



Aalto University
School of Business

DIVIDEND PAYOUT POLICY AND ACQUIRORS' ANNOUNCEMENT RETURNS

**An Enquiry into the Effect of Acquirors' Dividend Payout Policy in European
Mergers and Acquisitions**

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Abstract

The examination of value-creating properties for acquirors is plenty in prior research. However, the relationship between acquirors' dividend payout policies and announcement returns during mergers and acquisitions events has received marginal attention. Consistent with the findings of Glamboosky et al. (2020), this thesis presents evidence of a positive relation between dividend paying acquirors and cumulative abnormal returns for European public, listed companies. The similarity of the acquiror and the target dividend payout policies are also shown to have a significant relation, although negative. Due to the endogenous nature of dividend payout policy, the thesis limits its enquiry to only studying the similarity of dividend policies, however, a proposal is made for the future consideration of the implications of dividend tax incidence for acquiror dividend clientele.

Keywords Announcement Returns, Dividend Payout Policy, Mergers and Acquisitions

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1. Introduction

Mergers and acquisitions are traditionally carried out with the interest of creating value for shareholders. Long-term value creation can often be attributed to operational synergies, strategic advantages, and managerial performance, whilst short-term value creation comes from the expectations markets form for future performance. Past literature has relatively unanimously agreed that the wealth effect for shareholders of the target company is a premium of around 20% to 30%, in Europe (Goergen and Renneboog 2003). The effect on the bidding company's shareholders has not been agreed upon in research, but according to Goergen and Renneboog (2003), ranges between -0.5% and 0.7% for European companies. Interestingly, the value created can be broken down into a sum of company-specific, internal factors such as size of the acquiror (Moeller et al. 2004), and deal-specific variables like the method of payment (Travlos 1987).

Corporate governance also has an impact: Glambosky et al. (2020) report that dividend payout policy in U.S. listed companies positively impacted value creation for acquirors in mergers and acquisitions announcements, at a statistically significant level. Much of the same characteristics of listed companies' dividend payout policies apply in Europe as in the U.S. (Eije and Megginson 2008), but do the results extend to the mergers and acquisitions market as well?

The results in mergers and acquisitions can be explained through managerial signaling. For some executives, takeovers are a way of egocentric empire building (Jensen 1986; Hope and Thomas 2008), whilst for others, deals are a way of implementing expansionary strategic initiatives. However, from the perspective of participating companies' shareholders, bids are a signal of management confidence in an opportunity for value-creation. In a similar way, dividends are a signal of the company's prospects to shareholders; changes in dividends have been linked to future earnings growth (Benartzi et al. 1997). Hence, dividends carry information from management to shareholders.

The primary objective of this thesis is to test the relationship between dividend payout policy and announcement returns for acquirors in European public, listed mergers and acquisitions. Particularly, whether dividend payout policy, as an informative mechanism for shareholders, has a positive impact on the value created in a transaction. The thesis aims to expand the study of Glambosky et al. (2020) into the European market, whilst contributing to existing results by examining the effect of similarity between the dividend policies of the acquiror and target companies.

The thesis is structured linearly from theoretical motivation to conclusion. In the second section, I begin by reviewing the relevant literature related to dividend payout policy and mergers and acquisitions announcement events. Subsequently, based on the determinants from the literature, I build the hypotheses of this thesis. The third section outlines the criteria used for data construction and highlights the key observations in the sample. Section four focuses on the methodology and the chosen variables. In section 5, I present the empirical results and the determinants of acquiror cumulative abnormal returns. Section six discusses the results and their implications. Finally, in section seven I conclude the thesis.

2. Theoretical Background and Hypotheses

In the past two decades, share repurchases have overtaken dividends as the main payout method for companies in Europe (Deangelo et al. 2004; Farre-Mensa et al. 2014). Contemporaneously, the aggregate real dividends paid out have grown because of the firms still paying dividends increasing their payout significantly in the corresponding time-period (Eije and Megginson 2008). Moreover, the trend in dividend policy remained similar up until 2011, when approximately 50% of companies in EU-15 countries paid a dividend (Kuo et al. 2013). In the Nordics, 72% of listed firms had a defined dividend policy in place in 2014 (Brunzell et al. 2014). Similarly, Amenta (2013) reports that at the end of Q3 in 2013 84% of the companies in the S&P500 index had a dividend paying policy, confirming that for large-capitalization, listed companies', dividend policy is nevertheless still a current topic.

2.1 The Implications of Dividend Payout Policy

“The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just do not fit together” (Black 1976, p. 5).

Ever since Modigliani and Miller's (1958, 1961) seminal work on the irrelevance of dividends, the payout policy of companies has been much like a puzzle; researchers have not been able to form a consensus on the importance of dividends. However, the significance of dividend policy lies in its implications: dividends have been used as a determinant of a multitude of different mechanisms from company valuation (Modigliani and Miller 1961) to management decision-making (Baker and Wurgler 2004) and signaling (Esqueda 2016). Alternatively, Brunzell et al. (2014) explain that dividend payout typically serves as a function of company profitability, growth expectations, stability of earnings, free cash flows and the governing structure of the

company. As a dividend posits so much about a company's fundamentals and its management, it is natural that it does not have a unitary effect on all the listed mechanisms, but instead, can be shown to impact many facets in differing magnitudes.

The information content of dividends has not been uniformly agreed upon but has strong statistical backing for an existing relationship in previous studies. Watts (1973), Miller and Rock (1985), Bar-Yosef and Huffman (1986), all present a statistically significant relation between dividends and future earnings. In more recent studies, the effect has been scrutinized, but remains to be disproven (DeAngelo, DeAngelo, and Skinner 1996; Benartzi, Michaely, and Thaler 1997). Multiple relevant theories have been formulated to capture the true effect of the informational content of dividends.

The agency theory of dividends provides evidence of how dividend policy is a by-product of the asymmetrical relationship between shareholders and management.¹ The 'outcome' model, derived from the agency theory by La Porta et al. (1999), explains that dividends offer protection from misinvestment of corporate funds, as "dividends are an outcome of effective legal protection of shareholders" (La Porta et al. 1999). Although, the key point is that failure to pay dividends leads to the 'diversion or waste' of cash, which does not benefit outside shareholders.

Signaling theory explains dividend policy as a form of communication between shareholders and managers, who are privy to sensitive, private information. Management incentive is to relay the information to shareholders when they believe that it will positively affect the stock valuation (Baker 2014). The empirical results on signaling theory are mixed. Allen and Michaely (2003) present that payout policy does not reflect management incentive to signal true intrinsic value to the market, while Deangelo et al. (2008) argue that dividends are a result of managers wanting to avoid signaling a waste of resources inside the company, especially free cash flow.²

2.2 Dividend Payout Policy in Mergers and Acquisitions

Prior literature on the wealth effect in mergers and acquisitions consists of a large body of research. However, there has been a relatively small focus on the effect of the dividend payout policy on mergers and acquisitions transactions.

¹Easterbrook, (1984), Jensen (1986), Fluck (1998a, 1998b), Myers (1998), Gomes (1998), & Zwiebel (1996).

²Based on the research of Jensen (1986) & Myers and Majluf (1984).

Most notably, Glambosky et al. (2020) find that a dividend paying acquiror's returns are on average higher than a non-dividend paying acquiror's around the announcement date, and that the acquiror's dividend policy has a significant and positive effect on the value created in the deal. In addition, they present that a higher dividend yield for the acquiror signifies higher returns, until a certain point.

Turki and Dereeper (2012) show the effect of dividend payout policy on the method of payment in transactions. They conclude that the acquiror's dividend payout policy likely influences the selection of payment method for acquisitions as dividend yield and dividend speed of adjustment have a positive effect on the choice of stock as a payment method in acquisitions of public listed companies, under asymmetric information. Moreover, Turki and Dereeper (2012) find that dividend paying acquirors experience a less negative reaction in stock-financed takeovers, contrasted with the prior findings on the effects of payment method for overall acquirors (Travlos 1987; Franks et al. 1991; Andrade et al. 2001 & Moeller et al. 2004).

Continuing their earlier analysis on the effect of payment methods in transactions, Turki and Dereeper (2013) show that a similar dividend policy in stock-based acquisitions decreases resistance from target shareholders and consequently increases the chances of deal completion between the two parties. Their findings are complemented by Jeon et al. (2010), who present that a similarity in dividend policies increases the likelihood of a stock payment. However, the wealth-effect of dividend policy similarity is still in question, as Glambosky et al. (2020) failed to find a significant effect on announcement returns.

2.3 Hypotheses

In the context of mergers and acquisitions announcement returns, dividend payout policy reflects information on the acquiror and target that influences how the market values the transaction. As shown by the literature, dividend payout policy is also a measure of certain protective and value-preserving qualities in a company and its management (La Porta et al. 1999; Deangelo et al. 2008). In addition, dividend policy can be considered a disciplinary mechanism, stopping management from excessive spending or general misuse of available resources. Thus, management in companies with a dividend paying policy is more prone to participate in value-creating mergers and acquisitions than their counterparts without a dividend paying policy. Based on these findings, I present my first hypothesis below:

Hypothesis 1 (H1): *The return on announcement for European acquirors with a dividend paying policy is higher than for those without a dividend paying policy.*

Similarity in dividend policy allows for a smoother transition from two entities to one. Target shareholders are appeased as their preference for a dividend is satisfied. According to the dividend clientele theory, the investors of a dividend paying company can be considered a synonymous group, a ‘clientele’, that determines the share price of a company based on their shared preference (Allen et al. 2000). The theory states that a change in dividend policy causes a shift in clientele because the company no longer offers a dividend that meets the preferences of the former clientele. The change is then reflected in the share price. Consequently, a similarity in dividend policies merely combines the two groups of shareholders with a shared preference and does not affect the share price. Thus, keeping consistent with hypothesis 1, the transaction can be deemed value-creating, which lays the foundation for the second hypothesis stated below:

Hypothesis 2 (H2): *Dividend paying acquirors that acquire/merge with dividend paying targets experience higher cumulative abnormal returns on announcement.*

3. Data

3.1 M&A Sample Construction

The primary data sample consists of all successful public-to-public acquisitions in the EU-15 countries (OECD), Norway and Switzerland between January 1, 2005, and December 31, 2020. The sample is gathered from the SDC’s Non-U.S. Mergers and Acquisitions Database. The minimum deal value has been set at \$1 million to incorporate a heterogenous sample. Further criteria requires that 1) acquirors own less than 25% of target stock before the acquisition announcement, 2) the acquirer owns more than 50% of target stock after deal completion, and 3) both the target and acquiror are public companies listed on a stock exchange in one of the respective countries in the sample universe. Additionally, the data is specified to exclude recapitalizations, privatizations and leveraged buyouts.

The initial sample consists of 489 transactions, which are spread into acquirors and targets with a focus on dividend payout policy. Dividend payers consist of all acquirors and targets that have paid a dividend in the 12 months preceding the announcement of the deal, which is consistent with the methodology of Glambsky et al. (2020). The sample is further reduced to a pool of 400 deals after accounting for outliers and missing data, when constructing the controlled variables.

Table 1

M&A Sample

Panel A

M&A Sample - Distribution of Acquirors

Year	Whole Sample		Acquirors with a Dividend Policy		Acquirors without a Dividend Policy	
	N	%	N	%	N	%
2005	55	11.25	42	8.59	13	2.66
2006	52	10.63	37	7.57	15	3.07
2007	51	10.43	45	9.20	6	1.23
2008	34	6.95	24	4.91	10	2.04
2009	29	5.93	19	3.89	10	2.04
2010	28	5.73	22	4.50	6	1.23
2011	33	6.75	23	4.70	10	2.04
2012	23	4.70	12	2.45	11	2.25
2013	22	4.50	13	2.66	9	1.84
2014	30	6.13	22	4.50	8	1.64
2015	26	5.32	14	2.86	12	2.45
2016	19	3.89	12	2.45	7	1.43
2017	22	4.50	17	3.48	5	1.02
2018	21	4.29	15	3.07	6	1.23
2019	20	4.09	16	3.27	4	0.82
2020	24	4.91	15	3.07	9	1.84
Total	489	100	348	71.17	141	28.83

Panel B

M&A Sample - Distribution of Targets

Year	Whole Sample		Targets with a Dividend Policy		Targets without a Dividend Policy	
	N	%	N	%	N	%
2005	55	11.25	38	7.77	17	3.48
2006	52	10.63	25	5.11	27	5.52
2007	51	10.43	37	7.57	14	2.86
2008	34	6.95	18	3.68	16	3.27
2009	29	5.93	12	2.45	17	3.48
2010	28	5.73	12	2.45	16	3.27
2011	33	6.75	19	3.89	14	2.86
2012	23	4.70	7	1.43	16	3.27
2013	22	4.50	9	1.84	13	2.66
2014	30	6.13	15	3.07	15	3.07
2015	26	5.32	13	2.66	13	2.66
2016	19	3.89	11	2.25	8	1.64
2017	22	4.50	17	3.48	5	1.02
2018	21	4.29	16	3.27	5	1.02
2019	20	4.09	14	2.86	6	1.23
2020	24	4.91	13	2.66	11	2.25
Total	489	100	276	56.44	213	43.56

Table 1 exhibits the distribution of year-by-year deal characteristics for acquirors and targets. Dividend paying acquirors and targets are determined by their dividend activity preceding the announcement of a deal. Those who have paid any kind of dividend in the last twelve months (LTM) are characterized as dividend payers.

3.2 *Return Data and the Market Index*

The daily total return data for acquirors is collected from Refinitiv Eikon Datastream. The returns data is adjusted for all dividends, repurchases, equity issuances, stock splits and interest. All returns are calculated logarithmically to preserve the symmetry and time-variance of returns. The FTSE-100 Total Returns Index constitutes the market index, as it is the most accurate representation of the sample universe's market portfolio. Moreover, it is the best collective estimation of risk and investor attitude in the sample area.

4. Methodology

4.1 *Measuring Dividend Similarity*

As an endogenous variable, similarity of dividend payout policies is hard to measure. However, dividend yield is an indicator that signals a lot about a company's dividend policy. It measures the absolute amount, and how much the company pays out relative to its valuation. Moreover, it can be used as a proxy of company earnings. Thus, we can estimate similarity of dividend policies by comparing the dividend yields of the merging entities.

To create a reliable indicator of similarity between the acquiror and the target, we want to first subtract the dividend yield of the target from the acquiror's. As we are looking at a score relative to the acquiror, the sign is irrelevant and thus we can calculate the absolute value:

$$S_i = |DY_{ACQ} - DY_{TGT}| \quad (1)$$

After subtracting, we want to standardize the score on a linear scale between [0,1] by dividing it with the maximum value of the range:

$$S_i^* = \frac{|DY_{ACQ} - DY_{TGT}|}{\max(S_i)} \quad (2)$$

For acquirors and targets whose dividend yields are equal, the score is 0, while 1 represents the pair that is the most dissimilar. This is consistent with dividend clientele theory, as dissimilarity causes the clientele to change, and vice versa.

4.2 Measuring Acquirors' Cumulative Abnormal Returns

4.2.1 Market Model

In line with MacKinlay's (1997) framework for measuring and analyzing abnormal returns in event studies, the methodology requires estimating model parameters α_i & β_i , for each acquiror i . The parameters are estimated using the estimation window [-250, -45] with respect to the announcement date. The selection of the estimation window is based on studies investigating the sensitivity of results, which have determined that results do not suffer from varying estimation windows if they exceed 100 days (Armitage 1995; Park 2004). The window is also in line with the recommendations of Moorman and Lehman (2004) and Fornell et al. (2006) who used similar estimation windows to examine announcement effects.

The parameters will be estimated by regressing the acquiror's daily returns against the FTSE-100 Total Returns Index by using the following regression model (market model):

$$E[r_{i,t}] = \alpha_i + \beta_i * R_{m,t} + \epsilon_{i,t} \quad (3)$$

where (in period t) $r_{i,t}$ is the return on acquiror i , $R_{m,t}$ is the market return, α_i is a constant (that is assumed zero³), and β_i is the estimated beta of the acquiror i .

The normal market returns (expected returns) are then calculated for the acquirors using the estimated parameters. With the normal market returns the abnormal returns (AR) can be calculated for the acquirors by subtracting the estimated returns from the realized returns:

$$AR_{i,t} = r_{i,t} - (\alpha_i + \beta_i * R_{m,t}) \quad (4)$$

Lastly, the cumulative abnormal returns (CAR) are calculated for the wanted event window(s):

$$CAR_{i,t} = \sum_{t_1}^{t_2} AR_{i,t} \quad (5)$$

4.2.2 Market Model with Scholes-Williams Beta Estimation

To account for thin trading bias and the price adjustment delays of the acquirors' underlying stock returns, the expected returns for acquirors are also estimated with adjusted Scholes-Williams parameters (Scholes and Williams 1977).

³The alpha is assumed to be zero as the null hypothesis of abnormal returns states that returns do not deviate from expectance ($H_0: E(AR) = 0$).

The adjustments reduce the bias from non-synchronous trading by approximately 14.7% (McInish and Wood, 1986), and thus the expected returns reflect the event reactions more accurately between acquirors, as the effect of an acquiror's trading volatility is reduced.

The beta and intercept in the market model are adjusted to incorporate differing trading volatilities in the acquirors' securities:

$$\beta_i^* = \frac{\beta_i^{-1} + \beta_i + \beta_i^{+1}}{1 + 2 * \rho_i} \quad (6)$$

where β_i^{-1} is the lagged beta, β_i is the contemporaneous beta, β_i^{+1} is the leading beta for the acquiror i , and ρ_i is the estimated first order autocorrelation of market returns. All betas are estimated relative to the estimation window of $[-250, -45]$.

$$\alpha_i^* = \overline{R_{i,t}} - \beta_i * \overline{R_{m,t}} \quad (7)$$

where $\overline{R_{i,t}}$ is the mean return of acquiror i over the estimation window, β_i is the contemporaneous beta, and $\overline{R_{m,t}}$ is the mean return of market returns over the estimation window.

4.2.3 Cumulative Average Abnormal Returns for Acquirors

As shown in Table 2, dividend paying acquirors tend to perform better in mergers and acquisitions, on average, than their counterparts. The results for both models are consistent with the first hypothesis (H1), and with Glambosky et al. (2020), but the differences of means between the subsamples are statistically insignificant, and hence do not allow for the rejection of the null hypothesis that the returns on announcement significantly deviate from zero: $H_0: E(CAAR) = 0$.

However, as seen in table 1 the disparity between subsamples is large which skews the test-statistics negatively, and thus allows for the careful consideration of the observed effect (I will come back to the statistical limitations of the thesis in the conclusion). Moreover, the results for the whole sample of acquirors are similar to those in prior literature for European mergers and acquisitions (Goergen and Renneboog 2003; Campa and Hernando 2004).

Table 2
Acquiror Cumulative Average Abnormal Returns (CAAR)

Model	Window	All	Dividend Payers	Non-Dividend Payers	Difference	t-statistic	p-value
MM	[-1, +1]	-0.21 %	0.02 %	-0.78 %	0.80 %	0.96	< 0.340
MM	[-2, +1]	-0.25 %	0.09 %	-1.10 %	1.18 %	1.37	< 0.172
MMSW	[-1, +1]	-0.22 %	0.04 %	-0.86 %	0.89 %	1.05	< 0.294
MMSW	[-2, +1]	-0.31 %	0.09 %	-1.31 %	1.40 %	1.58	< 0.116
Observations		489	348	141			

Table 2 reports the Cumulative Average Abnormal Returns (CAAR) of all acquirors within the respective event windows. CAAR is calculated as the cross-sectional mean of acquirors' Cumulative Abnormal Returns (CAR). CAR is measured as the difference in an acquiror's expected return and its realized market return. Expected returns have been estimated from the market model with unadjusted betas and Scholes-Williams adjusted betas, denoted by MM and MMSW, respectively. The benchmark index for estimating the parameters was the FTSE-100 Total Returns Index. Statistical significance is indicated with ***, **, and *, at levels of 1%, 5%, and 10%, respectively.

4.3 Observed Variables

The existence of acquiror and target dividend policies is observed with a dummy variable that has the value of 1 if the entity has paid any kind of dividend policy in the last twelve months, and 0 if it has not. The variables are denoted with ACQDIV and TGTDIV, correspondingly.

Dividend yield is used to measure the quality of the acquiror and the target dividend policies and is calculated as the mean dividend yield over the past twelve months. The variables are denoted with ACQDIVYIELD and TGTDIVYIELD, correspondingly.

Similarity of dividend policies is measured with the derived similarity score presented in section 4.1. The similarity score measures the quality of the similarity of dividend policies.

4.4 Control Variables

The control variables are all chosen based on effects that have been priorly studied in connection with mergers and acquisitions announcement events. The variables have also been chosen to estimate a model that optimally explains the CAR for acquirors in context with dividend payout policy. This section looks at deal characteristics first, after which acquiror characteristics are considered. Variable statistics are presented in Table 3.

4.4.1 Deal Value

Moeller et al. (2005) report lower cumulative abnormal returns for acquirers in transactions with large deal value. They argue that in a higher valued deal the target is more likely to be overvalued. Moeller et al. (2004) also present that the distribution is skewed as a small incidence of large losses accounts for a higher effect. Moreover, they note that 75.9% of deals with large losses were acquisitions of public firms. Thus, the effect of deal value may be over-represented in the sample. Deal value is controlled for with a log-linear (natural logarithm) variable.

4.4.2 Related Industry

Prior literature strongly implies that acquirors underperform less in vertical mergers and acquisitions. According to Agrawal et al. (1992) the superior performance of transactions in related industries is attributable to the negative effects from diversifying incentives in non-vertical (conglomerate) transactions. Companies in conglomerate deals reportedly suffer from an increase in agency problems between managers and shareholders (Schleifer and Vishny 1989). Moreover, diversifying leads to adverse effects such as rent-seeking behavior (Scharfstein and Stein 2000) and bureaucratic rigidity (Rajan et al. 2000). In the sample of acquirors, 31.29% of deals are between acquirors and targets in a related industry. Relatedness is controlled with a dummy variable that has the value 1 when the acquiror 4-digit SIC codes are identical and 0 when they are not.

4.4.3 Payment Method

A large body of literature on mergers and acquisitions examines the effect of the acquiror's payment method. Most studies document that a cash payment yields greater returns for the acquiror (Travlos 1987; Franks et al. 1991; Andrade et al. 2001; Moeller et al. 2004). On the contrary, Goergen and Renneboog (2004) present, that for European companies, financing transactions with equity may have a positive and significant effect on the acquiror's returns, and Turki and Dereeper (2012) arrive at a similar conclusion for dividend paying acquirors, for whom, stock-financing has a positive and significant effect on announcement returns. To account for the impact of the payment method, a dummy variable is introduced, that is 1 for all payments that were financed with cash only, and 0 for all equity payments.

4.4.4 Cross-Border

Evidence on the value-creation properties of cross-border acquisitions versus domestic acquisitions is inconclusive. Several studies show that cross-border transactions destroy value for acquirors because of a higher premium paid for international targets (e.g. Eckbo and Thorburn 2000; Goergen and Renneboog 2004), whereas, the arguments for acquiror value-creation are based on characteristics of the target country such as tax policy, labor markets and strength of currency (Servaes and Zenner 2004; Bris and Cabolis 2008). Cross-border deals are controlled with a dummy variable that is 1 for all foreign transactions and 0 for all domestic transactions.

4.4.5 Acquiror Market-to-Book Ratio

Acquiror market-to-book ratio serves as the control variable for the acquiror's market valuation. The variable is formed by dividing the market value of the acquiror's equity (capitalization) with its book value at the end of the estimation window; -45 days relative to the announcement of intent to acquire. Earlier studies note that acquirors that have a high market-to-book ratio, experience lower returns on announcement (Rau and Vermaelen 1998). Rau and Vermaelen (1998) extend on Fama and French (1992) and suggest that a 'value'⁴ acquiror performs better than a 'growth'⁵ acquirer. The median market-to-book ratio of an acquiror in the sample is 1.78.

4.4.6 Acquiror Size Relative to Target

The results on the effect of relative size between acquiror and target are contrasted in prior studies. Eckbo and Thorburn (2000) argue that the size of the acquiror, relative to the target, lowers abnormal returns on announcement, and Moeller et al. (2004) present evidence on a negative size effect for large companies in the U.S. On the other side of the fence, Al-Sharkas (2003) provides evidence on a negative relation between relative size and the acquiror's abnormal returns on announcement. As the population of acquirors is homogeneous (large, listed companies), the effect of the variable is largely dependent on the targets. The variable is calculated for each transaction by dividing the target market capitalization with the acquirors market capitalization.

⁴Value firms are defined by Fama and French (1992) as low book-to-market companies.

⁵Growth firms are defined by Fama and French (1992) as high book-to-market companies.

4.4.7 Acquiror Return on Assets

Acquiror return on assets (ROA) is used to control acquiror profitability and operating efficiency. Prior literature exhibits a significant increase in long-term performance for acquirors with good operational performance and profitability ratios (Gugler et al. 2003). Although short term effects have been found inconclusive, as a consistent measure of operating performance, ROA is a measure of the acquiror’s capability to integrate the target’s operations. Acquiror ROA is calculated by dividing net income with total assets.

4.4.8 Acquiror Stock Run-up

Schwert (1996) presents that the pre-merger runup of the targets’ stock returns is an added cost to the acquirors abnormal returns; the runup accounts for approximately half of the premium paid on the target’s stock. Contrarily, Schwert (1996) also shows that the preceding stock runup does not have an effect, but instead, it is the closing price of the target company’s stock one day before the announcement of the transaction that predetermines the size of the premium. As the calculation of abnormal returns captures the effect of pre-merger/-acquisition price volatility, the target stock run-up has been chosen to be excluded.

However, Rosen (2006) explains that the market collectively experiences *merger momentum*. Acquiror stocks react positively to merger announcements when the market is ‘hot’ or when other prior mergers have been received well. Therefore, the momentum of the acquiror’s stock has been accounted for by estimating the CAR for each acquiror over the window of [-44, -5] days relative to the announcement.

Table 3
Acquiror & Deal Characteristics

Panel A						
Acquiror Characteristics & Deal Value						
	Whole Sample		Acquirors with a Dividend Policy		Acquirors without a Dividend Policy	
	Mean	Median	Mean	Median	Mean	Median
Market-to-Book	3.02	1.78	3.15	1.77	2.61	1.90
Return on Assets (%)	3.08	3.30	4.87	3.70	-2.45	0.30
Stock Run Up (%)	-0.94	-0.81	-0.91	-0.93	-1.06	-0.30
Relative Size (%)	26.85	19.20	25.89	17.80	30.94	26.00
Deal Value (\$M)	2078	194	2596	317	459	41
ln(Deal Value) (\$M)	5.35	5.27	5.79	5.76	3.99	3.71

Panel B

Deal Characteristics

	Whole Sample		Acquirors with a Dividend Policy		Acquirors without a Dividend Policy	
	N	%	N	%	N	%
Cash-only Deals	149	30.47	131	26.79	18	3.68
Stock-only Deals	125	25.56	74	15.13	51	10.43
Related Deals	153	31.29	107	21.88	46	9.41
Cross-border Deals	117	23.93	98	20.04	19	3.89
Observations	400	400	400	400	400	400

Table 3 presents descriptive statistics on acquiror and deal characteristics. Acquiror characteristics and deal value are presented in Panel A, and deal characteristics are presented in Panel B. Acquirors are separated into dividend paying and non-dividend paying subgroups based on their history of dividend payments in the last twelve months.

4.5 Models for OLS Cross-Sectional Regression

The OLS regression models in use test the three hypotheses that were set in the beginning of the thesis. All models are heteroskedasticity-robust, and account for time-series variation with year dummies. Control variables are featured in all models to strengthen their explanatory power, and to avoid falsely significant results. The first four models (1-4) follow Glamboosky et al. (2020), while model five (5) tests the effect of similarity in dividend policies on acquirors' cumulative abnormal returns.

#	Model
1	$CAR_i = \alpha_i + \beta_1 ACQDIV_i + \sum \beta_j CONTROL_i + \varepsilon_i$
2	$CAR_i = \alpha_i + \beta_2 TGTDIV_i + \sum \beta_j CONTROL_i + \varepsilon_i$
3	$CAR_i = \alpha_i + \beta_3 ACQDIVYIELD_i + \beta_4 TGTDIVYIELD_i + \beta_5 (ACQDIVYIELD_i)^2 + \beta_6 (TGTDIVYIELD_i)^2 + \sum \beta_j CONTROL_i + \varepsilon_i$
4	$CAR_i = \alpha_i + \beta_1 ACQDIV_i + \beta_2 TGTDIV_i + \beta_7 (ACQDIV_i * TGTDIV_i) + \sum \beta_j CONTROL_i + \varepsilon_i$
5	$CAR_i = \alpha_i + \beta_1 ACQDIV_i + \beta_8 SIMILARITY + \beta_9 (ACQDIV_i * SIMILARITY_i) + \sum \beta_j CONTROL_i + \varepsilon_i$

The first model explores the relation between dividend paying acquirors and acquirors' cumulative abnormal returns and tests the first hypothesis. The second model tests the

standalone effect of a target's dividend policy on acquiror returns. Like the first model, the third model tests the relationship of acquirors' cumulative abnormal returns with dividend paying acquirers. However, by using dividend yield, the model adds a new dimension by making the relationship granular. In the fourth model, acquiror dividend policy is interacted on target dividend policy to see how concurrent dividend policies affect acquiror returns, and to test the second hypothesis. The fifth and final model interacts the similarity score for dividend policies, derived in section 4.1, on acquiror dividend policy to further examine the effect of similarity on acquiror returns.

5. Determinants of Cumulative Abnormal Returns for Acquirors

5.1 Effect of Dividend Payout Policy on Acquirors' Cumulative Abnormal Returns

The results in Table 4, exhibit a positive effect on cumulative abnormal returns for acquirors in EU-15 countries, Norway, and Switzerland. In the first, the coefficient for dividend paying acquirors is 0.019 and weakly statistically significant ($p = 0.098$). The standalone effect of acquirors' dividend policy on announcement returns can hence be considered significantly different from zero for the acquirors in the sample. In the fourth model, the coefficient is larger at 0.036 and highly statistically significant ($p = 0.007$). Moreover, the findings are consistent with the study of Glamboosky et al. (2020), and thus under critical consideration support the acceptance of the first hypothesis.

Acquiror dividend yield is also indicative of a positive relation between acquiror dividend policy and returns on announcement. The coefficient for ACQDIVYIELD is 0.007 and weakly statistically significant ($p = 0.079$), implying higher returns for acquirers with a higher dividend yield. Keeping consistent with Glamboosky et al. (2020), the coefficient for ACQDIVYIELD² is negative and significant ($p = 0.062$), which would imply a curvilinear relationship with acquiror returns and dividend yields. Glamboosky et al. (2020) argued that the relationship can be explained by the lifecycle theory, however, it is more likely that at some point a high dividend yield loses its importance for shareholders as it signals a lack of investments and development from management.

On its own, the target's dividend policy fails to explain returns for acquirors. The coefficient of the dummy variable for target dividend policy in model 1 is positive at 0.008 ($p = 0.264$) and 0.041 ($p = 0.098$) in model four. Target dividend policy is likely irrelevant to acquiror shareholders, when there is not an existing dividend payout policy in place, and thus the effect is minute as a standalone variable. However, there is evidence that it is not totally irrelevant

for acquiring shareholders as the dummy variable for target dividend yield has a positive and weakly significant effect on returns. Contrary to the acquirors, the coefficient for TGTDIVYIELD² is -0.0008, meaning that the effect on returns is relatively non-existent.

5.2 Similarity in Dividend Payout Policy

As seen in Table 4, there is a statistically significant (at 10%-level) relationship between cumulative abnormal returns to acquirors and matching dividend policies, although, the relation is contrary to what was expected. Model three explains the interaction between acquiror and target dividend policies in general: the coefficient of interaction between ACQDIV and TGTDIV is -0.048 ($p = 0.084$). In other words, cumulative abnormal returns for acquirors are smaller when merging with a dividend paying target. The result is consistent with Glambosky et al. (2020) but the magnitude of the effect is much larger.

The interaction coefficient is most likely a resultant of the clientele effect and the endogeneity of dividend policy. Having a dividend policy for the acquiror and target means that both companies have shareholders that appreciate a dividend, as otherwise it would have been ‘forced out’, according to the outcome model (La Porta et al. 1999). Therefore, a rational explanation for the negative effect is that the dividend clientele of the merging companies differs, which causes a reaction in the share price. As the interaction between TGTDIV and ACQDIV only observes the existence of dividend policies, there might be other intrinsic variables that need to be controlled to test the effect of similar dividend policies more consistently.

As the existence of dividend paying policy is not enough to determine the effect of the combined dividend policy on acquiror returns, the results lead to the rejection of the second hypothesis, because it cannot be reliably inferred from the results that matching dividend policies cause positive abnormal returns for the acquiror.

Model 5 examines the merging entities’ dividend yields as a measure of similarity. The explanation in Table 5 shows that the interaction between ACQDIV and SIMILARITY also has a significant and negative effect on acquirors’ returns: the coefficient of the interaction is -0.124 ($p = 0.056$). However, the coefficient explains that returns to acquirors are higher when the dividend yields are similar. Therefore, we can reform the second hypothesis to state that similarity between acquiror and target dividend policies increases returns on announcement for acquirors.

Table 4

Cross-sectional OLS Regression of Acquirors' Cumulative Abnormal Returns (CAR)

Independent variables	Model 1	Model 2	Model 3	Model 4	Model 5
ACQDIV	0.019 (1.657*)			0.036 (2.700***)	0.025 (2.041**)
TGTDIV		0.008 (1.118)		0.041 (1.660*)	
ACQDIV x TGTDIV				-0.048 (-1.735*)	
ACQDIVYIELD			0.007 (1.763*)		
TGTDIVYIELD			0.003 (1.663*)		
ACQDIVYIELD^2			-0.008 (-1.872*)		
TGTDIVYIELD^2			0.000 (-0.950)		
SIMILARITY					0.090 (1.735*)
ACQDIV x SIMILARITY					-0.124 (-1.956*)
<i>ACQMKBK</i>	0.000 (-0.701)	0.000 (-0.672)	0.000 (-0.411)	0.000 (-0.551)	0.000 (-0.724)
<i>ACQROA</i>	0.021 (-0.338)	0.045 (0.747)	0.031 (0.519)	0.005 (0.081)	0.015 (0.253)
<i>ACQRU</i>	0.001 (-0.028)	0.000 (0.006)	-0.001 (-0.014)	-0.003 (-0.085)	0.000 (0.007)
<i>ACQSIZE</i>	0.032 (1.684*)	0.027 (1.422)	0.0293 (1.551)	0.031 (1.689*)	0.031 (1.573)
<i>CASH</i>	0.012 (1.857*)	0.014 (2.160**)	0.013 (1.952*)	0.01 (1.494)	0.012 (1.810*)
<i>CROSS-BORDER</i>	-0.006 (-0.750)	-0.006 (-0.762)	-0.006 (-0.774)	-0.006 (-0.756)	-0.005 (-0.696)
<i>DEALVALUE</i>	-0.006 (-2.918***)	-0.005 (-2.493**)	-0.006 (-3.065***)	-0.006 (-2.912***)	-0.005 (-3.056***)
<i>RELATED</i>	0.005 (-0.644)	0.004 (0.481)	0.004 (0.508)	0.007 (0.917)	0.005 (0.607)
Wald-statistic	9.962	3.253	10.900	14.800	11.700
R-squared	0.037	0.030	0.046	0.053	0.043
Year fixed effects	YES	YES	YES	YES	YES
Observations	400	400	400	400	400

Table 4 presents the coefficients of a cross-sectional OLS regression of acquiror short-term cumulative abnormal returns (CAR). The announcement window is [-2, +1] trading days relative to the announcement of a transaction, and the abnormal returns have been calculated with the market model using Scholes-Williams adjusted parameters. The benchmark index for estimating expected returns is the FTSE-100 Total Returns Index. ACQDIV and TGTDIV are dummy variables used to observe the existence of acquirors' and targets' dividend policies. ACQDIVYIELD and TGTDIVYIELD are variables that measure the quality of acquirors' and targets' dividend yields, and are measured as the mean dividend yield from the prior twelve months relative to the announcement of the transaction. SIMILARITY is observed to measure the quality of acquirors' and targets' dividend policy similarity. ACQMKBK is the market-to-book ratio of acquiror equity, measured 45 trading days prior to announcement. ACQROA is the acquiror's return on assets measured the year prior to announcement. ACQRU is the run-up of acquiror stock during the time window of [-45, -5] trading days relative to announcement. ACQSIZE is the market capitalization of the target relative to the market capitalization of the acquiror. DEALVALUE is the natural logarithm of the final value of the deal reported by SDC. CASH, CROSS-BORDER and RELATED are dummy variables that receive the value of 1 for deals meeting the characteristics of paid with cash, cross-border deal, or related industries, and 0 for deals that do not meet the criteria. Statistical significance is indicated with ***, **, and *, at levels of 1%, 5%, and 10%, respectively. Heteroskedasticity-robust t-statistics are reported under the coefficients, in parentheses.

5.3 Control Variables and Their Implications

Consistent with Moeller, Schlingemann and Stultz (2005), increasing deal value had a negative relation with announcement returns for acquirors. Presented in Table 4, the coefficient is approximately -0.005 and statistically significant at the conventional levels for each model. As the effect is relatively small, the variable has little economic significance in the models.

Cash-only deals, on the other hand, increased returns for acquirors in general from 1.1% to 1.4% (significant at 5%, and 10%-level). The finding is consistent with Travlos (1987), Franks et al. (1991), Andrade et al. (2001) and Moeller et al. (2004), who all report higher returns on announcement in cash-funded deals. However, it fails to support Turki and Dereeper (2012), who reported higher returns for dividend paying acquirors in stock-financed deals, as the coefficient does not imply anything about dividend paying acquirors.

Table 5

Explanations of Interaction Coefficients

Panel A

Model 4

Acquiror Policy	Target Policy	Interaction	Effect
Dividend Policy = 1	Dividend Policy = 1	$\beta_1 + \beta_3 * TGTDIV_i$ $= \beta_1 + \beta_3$	-0.012
Dividend Policy = 1	No Dividend Policy = 0	$\beta_1 + \beta_3 * TGTDIV_i$ $= \beta_1$	0.036

Panel B

Model 5

Acquiror Policy	Similarity	Interaction	Effect
Dividend Policy = 1	Similarity Score = 1	$\beta_8 + \beta_9 * SIMILARITY_i$ $= \beta_8 + \beta_9$	-0.099
Dividend Policy = 1	Similarity Score = 0	$\beta_8 + \beta_9 * SIMILARITY_i$ $= \beta_8$	0.025

Table 5 provides explanations of the interactions in models 4 and 5. Panel A explains the interaction between coefficients ACQDIV and TGTDIV, and Panel B explains the interaction between ACQDIV and SIMILARITY. As SIMILARITY is a continuous variable between [0, 1], the effect column provides the range of values that the interaction produces.

6. Discussion

6.1 The Implications of Similarity in Dividend Policies for Acquirors

The results of the study show a positive impact on short-term abnormal returns from similarity in dividend policy between the merging entities. The results support the existence of a dividend clientele effect (Allen et al. 2000): similarity in dividend yields appeases the target shareholder's preferences and has a less negative effect on acquiror cumulative abnormal returns. However, when dividend yields are very different the impact is largely negative.

Glambosky et al. (2020) investigated the effect of changes in dividend policies prior to acquisition in their study. They found that an increase in dividends has weakly significant and negative reaction in returns, and that implementing a dividend in the twelve months prior has a weakly significant and positive relation with acquiror returns. The findings may suggest that companies have understood the adverse effects that come from differences in payout policies and have tried to accommodate a similar payout policy to the targets. Similarly, the positive effect of keeping dividend policy unchanged can be attributed to dividend paying acquirors who have not had to adjust their policies.

Thus, the implication for acquirors who want to maximize short-term returns is for them to try to match the dividend preferences of target shareholders. As per the clientele effect, a large dissimilarity may lead to an adverse effect in cumulative abnormal returns for the acquiror.

6.2 Cross-Border Mergers and Acquisitions for Dividend Paying Acquirors

The limitations in capturing the true effect of cross-border mergers and acquisitions come from the nature of modern-day transactions. Often, deals between large multinational companies feature integration of operations abroad, even when the deal is classified as a domestic deal. The implication of this for acquirors with a dividend policy comes in the form of taxation. Moreover, prior research shows that taxation is a key principle in acquiror value-creation in cross-border acquisitions (Servaes and Zenner 1994).

In a quasi-integrated market like the EU, the difference between dividend taxation in member countries is large. Thus, theoretically, a part of an acquisition's wealth effect for the acquiror is dependent on the marginal tax increase of its dividend clientele. Moreover, Chang and Rhee (1990) present empirical support on a negative relation between shareholder tax rates and dividend yields, and Ayers et al. (2002) show that a higher dividend yield causes a higher negative response to an increase in the individual tax rate for a company's stock. The transitive

nature of the presented conjectures would imply that a cross-border acquisition should influence the acquiror's returns on announcement when there is a difference in the taxation of the combining entities' dividends.

Capturing the true effect of tax differences in cross-border deals requires being able to accurately estimate the true effect of tax differentiation for institutionalized ownership clientele.⁶ Allen et al. (2000) presented a prediction that dividend policy is implicant on the tax difference between institutions and individual investors, which would support the idea of a relationship between announcement returns and a tax-induced change of dividend policy.

However, the results suggest that cross-border deals do not have a significant effect on acquirors' returns, which would imply that a difference in taxes does not significantly affect the returns either. Although, the results may be limited in explaining the effect of cross-border transactions as a relatively small portion of non-dividend paying acquirors participated in cross-border transactions (3.89%), skewing the effects of the subsamples.

6.3 Limitations of the Study and Suggestions for Future Research

6.3.1 Measuring the Effect of Dividend Policy

As a product of multiple different internal and external mechanisms, the full effect of dividend payout policy is hard to quantify, and often leads to simplifications of complex phenomena. With dividends, simplifying one aspect usually leads to sacrificing another one. Choosing to use dividend yields as the building block for measuring similarity set the criteria strictly to financial impact as similarity was now measured in size of returns.

Similarly, choosing to use the last twelve months as the criteria for establishing acquirors and targets as dividend payers shields announcement returns from the effect of changes in dividend policy or the predictions of future dividends. In other words, the constraint of dividend payout policy is its ability to explain only a relatively small part of its total effect on value-creation for acquirors. As the results in Table 4 have presented a relation between similarity in dividend policies and acquirors' cumulative abnormal returns, future research should aim to standardize dividend policy even further to study the effect more accurately.

⁶See the Appendix section A for a proposed model at estimating the tax incidence for individual investors.

6.3.2 *Data and Model Limitations*

Largely unequal samples lead to problems with statistical power. As the relation between dividend paying and non-dividend paying acquirors is quite skewed in public markets, the effect of payout policy is skewed. Also, to further prove the effects of the dividend payout policy, data is needed for a more extended period. Missing data entries reduce sample size, especially for accounting data, making the data collection process exhaustive.

Measuring expected returns for acquirors is also always subject to error and deviation from actual returns. Especially when looking at short-term cumulative returns, the probability for randomness in variation increases. Moreover, short-term abnormal returns measure the reaction the market has to an announcement and leave much to say about the permanent value-creating properties of the transaction. However, the long-term effects are left for future consideration.⁷

7. Concluding Remarks

The objective of this thesis was to motivate and test the relationship between dividend payout policy and acquirors' returns on announcement of mergers and acquisitions. Determinants were separated into acquiror factors, target factors and deal factors with a focus on the acquiror and deal characteristics. The initial sample consisted of 489 transactions (between 01/2005 and 12/2020) in the EU-15 countries, Norway, and Switzerland, and was reduced to 400 after accounting for outliers and missing data entries. The sample universe was selected with the purpose of extending the study of Glamboosky et al. (2020) into a less homogeneous market.

The results of this thesis were obtained through conventional event study formula: acquiror returns were estimated with the market model, betas were adjusted to account for non-synchronicity, cumulative abnormal returns were calculated, positive effect for dividend-paying acquirors confirmed, and acquiror cumulative abnormal returns regressed on a set of independent variables.

The main finding of this thesis is that dividend payout policy has a positive and weakly significant effect on short-term acquiror returns for European companies. The finding is consistent with Glamboosky et al. (2020). The secondary finding is that similarity in dividend

⁷See the Appendix section B and Table 7 for the models' estimations on long-term CAAR for acquirors.

policies between an acquiror and target has a positive and weakly significant effect on acquirors' short-term cumulative abnormal returns. However, the interpretation of the result is subject to careful consideration as it is based on a self-assessed similarity score.

The thesis contributes to existing financial literature by further examining the determinants of the wealth-effect in the context of payout policy. Moreover, the thesis discusses the incidence of dividend taxation and its effect on announcement returns for dividend paying acquirors. It also proposes a rudimentary formula to evaluate the effect of dividend taxation on announcement returns in mergers and acquisitions.

The practical implication of this thesis is aimed at public, dividend paying acquirors that are considering an acquisition. The two variables that they need to consider in a transaction are 1) the existence of a target's dividend policy and 2) the similarity between dividend policies for the merging entities. If the target has a dividend policy in place, management can consider altering their dividend policy to match that of the targets to preserve to combined dividend clientele.

Appendix

A: Dividend Tax Rate Differences

The methodology assumes that both the targets and acquiror's investor clientele are subject to a change in tax rate in a transaction between two entities. As the entity's clientele is then split between two different countries, it is also subject to two different rates. To fully consider the size difference of dividend clientele between the merging entities, the merged company's tax rate can be calculated as a weighted average of acquiror and target tax rates:

$$\Delta tr = (tr_{ACQ} * \frac{MV_{ACQ}}{MV_{ACQ} + MV_{TGT}} + tr_{TGT} * \frac{MV_{TGT}}{MV_{ACQ} + MV_{TGT}}) - tr_{ACQ} \quad (8)$$

Thus, the effect from the change in tax rate for the company's dividend clientele is the combined tax rate minus initial acquiror rate:

$$\% \Delta tr = \frac{tr_{ACQ+TGT} - tr_{ACQ}}{tr_{ACQ}} \quad (9)$$

B: Table 7: Distribution of Long-term CAARs for Acquirors

Table 7
Acquiror Cumulative Average Abnormal Returns (CAAR)

Model	Window	All	Dividend Payers	Non-Dividend Payers	Difference	t-statistic	p-value
MM	[-5, +5]	-0.21 %	0.02 %	-0.78 %	0.80 %	0.96	0.346
MM	[-10, +10]	-0.68 %	0.05 %	-2.49 %	2.54 %	1.32	0.200
MM	[-20, +20]	-0.25 %	0.09 %	-1.10 %	1.18 %	1.37	0.183
MM	[-40, +40]	-1.95 %	-1.73 %	-2.52 %	0.79 %	0.24	0.811
MMSW	[-5, +5]	-0.48 %	0.25 %	-2.29 %	2.54 %	1.54	0.136
MMSW	[-10, +10]	-0.79 %	0.05 %	-2.86 %	2.91 %	1.43	0.164
MMSW	[-20, +20]	-2.21 %	-1.46 %	-4.06 %	2.60 %	1.13	0.270
MMSW	[-40, +40]	-2.11 %	-1.85 %	-2.75 %	0.89 %	0.27	0.787
Observations		489	348	141			

Table 7 reports the Cumulative Average Abnormal Returns (CAAR) of all acquirors within the respective event windows. CAAR is calculated as the cross-sectional mean of acquirors' Cumulative Abnormal Returns (CAR). CAR is measured as the difference in an acquiror's expected return and its realized market return. Expected returns have been estimated from the market model with unadjusted betas and Scholes-Williams adjusted betas, denoted by MM and MMSW, respectively. The benchmark index for estimating the parameters was the FTSE-100 Total Returns Index. Statistical significance is indicated with ***, **, and *, at levels of 1%, 5%, and 10%, respectively.

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