummy variable that equals one if the firms' dividend payout ratio is between zero and one, and zero otherwise.
DPR_more1	This payout ratio was defined as a dummy variable that equals one if the firms' dividend payout ratio is higher than one, and zero otherwise.
	Independent variables
CEO	CEO turnover was defined as a dummy variable (one if there was a CEO turnover during the actual year of turnover and zero otherwise).
CEO_	CEO_ was defined as a dummy variable that equals one from the year that the turnover occurred onwards and zero otherwise.
ln_Assets	This variable represents the natural logarithm of Total Assets (*proxy* used to control for firms' size).
ROE	Return on Equity measured as Net Income divided by shareholders' equity.
FinCrisis	The financial crisis that occurred during the sample period was defined as a dummy variable that equals one if a year is within 2008-2012 period, and zero otherwise.
NPM	NPM is the Net Profit Margin (*proxy* used to measure firms' profitability).
Lev	Leverage was computed by dividing the sum of long-term debt and debt in current liabilities by total assets.
MBR	MBR is the Market-to-Book ratio (*proxy* that represents investors' expectations on firms' growth).
TaxRate	TaxRate is defined as the Book Effective Tax Rate (BETR) and it was computed by dividing Income Tax by EBT.

Table 6 – Determinants of dividend payments

	(1) D_dividends *Logit*	(2) D_dividends *Probit*	(3) D_dividends *Logit*	(4) D_dividends *Probit*
main				
CEO	-0.078	-0.035		
	(0.345)	(0.193)		
CEO_crisis			-1.117**	-0.611**
			(0.496)	(0.278)
ln_Assets	2.185***	1.423***	2.235***	1.302***
	(0.252)	(0.132)	(0.250)	(0.127)
ROE	10.530***	5.701***	10.464***	5.848***
	(1.691)	(0.820)	(1.998)	(0.821)
FinCrisis	-1.066***	-0.559***		
	(0.244)	(0.133)		
NPM	-0.019	0.035	0.141	0.023
	(0.961)	(0.398)	(1.031)	(0.385)
Leverage	3.806**	1.724**	4.843***	2.403***
	(1.600)	(0.846)	(1.672)	(0.830)
MBR	-0.059	-0.041	0.015	-0.009
	(0.065)	(0.040)	(0.072)	(0.040)
TaxRate	0.015	0.001	0.009	-0.000
	(0.039)	(0.021)	(0.039)	(0.022)
Constant	-12.650***	-8.413***	-13.644***	-8.181***
	(2.423)	(1.257)	(2.414)	(1.189)
Observations	4155	4155	4155	4155
Adjusted R^2	0.083	0.086	0.080	0.086

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results by using a Logit and Probit model.

This table display the results for the following equation: $D\_dividends_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$

Table 7 – Determinants of the amount paid in dividends

	(1) DPS *FE*	(2) DPS *RE*	(3) DY *FE*	(4) DY *RE*	(5) DPS *FE*	(6) DPS *RE*	(7) DY *FE*	(8) DY *RE*
main								
CEO	0.034	0.037	0.002**	0.003**				
	(0.032)	(0.031)	(0.001)	(0.001)				
CEO_crisis					-0.072	-0.004	0.005*	0.002
					(0.062)	(0.062)	(0.002)	(0.003)
ln_Assets	0.406***	0.132***	0.001	0.003***	0.415***	0.132***	0.001	0.003***
	(0.063)	(0.040)	(0.001)	(0.000)	(0.063)	(0.040)	(0.001)	(0.000)
ROE	0.830***	0.864***	0.005	0.009**	0.827***	0.864***	0.005	0.009**
	(0.297)	(0.253)	(0.005)	(0.004)	(0.300)	(0.253)	(0.005)	(0.004)
FinCrisis	-0.088***	0.413***	0.005***	0.006***				
	(0.027)	(0.058)	(0.001)	(0.001)				
NPM	-0.097	-0.079	-0.010*	-0.007*	-0.088	-0.082	-0.010*	-0.007*
	(0.172)	(0.145)	(0.006)	(0.004)	(0.177)	(0.145)	(0.005)	(0.004)
Leverage	1.282***	0.347	0.031***	0.010**	1.313***	0.348	0.029***	0.010**
	(0.297)	(0.231)	(0.008)	(0.004)	(0.296)	(0.231)	(0.008)	(0.004)
MBR	0.016**	0.006	-0.000*	-0.000*	0.018**	0.006	-0.000**	-0.000*
	(0.008)	(0.007)	(0.000)	(0.000)	(0.008)	(0.007)	(0.000)	(0.000)
TaxRate	-0.096	-0.096	-0.005	-0.005	-0.096	-0.096	-0.005	-0.005
	(0.074)	(0.074)	(0.004)	(0.004)	(0.074)	(0.074)	(0.004)	(0.004)
Constant	-3.380***	-1.061***	-0.003	-0.012**	-3.514***	-1.059***	0.004	-0.011**
	(0.602)	(0.374)	(0.011)	(0.005)	(0.605)	(0.374)	(0.011)	(0.005)
Observations	4155	4155	4155	4155	4155	4155	4155	4155
Adjusted R^2	0.166	0.258	0.192	0.270	0.164	0.258	0.185	0.269

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results by using a FE and RE model.

This table display the results for the following equation: $Y_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$ *with Y = DPS or DY.*

Table 8 – Determinants of the amount paid in dividends by period

	(1) DPS *< 2008 FE*	(2) DPS *< 2008 RE*	(3) DPS *During FE*	(4) DPS *During RE*	(5) DPS *> 2012 FE*	(6) DPS *> 2012 RE*	(7) DY *< 2008 FE*	(8) DY *< 2008 RE*	(9) DY *During* FE	(10) DY *During RE*	(11) DY *> 2012* FE	(12) DY *> 2012 RE*
CEO	-0.011	-0.004	0.055	0.058	0.071**	0.061*	0.000	0.000	0.002	0.003	0.003***	0.003***
	(0.022)	(0.021)	(0.074)	(0.072)	(0.035)	(0.035)	(0.001)	(0.001)	(0.003)	(0.003)	(0.001)	(0.001)
ln_Assets	0.014	0.103***	0.437***	0.168***	0.270*	0.219***	-0.003	0.002**	-0.004	0.003***	-0.003	0.002***
	(0.079)	(0.027)	(0.116)	(0.034)	(0.160)	(0.046)	(0.002)	(0.001)	(0.003)	(0.001)	(0.004)	(0.001)
ROE	0.331	0.224	0.695***	0.792***	0.031	0.524***	0.001	0.002	0.031*	0.027***	-0.001	0.004
	(0.345)	(0.210)	(0.249)	(0.276)	(0.200)	(0.192)	(0.008)	(0.005)	(0.017)	(0.010)	(0.004)	(0.003)
NPM	0.133	0.058	-0.001	0.059	0.353	0.305	0.008**	0.005*	-0.014*	-0.011**	0.008	0.002
	(0.113)	(0.123)	(0.156)	(0.145)	(0.374)	(0.200)	(0.003)	(0.003)	(0.008)	(0.005)	(0.007)	(0.002)
Leverage	0.398	0.130	1.081**	0.044	0.205	-0.673	0.022**	0.011**	0.082***	0.010	0.021	0.009
	(0.345)	(0.222)	(0.522)	(0.286)	(1.238)	(0.621)	(0.010)	(0.005)	(0.024)	(0.008)	(0.021)	(0.007)
MBR	0.002	0.002	0.049*	0.023	0.013	0.010	-0.001	-0.000*	-0.001	-0.001**	-0.000**	-0.000
	(0.016)	(0.010)	(0.026)	(0.020)	(0.010)	(0.007)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
TaxRate	0.001	-0.002	-0.206**	-0.204**	0.004	0.006	0.000	0.000	-0.011**	-0.010**	0.000	0.000
	(0.002)	(0.003)	(0.100)	(0.099)	(0.006)	(0.006)	(0.000)	(0.000)	(0.005)	(0.005)	(0.000)	(0.000)
Constant	0.421	-0.565**	-3.753***	-0.792**	-1.577	-0.886*	0.037**	-0.003	0.045	-0.011	0.040	0.000
	(0.713)	(0.229)	(1.111)	(0.335)	(1.358)	(0.480)	(0.017)	(0.006)	(0.028)	(0.008)	(0.032)	(.)
Observations	991	991	1499	1499	1665	1665	991	991	1499	1499	1665	1665
Adjusted R^2	0.006	0.340	0.406	0.419	0.010	0.199	0.022	0.292	0.445	0.475	0.010	0.231

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results before the financial crisis (year < 2008), during (2008 ≤ year ≤ 2012) and after it (year > 2012) by using a FE and RE model.

This table display the results for the following equation: $Y_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$ *with Y = DPS or DY.*

Table 9 – Determinants of DPS stability in the sample period and its sub-periods

	(1) DPS_regular *All Logit*	(2) DPS_regular *All Probit*	(3) DPS_regular *< 2008 Logit*	(4) DPS_regular *< 2008 Probit*	(5) DPS_regular *During Logit*	(6) DPS_regular *During Probit*	(7) DPS_regular *> 2012 Logit*	(8) DPS_regular *> 2012 Probit*
DPS_regular								
CEO	0.055	0.037	-0.223	-0.123	0.440	0.259	-0.405	-0.233
	(0.162)	(0.092)	(0.335)	(0.190)	(0.292)	(0.167)	(0.354)	(0.200)
ln_Assets	-0.143	-0.075	-0.048	-0.032	-0.561***	-0.320***	-0.872***	-0.498***
	(0.091)	(0.050)	(0.135)	(0.076)	(0.140)	(0.080)	(0.195)	(0.113)
ROE	-3.887***	-2.184***	-2.210*	-1.254*	-4.450***	-2.489***	-10.377***	-5.837***
	(0.699)	(0.384)	(1.275)	(0.697)	(1.368)	(0.763)	(2.051)	(1.142)
FinCrisis	0.830***	0.467***						
	(0.109)	(0.061)						
NPM	0.449	0.257	-0.317	-0.204	0.173	0.087	1.145	0.604
	(0.363)	(0.198)	(0.952)	(0.530)	(0.671)	(0.362)	(1.289)	(0.716)
Leverage	0.972	0.588*	0.045	0.014	-0.405	-0.211	2.168*	1.266*
	(0.606)	(0.338)	(1.158)	(0.653)	(1.049)	(0.605)	(1.287)	(0.741)
MBR	0.053**	0.031**	0.114	0.060	0.016	0.012	0.077	0.042
	(0.027)	(0.015)	(0.072)	(0.039)	(0.076)	(0.044)	(0.057)	(0.032)
TaxRate	-0.016	-0.009	-0.087	-0.048	-0.003	-0.001	0.045	0.027
	(0.019)	(0.011)	(0.068)	(0.036)	(0.032)	(0.019)	(0.058)	(0.033)
Constant	-0.727	-0.480	-1.954	-1.055	4.403***	2.483***	5.994***	3.413***
	(0.902)	(0.497)	(1.345)	(0.751)	(1.384)	(0.795)	(1.989)	(1.157)
Observations	4155	4155	991	991	1499	1499	1665	1665
Adjusted R^2	0.064	0.065	0.045	0.044	0.111	0.109	0.184	0.184

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results for all the sample period, before the financial crisis (year < 2008), during (2008 ≤ year ≤ 2012) and after it (year > 2012) by using a Logit and Probit model.

This table display the results for the following equation: $DPS\_regular_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$

Table 10 – Determinants of DY stability in the sample period and its sub-periods

	(1) DY_regular *All* *Logit*	(2) DY_regular *All* *Probit*	(3) DY_regular *< 2008* *Logit*	(4) DY_regular *< 2008* *Probit*	(5) DY_regular *During* *Logit*	(6) DY_regular *During* *Probit*	(7) DY_regular *> 2012* *Logit*	(8) DY_regular *> 2012* *Probit*
DY_regular								
CEO	0.147	0.091	-0.005	0.022	0.405	0.225	0.059	0.016
	(0.263)	(0.146)	(0.494)	(0.277)	(0.525)	(0.297)	(0.694)	(0.381)
ln_Assets	-0.099	-0.021	-0.352	-0.209*	-1.197***	-0.638***	-1.128***	-0.601***
	(0.140)	(0.072)	(0.216)	(0.119)	(0.308)	(0.170)	(0.395)	(0.230)
ROE	-3.850***	-2.085***	-1.732	-0.752	-9.635***	-5.246***	-9.917**	-5.157**
	(1.019)	(0.533)	(1.678)	(0.875)	(2.922)	(1.782)	(4.858)	(2.062)
FinCrisis	1.007***	0.528***						
	(0.187)	(0.101)						
NPM	0.435	0.216	-0.230	-0.230	1.264	0.694	1.940	1.063
	(0.438)	(0.237)	(1.185)	(0.663)	(0.923)	(0.532)	(1.829)	(1.208)
Leverage	0.083	0.112	0.200	-0.012	-3.717*	-2.139*	0.145	0.401
	(0.956)	(0.510)	(1.706)	(0.952)	(2.150)	(1.187)	(2.632)	(1.480)
MBR	0.113***	0.063***	0.263***	0.132***	0.449***	0.259***	0.117	0.054
	(0.038)	(0.020)	(0.095)	(0.047)	(0.154)	(0.091)	(0.100)	(0.048)
TaxRate	-0.035	-0.019	-0.168	-0.096	0.048	0.026	-0.014	0.002
	(0.033)	(0.019)	(0.123)	(0.071)	(0.089)	(0.051)	(0.188)	(0.073)
Constant	-5.722***	-3.530***	-1.961	-0.999	4.930	2.231	-3.139	-2.262
	(1.393)	(0.724)	(2.078)	(1.172)	(3.025)	(1.715)	(3.923)	(2.214)
Observations	4155	4155	991	991	1499	1499	1665	1665
Adjusted R^2	0.020	0.019	0.120	0.108	0.142	0.131	0.024	0.020

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results for all the sample period, before the financial crisis (year < 2008), during (2008 ≤ year ≤ 2012) and after it (year > 2012) by using a Logit and Probit model.

This table display the results for the following equation: $DY\_regular_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$

Table 11 – Determinants of DPR in special cases

	(1) DPR_negative *Logit*	(2) DPR_negative *Probit*	(3) DPR_0and1 *Logit*	(4) DPR_0and1 *Probit*	(5) DPR_more1 *Logit*	(6) DPR_more1 *Probit*
main						
CEO	0.556**	0.300**	-0.610***	-0.343***	0.560**	0.293**
	(0.244)	(0.126)	(0.180)	(0.098)	(0.231)	(0.117)
ln_Assets	0.151	0.096*	-0.306***	-0.156***	0.283***	0.132***
	(0.107)	(0.052)	(0.084)	(0.043)	(0.100)	(0.048)
ROE	-8.237***	-4.075***	6.140***	3.260***	-3.235***	-1.635***
	(1.120)	(0.552)	(0.799)	(0.415)	(1.019)	(0.511)
FinCrisis	-0.138	-0.023	-0.018	-0.038	0.066	0.033
	(0.187)	(0.094)	(0.133)	(0.071)	(0.174)	(0.087)
NPM	0.890*	0.404	-0.671	-0.382*	1.749	0.915
	(0.474)	(0.249)	(0.409)	(0.223)	(1.214)	(0.614)
Leverage	3.853***	1.771***	-4.422***	-2.288***	3.500***	1.713***
	(0.892)	(0.438)	(0.674)	(0.348)	(0.767)	(0.381)
MBR	-0.406***	-0.140***	0.144***	0.071***	-0.042	-0.021
	(0.088)	(0.032)	(0.034)	(0.016)	(0.030)	(0.015)
TaxRate	0.204***	0.108***	-0.242***	-0.060***	0.044	0.017
	(0.039)	(0.018)	(0.048)	(0.012)	(0.030)	(0.012)
Constant	-4.929***	-2.909***	6.352***	3.337***	-7.424***	-3.722***
	(1.204)	(0.577)	(0.908)	(0.460)	(1.081)	(0.522)
Observations	4155	4155	4155	4155	4155	4155
Adjusted R^2	0.583	0.471	0.365	0.332	0.143	0.127

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results for a negative DPR, between zero and one, and higher than one by using a Logit and Probit model.

This table display the results for the following equation: $Y_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$ *with Y = DPR_negative, DPR_0and1 or DPR_more1.*

Table 12 – Determinants of dividends paid, DPS and DY lagged variables of first order

	(1) D_dividends T+1 *Logit*	(2) D_dividends T+1 *Probit*	(3) DPS T+1 *FE*	(4) DPS T+1 *RE*	(5) DY T+1 *FE*	(6) DY T+1 *RE*
main						
CEO	-0.125	-0.060	-0.016	-0.009	-0.000	0.000
	(0.384)	(0.203)	(0.035)	(0.033)	(0.001)	(0.001)
ln_Assets	2.603***	1.411***	0.463***	0.148***	0.003***	0.003***
	(0.283)	(0.118)	(0.070)	(0.040)	(0.001)	(0.000)
ROE	4.253*	2.967**	1.023***	1.049***	0.004	0.007*
	(2.410)	(1.459)	(0.325)	(0.293)	(0.005)	(0.004)
FinCrisis	-0.711***	-0.391***	-0.092***	0.329***	0.000	-0.000
	(0.264)	(0.142)	(0.030)	(0.053)	(0.001)	(0.001)
NPM	11.925**	4.849***	-0.151	-0.136	0.007	0.003
	(4.732)	(1.628)	(0.149)	(0.138)	(0.005)	(0.003)
Leverage	-0.035	-0.104	0.721***	-0.116	0.009*	0.003
	(1.724)	(0.877)	(0.278)	(0.215)	(0.005)	(0.004)
MBR	-0.046	-0.046	0.017*	0.005	-0.000*	-0.000
	(0.070)	(0.041)	(0.010)	(0.008)	(0.000)	(0.000)
TaxRate	-0.008	-0.006	0.009	0.009	0.000	0.000
	(0.039)	(0.021)	(0.010)	(0.011)	(0.000)	(0.000)
Constant	-15.154***	-8.348***	-3.778***	-1.083***	-0.008	-0.012**
	(2.650)	(1.108)	(0.671)	(0.380)	(0.009)	(0.005)
Observations	3844	3844	3838	3838	3838	3838
Adjusted R^2	0.125	0.120	0.090	0.238	0.003	0.147

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results for the dividend payments, DPS and DY lagged variables of first order by using a Logit, Probit, FE and RE model.

This table display the results for the following equation: $Y_{i,\,t+1} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$ *with Y = D_dividends, DPS or DY.*

Table 13 – Determinants of dividends paid, DPS and DY lagged variables of second order

	(1) D_dividends T+2 *Logit*	(2) D_dividends T+2 *Probit*	(3) DPS T+2 *FE*	(4) DPS T+2 *RE*	(5) DY T+2 *FE*	(6) DY T+2 *RE*
main						
CEO	0.183	0.066	0.076	0.088	0.003	0.004
	(0.410)	(0.213)	(0.083)	(0.081)	(0.004)	(0.004)
ln_Assets	2.702***	1.518***	0.474***	0.152***	0.003***	0.003***
	(0.285)	(0.132)	(0.076)	(0.039)	(0.001)	(0.001)
ROE	5.563***	2.986***	1.037***	1.129***	0.004	0.009**
	(1.732)	(0.960)	(0.370)	(0.322)	(0.005)	(0.004)
FinCrisis	0.028	0.017	-0.003	0.483***	-0.000	0.002*
	(0.265)	(0.142)	(0.032)	(0.081)	(0.001)	(0.001)
NPM	0.339	0.122	-0.181	-0.183	0.008	0.002
	(0.731)	(0.352)	(0.158)	(0.143)	(0.005)	(0.003)
Leverage	-2.936*	-1.574*	0.485	-0.325	-0.005	0.000
	(1.689)	(0.832)	(0.296)	(0.219)	(0.005)	(0.004)
MBR	-0.058	-0.034	0.024**	0.007	-0.000**	-0.000
	(0.072)	(0.049)	(0.010)	(0.007)	(0.000)	(0.000)
TaxRate	0.027	0.014	0.016	0.017	0.001	0.001
	(0.039)	(0.020)	(0.012)	(0.011)	(0.001)	(0.000)
Constant	-14.547***	-8.295***	-3.840***	-1.019***	-0.010	-0.013***
	(2.648)	(1.199)	(0.726)	(0.383)	(0.009)	(0.005)
Observations	3482	3482	3475	3475	3475	3475
Adjusted R^2	0.088	0.089	0.070	0.234	0.006	0.155

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results for the dividend payments, DPS and DY lagged variables of second order by using a Logit, Probit, FE and RE model.

This table display the results for the following equation: $Y_{i,\,t+2} = \beta_0 + \beta_1 CEO_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$ *with Y = D_dividends, DPS or DY.*

Table 14 – Influence of *CEO_* in dividends paid, DPS and DY

	(1) D_dividends *Logit*	(2) D_dividends *Probit*	(3) DPS *FE*	(4) DPS *RE*	(5) DY *FE*	(6) DY *RE*
main						
CEO_	0.004	-0.036	-0.007	-0.025	0.000	0.001
	(0.265)	(0.145)	(0.026)	(0.024)	(0.001)	(0.001)
ln_Assets	2.183***	1.459***	0.406***	0.132***	0.001	0.003***
	(0.252)	(0.123)	(0.063)	(0.040)	(0.001)	(0.000)
ROE	10.528***	5.811***	0.829***	0.863***	0.004	0.009**
	(1.690)	(0.775)	(0.297)	(0.253)	(0.005)	(0.004)
FinCrisis	-1.066***	-0.555***	-0.089***	0.414***	0.005***	0.006***
	(0.244)	(0.133)	(0.027)	(0.058)	(0.001)	(0.001)
NPM	-0.009	0.012	-0.101	-0.083	-0.010*	-0.007*
	(0.962)	(0.390)	(0.172)	(0.144)	(0.006)	(0.004)
Leverage	3.792**	1.728**	1.283***	0.347	0.031***	0.010**
	(1.599)	(0.850)	(0.297)	(0.231)	(0.008)	(0.004)
MBR	-0.058	-0.044	0.016**	0.006	-0.000*	-0.000*
	(0.065)	(0.038)	(0.008)	(0.007)	(0.000)	(0.000)
TaxRate	0.015	0.000	-0.096	-0.096	-0.005	-0.005
	(0.038)	(0.021)	(0.074)	(0.074)	(0.004)	(0.004)
Constant	-12.643***	-8.671***	-3.379***	-1.053***	-0.002	-0.012**
	(2.422)	(1.193)	(0.603)	(0.373)	(0.011)	(0.005)
Observations	4155	4155	4155	4155	4155	4155
Adjusted R^2	0.083	0.089	0.166	0.258	0.191	0.269

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the table above it is shown the estimation results for the dividend payments, DPS and DY lagged variables of second order by using a Logit, Probit, FE and RE model.

This table display the results for the following equation: $Y_{it} = \beta_0 + \beta_1 CEO\_{}_{it} + \beta_2 ln\_Assets_{it} + \beta_3 ROE_{it} + \beta_4 FinCrisis_{it} + \beta_5 NPM_{it} + \beta_6 Lev_{it} + \beta_7 MBR_{it} + \beta_8 TaxRate_{it} + \varepsilon_{it}$ *with Y = D_dividends, DPS or DY.*

Table 15 – Literature Review Summary Table of Theoretical Papers of CEO turnover

The table presents information about the author, type of analysis and respective conclusions for theoretical papers present in the literature review.

Author (year)	Type of analysis	Main Conclusions
Brickley (2003)	• Summarizes the general empirical findings on CEO turnover and firm performance.	• CEO's age can be considered an important variable in explaining CEO turnover; • The sensitivity of turnover to performance increases with the higher number of outsiders on the board.
Murphy (1999)	• Summarizes pay practices and trends in CEOs compensation.	• Compensation is higher, and pay-performance sensitivities are lower, in larger firms; • Levels of pay and pay-performance sensitivities are lower in regulated companies than in industrial firms; • Levels of pay and pay-performance sensitivities are higher in the US than in other countries; • CEOs in the 1990s are less likely to leave at average retirement ages than in earlier years; • There is a high probability to be replaced through outside hires rather than internal promotions; • CEOs were most likely to leave their corporations at ages 64/65.
Hermalin and Weisbach (1998)	• Model in which board effectiveness is a function of its independence; • The determinants of board composition as a bargaining process.	• A model of corporate governance should be consistent with both perspectives (board and CEO); • Independent directors are added to the board after a poor corporate performance.

Table 16 – Literature Review Summary Table of Theoretical Papers of Dividend Policy

The table presents information about the author, type of analysis and conclusions for theoretical papers regarding dividend policy.

Author (year)	Type of analysis	Main Conclusions
Miller and Modigliani (1961)	• Examines the effect of differences in dividend policy on the current price of shares in an ideal economy.	• Dividend policy has no effect on the value of the corporation in a world without taxes, transaction costs, or other market imperfections.
Lintner (1956)	• Development of a theoretical model of corporate dividend behaviour which relates the change in real dividends with the change in corporate profits.	• Dividends distributed by the companies were a result of the net income and the dividend payout; • Firms are averse to reduce their payout ratio even when there is an environment of scarcity; • The target payout ratio is a variable which affects payout decisions; • Both current profit and previous dividend influence dividend payout policy.
Jensen (1986)	• Theory which explains how debt can be used to reduce agency costs within a firm.	• Managers that have remaining free cash flows can increase dividends or repurchase stocks; • Debt and dividends can be seen as substitutes;

		• Debt reduces the agency costs within a firm by reducing the amount of free cash flow available for managers to spend.
Black (1976)	• Why do Corporations pay dividends?	• Dividends and repurchases have different tax implications. When a firm repurchases shares, shareholders will be taxed at the capital gain tax rate. Dividends are taxed at a higher rate than capital gains. So, shareholders will prefer repurchasing shares rather than receiving dividends. There is a tax advantage for share repurchases. However, despite being a tax disadvantage for the investors, corporations continue to issue dividends; • Dividend changes, or the fact that the dividend doesn't change, may tell investors more about what the managers think that they can find out from other sources.

Table 17 – Literature Review Summary Table of Empirical Papers of CEO turnover

The table presents information about the author, region/country of study, the period of analysis (if applied), methodology, dependent variable, independent variables and respective conclusions for the empirical papers mentioned in the literature review.

Author (year)	**Region/ Country**	**Period**	**Methodology**	**Dependent Variable**	**Independent Variables**	**Main Conclusions**
Jenter and Kanaan (2015)	N/A	1993-2009	• Two stage-regression approach to examine the sensitivity of CEO turnover to peer performance; • First stage: corporate performance explained by peer's performance and a specific component (e.g. CEO ability); • The second stage: estimate the probability of CEO turnover using estimated peer group performance and a residual component	• Corporate performance; • Probability of a CEO being dismissed.	• Peers' performance; • Specific component (e.g. CEO ability)[2]; • Residual component associated with firm performance.	• Low industry stock and market returns increase the probability of forced CEO turnover; • Peer performance influences CEOs who are underperforming their peers; • Boards blame CEOs facts beyond their control (peers' performance); • Performance in recessions is an essential factor that reflects more about a CEO quality decision making.

[2] CEO ability is measured from firm performance and other corporate signals;

			related with firm performance.			
Kaplan and Minton (2012)	U.S.A.	1992-2007	• Study of CEO turnover in the period mentioned.	• N/A	• N/A	• From 1992 to 1999, average CEO turnover was about 12.6%, implying an average CEO tenure[3] of, approximately, 8 years; • Since 2000, CEO turnover increased to 16.8%, implying an average tenure of about 6 years; • Turnover is associated with 3 components of firm stock performance – performance relative to industry, industry performance relative to the market, and the performance of the stock market; • The turnover-performance sensitivity is related to board independence; • The recent tenures are shorter than those reported in previous years.
Hazarika et al. (2012)	N/A	1992-2004	• Examine the relationship between CEO turnover and earnings management.	• Dummy variables: 2 if CEO turnover is voluntary, 1 if is a forced turnover, and 0 otherwise.	• Earnings management; • Industry-adjusted firm return; • Positive industry-adjusted firm return indicator; • Negative Industry-Adjusted Firm Return Indicator; • Cumulative industry return; • Stock return volatility; • Firm size; • Stock return volatility; • Firm size; • Operating performance; • Operating earnings volatility; • Market-to-book ratio; • Leverage;	• Earnings management is strongly associated with forced CEO turnover, but is not related to voluntary turnover; • CEO tenure is negatively related to earnings management; • Similar results were found for CFOs.

[3] CEO tenure is the length of time that a CEO has been in his or her position.

					• Sales growth; • Special items, extraordinary items, restructuring charges; • CEO incentive ratio[4]; • CEO stock ownership; • CEO-Chairperson Independent directors.	
Kang and Shivdasani (1995)	Japan	1985-1990	• CEO turnover and firm performance using regression models.	• CEO turnover (routine/nonroutine).	• ROA; • Excess Stock Return; • Negative Income Dummy (1 if pre-tax operating income is negative, 0 otherwise).	• Turnover is significantly negatively related to firm performance, more if performance is measured relative to other firms in the same industry; • Nonroutine turnover[5] is significantly related to industry-adjusted return on assets, excess returns, and negative pre-tax earnings; • No evidence that nonroutine turnover is influenced by poor industry performance; • The sensitivity of nonroutine turnover to earnings performance is significantly related to the presence of the main bank relation; • In contrast to evidence from U.S. researches, the presence of outside directors on the board does not affect turnover probability; • Improvements in performance occur after nonroutine turnover, but it was found no evidence of performance changes after a routine turnover.
Dikolli et al. (2014)	N/A	1996-2005	• Relationship between performance and CEO tenure.	• CEO turnover.	• ROA; • Cumulative median industry-adjusted monthly stock returns; • Forecast error; • Sum of negative quarterly analyst forecast errors;	• Performance is a better indicator in the early stages of a CEO tenure; • Uncertainty about the CEO's ability creates a demand for good performances in order to reduce such uncertainty; • The longer the CEO tenure, the lower is the board's independence towards the CEO.

[4] Share of a CEO's total compensation (includes salary, bonus, and value of options holdings) that results from a one percentage point increase in the value of his or her equity in the company;
[5] CEO is forced to leave his or her position for various reasons, including being fired for poor performance. Health reasons are also included in this definition.

					• Dummy variable: 1 if the then 4.77 years (median sample tenure); • CEO's age; • Dummy variable: 1 if CEO age is 64, 65 or 66, 0 otherwise; • The cumulative density function of the standard error of a firm's monthly change in the stock price over the prior 36 months • The cumulative density function of the standard error of the firm's quarterly net income over the prior 12 quarters; • Firm's equity book value divided by its market value.	
Huson et al. (2001)	N/A	1971-1994	• Use of logit models.	• Dummy variable: 1 if the CEO changes, 0 otherwise.	• Dummy variable: 1 if the CEO is 60 or older, 0 otherwise; • Dummy variable: 1 if the CEO is a member of the founding family, 0 otherwise; • Dummy variables to determine each data is being used: 1 if the period is the one specified, 0 otherwise; • Natural log of sales; • ROA; • ΔROA; • Industry-adjusted stock returns.	• Forced CEO turnovers and outside succession increased in the period in question; • The sensitivity of forced turnovers to corporate performance did not change over the period.

Gao et al. (2017)	U.S.A.	2001-2011	• Test the difference in CEO turnover in public and private firms.	• Dummy variable: 1 if firms' CEO is replaced during that year, 0 otherwise.	• ROA; • Sales growth; • Stock returns; • The standard deviation of industry median adjusted quarterly operating cash flows over the previous 8 quarters; • Leverage; • CEO tenure; • (Earnings before extraordinary items and discontinued operations – Operating cash flow from continuing operations) / Total assets; • Number of employees; • Number of firms in the industry; • Number of firms in the state; • Dummy variable: 1 if the CEO has 5% stake of the company, 0 otherwise; • Others (CEO age, dummy variable to determine if the CEO was the founder, etc).	• Public firms have a higher CEO turnover and higher performance-sensitivity turnover compared with private firms; • The main contributor to this difference is public-firms investor myopia.
Campbell et al. (2011)	N/A	1992-2005	• Estimation of the relation between the probability of a forced turnover and CEO	• 1 for forced CEO turnovers and 0 otherwise.	• Low-optimism CEO indicator[6]; • High-optimism[7] CEO indicator;	• CEOs with low optimism and CEOs with high-optimism have significantly greater risks of forced turnover than do moderately optimistic CEOs;

[6] Low-optimism CEO – exercise options at 30% or lower moneyness, have net-stock-purchases in the bottom quintile and sell off more than 10% of their holdings, or manage firms with investment rates in the bottom quintile of their industry;
[7] High-optimism CEO – hold options at 100% or greater moneyness, have net-stock-purchases in the top quintile and increase their holdings by at least 10%, or manage firms with investment rates in the top quintile of their industry.

			optimism, while controlling for other variables.		• Industry-adjusted stock return over CEO tenure; • CEO percent ownership in the firm; • CEO salary; • CEO bonus; • CEO age; • CEO tenure; • Ln(assets); • Industry-adjusted ROA; • Executive and director ownership.	• Low-optimism CEOs have a 50% to 112% greater probability of forced turnover than a moderately optimistic CEO has, with an average of 81% greater. While high-optimism CEOs have a 28% to 99% greater probability of a non-voluntary turnover than moderately optimistic CEOs, with an average of 48% greater; • CEO that generates an industry-adjusted stock return two standard deviations below the mean, face a 68% to 86% greater probability of forced turnover than a mean-performing CEO, with an average of 80%; • CEOs with low optimism or high optimism are significantly more likely to face forced turnover than are moderately optimistic CEOs; • CEO optimism and turnover risk should have no correlation among firms whose boards do not act in shareholders' interests.
Weisbach (1995)	U.S.A.	1971-1982	• Examines the relation between management turnover and divestitures of acquired divisions.	• Divestiture (dummy variable that equals 1 if an acquisition is divested in a given period).	• Management changes (a dummy variable that equals 1 if there is a CEO change in a given period); • Dummy variable that equals 1 if the acquisition is considered related and 0 otherwise (it is considered diversifying); • Control variable for calendar time; • Control variable for the length of time held.	• Forced management changes (initiated by the board) and normal retirements at age 65 both lead to divestitures of poorly-performing assets; • An investment project that does not to fit well with the rest of the firm's assets could lead to the manager's dismissal by its board; • Sales of unprofitable assets (acquired by the previous management) coinciding with management turnover; • acquisitions of unrelated businesses are more likely to be divested than acquisitions of • related businesses.
Puffer and Weintrop (1991)	U.S.A.	1982-1984	• Examine if performance measured as the difference between actual performance and boards' performance	• CEO turnover.	• Cumulative abnormal security returns (abnormal stock returns); • EPS; • ROE; • ROA;	• There is a turnover when reported annual earnings per share fall short of the board's expectations; • Agency Theory: there may be a conflict of interest between the board of directors and CEOs. The board is concerned with

			expectations is a better indicator of CEO turnover (includes 3 performance criteria: stock price performance, earnings targets, and accounting ratios).		• Corporate performance growth; • Ln(assets); • CEO tenure; • Market Share; • Difference between actual EPS and financial analysts' expectations of EPS; • Difference between actual EPS and the mean of financial analysts' expectations of EPS.	maximizing shareholders wealth, whereas, the CEO is motivated by self-interest (compensation and maximizing its own wealth); • A negative relation between corporate performance and CEO turnover which grows stronger the more a performance measure reflects the board's expectations; • The results of this paper apply to CEOs who did not reach the "normal retirement" age.
Murphy and Zimmerman (1993)	U.S.A.	1971-1990	• Examine the behaviour of several financial variables (R&D, advertising, capital expenditures, and accounting accruals) surrounding CEO turnover.	• 1st model: CEO turnover; • 2nd model: Growth variable for R&D, advertising, capital expenditures, and accounting accruals.	1st model: • Market-adjusted stock return (and its lagged variable); • Change in earnings (and its lagged variable); • CEO age; • CEO normal retirement age (64/65). 2nd model: • CEO turnover; • Market-adjusted stock return (and its lagged variable); • Change in earnings (and its lagged variable).	• 30% of the sample CEOs leave the office at age the normal retirement age (64/65); • The probability of CEO turnover is higher when contemporaneous and lagged stock returns and earnings changes are lower; • Also, the probability of CEO turnover is higher when CEO age increases and when the CEO age is 64 or 65; • Discretionary variables (R&D, advertising, capital expenditures and accruals) are lower during actual CEO turnover than in years -5 to -2 and years + 1 to +5; • Horizon Problem: CEOs have incentives to decrease R&D and advertising in their last years to increase accounting earnings and their compensation; • Upcoming CEOs take a big bath: market-adjusted account accruals are lower in the fiscal year in which the incumbent CEO is replaced by his or her successor.
Shen and Cannella Jr. (2002)	U.S.A.	1988-1994	• This study tests the performance impacts of successor type, post-succession senior	• Post-succession operational performance measured by ROA.	• Dummy variables for the 3 type of successors; • Successor Industry Experience;	• There are 3 types of successors: contenders (contending executive that has the support and approval of the board), followers (successors who follow a CEO's ordinary retirement to

			executive turnover and departing CEO tenure.		• Firm size and Diversification; • Pre-succession performance; • Governance Structure; • Industry Performance and instability; • Ln(Sales).	continue and follow the defined strategies) and outsiders; • CEO's succession does not significantly influence a firm's long-term market performance; • The hypothesis of a negative association between outsider successor and post-succession operational performance was supported; • The hypothesis of a positive association between a contender successor and post-succession firm performance was not supported by the analysis; • Senior executive turnover is positively related with firms' ROA after a contender succession but negatively associated with firms' ROA following outsider succession; • The tenure of departing CEOs influences firm operational performance.
Huson et al. (2004)	U.S.A.	1971-1995	• Examine CEO turnover related to firm performance.	• Operating firm performance.	• CEO turnover; • CEO's age; • Share ownership; • Ln(Assets); • Sales; • Succession characteristics (forced or takeover); • Successor CEO characteristics (age, years with the firm when appointed a CEO outsider);	• Deteriorating firm performance triggers management turnover; • Unadjusted, industry-adjusted, and control group-adjusted OROA depicts significant declines from three years before through one year before the turnover year. The results also show that the average control group-adjusted OROA increases significantly from one year before to three years after the turnover year; • Such improvements were achieved from management turnover and the improvement of the managers' quality; • Post-turnover changes in firm OROA are positively related to institutional ownership and are higher when the board is dominated by outside directors, and when the successor CEOs are firm outsiders. Outside directors made better CEO replacement decisions near the end of the period we examine;

						• Announcement-date abnormal returns are positively related to subsequent changes in firm operating performance; • Unadjusted book assets, capital expenditures, gross PP&E increase over the measurement period for all type of turnovers; • After voluntary turnovers, the results show a deterioration in unadjusted OROA, whereas control group-adjusted OROA improves. While, for forced turnovers, the evidence is consistent with poor performance preceding turnovers; • Firm financial performance tends to deteriorate prior to top management turnover.

Table 18 – Literature Review Summary Table of Empirical Papers of Dividend Policy

The table presents information about the author, region/country of study, the period of analysis (if applied), methodology, dependent variable, independent variables and respective conclusions for the empirical papers related with dividend policy.

Author (year)	**Region/ Country**	**Period**	**Methodology**	**Dependent Variable**	**Independent Variables**	**Main Conclusions**
Alli et al. (1993)	U.S.A.	1985	• Examines the dividend policy issue by simultaneously testing the alternative dividend theories using a two-step, which involves factor analysis and multiple regression.	• DPR.	• The ratio of common shares owned by institutions; • Ln(Total Assets); • Average realized capital expenditures; • The annual average growth rate in operating income; • Beta; • Variability in the capital structure; • Cash flow variability; • The ratio of the number of shareholders to total outstanding shares;	• Dividend payout ratios are inversely related to the cost of external funds (equity and debt), expected investment outlays, and growth; • Firms with a significant portion of their shares held by institutional investors are found to have higher payout ratios; • The argument that dividends may be used to mitigate agency problems between insiders and outsiders is supported; • Firms experiencing high issuing costs, high growth (and risk), and expecting a high level of capital expenditures pay low dividends, lending support for both the residual theory and pecking order argument; • Ownership dispersion does not affect dividends;

					• The ratio of shares held by insiders to total shares outstanding; • The ratio of net plant to total assets; • Financial slack; • Dividends stability (measured as a dummy variable).	• Firms prefer to increase their financial slack rather than pay higher dividends; • Firms with greater capital structure flexibility (easier access to capital markets) can pay higher dividends.
Boţoc and Pirtea (2014)	16 Emerging countries	2003-2011	• Investigate the drivers of dividend payout policy by analyzing the behaviour of 2,636 companies from sixteen emerging countries.	• DPR (measured as dividend-to-cash-flow ratio and dividend-to-earnings ratio).	• Liquidity ratio; • Cash needs; • Size (Sales-to-asset ratio); • Growth (growth rate in total assets); • Profitability (ROA); • Business cycle; • Business risk; • Financial leverage; • Corporate governance (dummy variable); • Legal origin (dummy variable; • Shareholders' rights (measured on a scale of 1 to 5).	• When investor protection is high, cash needs are more important in explaining dividend payout, and when investor protection is poor, liquidity appears to be more important; • Size and corporate governance are associated with higher dividend payouts; • Growth is negatively related to DPR, however, seems to not affect dividend policy; • Profitability is positively associated with DPR; • Liquidity has a positive effect on dividend payout, whereas cash needs have a negative effect; • Debt ratio is significant and positively related to DPR (trade-off theory of capital structure: more debt is used, the more profit the firm gets, and more dividends can be paid); • Dividend payout ratios are higher in countries with weak shareholder protection.
Fama and Babiak (1968)	N/A	1947-1964	• This paper examines the determinants of dividend payments by individual firms using Panel models.	• Change in dividend payments.	• Panel A: · Constant; · Net Income; · Dividend per share. • Panel B: · Constant; · Net Income + Depreciation (CF); · Dividend per share. • Panel C: · Constant;	• For all models both lagged dividends and some measure of current profits are important variables in explaining dividend changes; • Net income seems to provide a better measure of profits than either cash flow or net income and depreciation included as separate variables in the model.

					· Net Income; · Depreciation; · Dividend per share. • Panel D: · Net Income; · Dividend per share.	
Dewenter and Warther (1998)	U.S.A. and Japan	1982-1993	• Comparison between dividend policies of U.S. and Japanese firms; • Financial firms and utilities were excluded since their dividend policies are highly affected by external forces.	• Panel A: • Daily market-adjusted buy-and-hold return around the dividend omission. • Panel B: • Daily market-adjusted buy-and-hold return around the dividend initiation.	• Dummy variables for U.S. and Japan (1 if the companies are from that country, 0 otherwise); • ΔROS (Change in return on sales); • Years (number of years since dividend policy has been changed); • Dividend Yield.	• Japanese firms, and keiretsu-member firms, in particular, are subject to less information asymmetry and fewer agency conflicts than U.S. firms, and that information asymmetries and/or agency conflicts affect dividend policy; • Investors believe that when a firm reports positive results and pays a substantial dividend, this is a sign of an increase in future earnings; • Stock prices of Japanese firms react less strongly to dividend omissions and initiation announcements compared with US stock prices; • Keiretsu managers initiate and omit dividends more frequently than U.S. managers, and change their dividends more frequently than Japanese independent firm managers; • Japanese firm cut dividends in response to poor performance more quickly than U.S. firms;
Chang et al. (2016)	U.S.A.	1995-2009	• Examines the effect of institutional ownership on dividend payouts through the lens of agency theory using a logit model; • Afterwards, it is used a firm-fixed effects model.	• Dividend dummy variable (1 if the firm pays dividends, 0 otherwise).	• Log(Market Cap); • Leverage; • Cash/Total Assets; • ROA; • Sales' Growth; • Tobin's Q; • Log(Firm age); • Net FA/TA; • Past volatility; • FCF/TA; • Dividend payout ratio (cash dividends	• Logit model: • The total ownership by institutions, ownership by institutions with largest stakes in the firm, and ownership by these institutions that have both large stakes and short-term investment horizons are all negatively associated with future propensity to pay dividends; • The propensity to pay dividends increases with an increase in firm size, fixed assets ratio, firm age, or profitability, and decreases with an

					normalized by Net Income);
					• The ratio of shares owned by institutions that are the 10 largest shareholders;
					• Total ownership by institutions;
					• The ratio of shares owned by these top10 owners with a long-term investment horizon;
					• The ratio of shares owned by these top10 owners with a short-term investment horizon;
					• Others.
						increase in leverage, cash ratio, sales growth, or firm risk;
						• Firm-fixed effects model:
						  • The dividend payout ratio increases with an increase in firm size or cash ratio, and decreases with an increase in leverage, firm risk, or profitability. Suggesting that different firm characteristics influence both the propensity to pay dividends and the dividend payout ratio;
						  • Different types of institutional ownership have different effects on the propensity to pay and the magnitude of the payout ratio.

Rozeff (1982)			• Cross-sectional test relating dividend payout to the fraction of equity held by insiders, the past and expected future revenue growth of the firm, the firm's beta coefficient, and the number of common stockholders; • Regulated firms are not selected since their financing policies can be affected by external forces.	• Firm's target DPR (measured as the arithmetic average of a firm's seven dividend payout ratios over the seven years 1974-1980).	• Realized growth rate of the firm's revenue over the five-year period 1974-1979; • Forecast of the growth of sales revenue over the five-year period 1979-1984; • Beta; • Percentage of stock held by insiders; • Ln(Number of common stockholders);	• The dividend payout is a significantly negative function of the firm's past and expected future growth rate of sales; • DPR is a significantly negative function of its beta coefficient, a significantly negative function of the percentage of stock held by insiders, and a significantly positive function of the firm's number of common stockholders; • Future predicted growth variable is more important than the past realized growth; • The forecast may measure the long-term growth rate more accurately than the most recent realization; • Firms with greater investments have lower dividend payouts.
Chkir and Samir (2008)	Canada	1985-2004	• Examines the relationship between taxation and corporate dividend policy employing univariate and multivariate analyses; • There were two tax events in Canada. One	• DPY (Average payout ratio).	• Constant term; • Lagged DPY (lag value of the average payout ratio); • Earnings per share; • Dummy variable for 1987 (1 after 1987, 0 otherwise); • Dummy variable for 1994 (1 after 1994, 0 otherwise);	• Reduction of capital gains exemption from $500,000 to $100,000 was barely enough to boost the average dividend payouts; • The elimination of the capital gains exemption in 1994, however, had a much higher effect in increasing the level of dividend payouts; • Firms that have a high level of control concentration are more likely to pay fewer dividends;

			in 1987 and another in 1994.		• Control variable for ownership.	• Taxation has an impact on corporate dividend policy and the changes in the tax reform proves the existence of a dividend clientele.
Ahmad et al. (2018)	Europe	2007-2016	• Examines the determinants of firms' dividend policy measured as dividend yield using an OLS regression model; • Fixed effects for firm and years were included in the research.	• Dividend Yield (percentage of cash dividends paid relative to the market share price at year-end).	• ROA; • Investors' growth expectations about the firm (measured as the market-to-book ratio); • Ln(Market Cap); • Leverage; • Net Profit Margin (a proxy for profitability); • Ln(Sales); • DPS Regular as a dummy variable (1 if the firm pay a regular dividend per share, 0 otherwise); • Dividend payout ratio; • Fixed effects per firm and year.	• The dividend yield is not related with firms' profitability (contrary to expectations). This suggests that dividend yield may be higher for less-profitable firms; • Firms' growth is significant and negatively related with firms' dividend yield; • Dividend yields are lower for larger firms; • There is a negative effect of leverage on the dividend yield of firms with a stable dividend payout ratio over time; • Leverage may positively affect the dividend yield of firms with stable dividend per share.
Deshmukh et al. (2013)	U.S.A.	1984-1994	• Development of a model of the interaction between CEO overconfidence and dividend policy; • Financial firms, utilities, and regulated telephone companies were eliminated from the sample.	• Dividends to MV of equity.	• Log(Sales); • Stock ownership; • Vested options; • Growth opportunities; • Cash flow; • Tangible assets; • Leverage; • Dummy variable for the CEO's confidence level; • Dummy variable for the CEO's option-exercise behaviour.	• An overconfident CEO views external financing as costly and so builds financial slack for future investment needs by lowering the current dividend payout; • The level of dividend payout is lower in firms managed by overconfident CEOs; • The reduction in dividends related to CEO overconfidence is greater in firms with lower growth opportunities and lower cash flow; • Positive market reaction to a dividend-increase announcement is higher for firms with greater uncertainty about CEO overconfidence.