

CEO Equity Incentives and Payout Policy – Empirical Evidence from Sweden

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Abstract

Firms increasingly rely on equity incentives to align the interests of managers and shareholders. Yet because dividends mechanically reduce the value of unprotected stock options, these incentives may also discourage CEOs from distributing, even when this conflicts with shareholder interests. Understanding how compensation design shapes payout behavior is therefore important for corporate boards and policymakers. Prior studies link CEO common stock exposure to higher payouts and CEO stock option exposure to lower dividends and greater reliance on repurchases, but whether these findings extend to Sweden – a market with distinct ownership structures and limited dividend protection – remains unclear. We address this gap by examining the relationship between CEO equity incentives and payout policy using a sample of 296 firms listed on the Stockholm Stock Exchange from 2020 to 2024.

Using a two-step regression approach, we estimate how the composition and magnitude of CEO equity incentives relate to the incidence and level of dividends, repurchases, and total payouts. We find that a higher relative importance of options is associated with lower dividend incidence and levels, but we observe no clear reduction in total payouts, suggesting a partial substitution toward repurchases. Evidence for magnitude-based measures is inconsistent across robustness checks. While the analysis reveals clear associations, endogeneity concerns persist, and we refrain from making causal claims.

1. Introduction

The principal–agent problem is a central concern in corporate finance and may arise when a firm’s owners (principals) delegate decision-making authority to managers (agents), as is standard in publicly listed firms. The relationship becomes problematic when managerial and shareholder interests are misaligned and information is asymmetric (Jensen and Meckling, 1976). This misalignment gives rise to agency costs, as managers may take actions that advance their own interests rather than those of shareholders, thereby reducing firm value or necessitating costly monitoring. Jensen’s (1986) free cash flow problem represents one of the most consequential forms of the principal–agent problem, whereby managers with excess discretionary cash may undertake low-return projects that expand their influence rather than distributing funds to shareholders.

Distributing excess cash through dividends or share repurchases can mitigate agency costs by limiting the resources available for managerial discretionary spending. While both payout channels can mitigate agency costs, dividends may be particularly effective because they are viewed as a more credible commitment to recurring distributions, which subjects managers to heightened monitoring (Easterbrook, 1984). Share repurchases, permitted in Sweden only since 2000, have grown in prevalence both globally and domestically, yet dividends remain the dominant payout channel among Swedish firms. In our sample, 63% of firms distribute dividends while only 15% conduct repurchases, and dividends account for 92% of total payout volume.

Executive compensation design serves as another governance tool that can mitigate agency costs. By granting executives exposure to equity in the firm, their financial interests become more closely aligned with those of shareholders, as they directly participate in gains and losses associated with firm performance. Two of the most common forms of these equity incentives are grants of common stock and stock options. Equity-based compensation has grown to represent a larger share of European executive pay packages, particularly driven by the increasing prevalence of stock option programs, thereby contributing to the convergence of compensation practices in Europe and the U.S. (De Cesari and Özkan, 2015). In our sample, 41% of CEOs are exposed to firm equity through options, and 97% through common stock.

Although equity incentives are designed to align managers with shareholders, the differing effects of dividends on stock options and common stocks mean they can, in some cases, exacerbate misalignment and increase agency costs. It is well documented that share prices fall by

approximately the amount of the dividend on the ex-dividend day (e.g., Bali and Hite, 1998), which also reduces the value of stock options tied to the underlying share price (Liljeblom and Pasternack, 2006). However, holders of non-dividend-protected stock options are, unlike holders of common stock, not compensated by any cash transfer following the dividend. In contrast, share repurchases distribute value through share-price appreciation, from which both holders of common stock and stock options benefit (Ikenberry et al., 1995). The comparatively adverse effect of dividends on unprotected stock options suggests that executives may prefer to limit the level or alter the composition of distributions, even when doing so is not in the best interests of shareholders. Understanding the interplay between equity incentives and payout policy is therefore of clear relevance to boards and policymakers seeking to limit agency costs.

Empirical evidence from the U.S. suggests that higher executive stock option exposure is associated with lower dividend payments, which are substituted by increased share repurchases, leaving total payouts largely unchanged (Fenn and Liang, 2001; Cook and Zhang, 2022). Evidence from Europe, however, suggests a weaker substitution effect: higher stock option holdings are linked to reduced dividends but do not appear to generate a comparable increase in repurchases (De Cesari and Özkan, 2015; Burns et al., 2015). Notably, Sweden remains largely absent from the literature, and heterogeneity in institutional and governance environments implies that existing findings cannot be assumed to generalize to the Swedish context. This gap motivates our research question: *What is the relationship between CEO equity incentives and payout policy in Sweden?*

We contribute to the literature by providing the first empirical evidence on the relationship between CEO equity incentives and payout policy in Sweden. This contribution is made possible by a granular hand-collected dataset on CEO stock option and common stock holdings among firms listed on the Stockholm Stock Exchange between 2020 and 2024. Furthermore, we construct incentive variables that capture both the magnitude and composition of equity incentives, whereas earlier studies have largely emphasized the former dimension.

Our findings indicate that greater relative importance of stock options in CEO equity compensation is consistently associated with lower dividend incidence and dividend levels. Although one specification suggests that the relative importance of options also is associated with lower overall payout levels and a heightened propensity to repurchase, this pattern is not consistent across models. Consequently, we do not find evidence that overall payouts decline commensurately: while dividends are lower, they are partially offset by an increase in repurchases.

These findings align with prior literature and lend credibility to the notion that CEOs with greater option exposure may be dividend averse. However, due to endogeneity concerns, particularly omitted variable bias and reverse causality, we remain cautious in drawing any causal conclusions.

Our findings relating to the variables capturing the magnitude of equity incentives indicate negative associations with dividend incidence, dividend levels, and overall payout incidence – patterns consistent with dividends and equity incentives functioning as alternative governance tools for mitigating agency costs. However, because these magnitude-based results do not hold under robustness checks, we interpret them with caution and regard them as inconclusive.

The remainder of the thesis is structured as follows. Section 2 outlines the theoretical framework and develops our hypotheses. Section 3 describes the data sources, variable construction, and sample characteristics. Section 4 details the empirical methodology and presents the main results. Section 5 addresses validity considerations and reports robustness checks. Section 6 concludes.

2. Literature Review

2.1 The Principal-Agent Problem

A fundamental challenge in corporate finance is the alignment of executives' and shareholders' interests, the agency relationship (Jensen and Meckling, 1976). In the agency relationship, the principal delegates decision-making authority to an agent to act on their behalf. Because ownership and control are separated, and information asymmetries prevent full monitoring, agents may pursue actions that maximize their own utility at the expense of the principals. This misalignment of incentives gives rise to agency costs.

There are two approaches to reducing agency costs, monitoring and bonding. Monitoring relates to actions taken by the principal to observe, measure and influence the agent's behavior, such as hiring independent auditors to verify financial statements. Monitoring reduces information asymmetry and discourages opportunistic behavior, but it is costly. The other approach, bonding, represents actions taken voluntarily by the agent to convince the principal that they will act in their interest, even when direct observation is difficult. Thus, equity incentives are relevant in the principal-agent problem, as they serve as bonding mechanisms that may help align managerial and shareholder interests (Jensen and Meckling, 1976).

Easterbrook (1984) argues that dividends mitigate agency costs by forcing firms to access external capital markets, thereby subjecting managers to increased monitoring and reducing opportunities for discretionary spending. Similarly, Jensen's (1986) free cash flow hypothesis contends that managers with excess cash are incentivized to overinvest in low-return projects, as such investments allow them to expand their influence. Returning excess cash to shareholders through dividends or share repurchases limits managerial discretion by reducing the free cash available for inefficient investment. Thus, payout policy can function as a governance mechanism that reduces agency costs.

2.2 Dividends

Dividend payouts are one of the two main ways companies in Sweden distribute excess cash to shareholders. In 2022, 61% of listed Swedish firms paid out dividends, compared to an average of 52% of listed Swedish firms between 2005-2015 (OECD, 2025). Prior literature investigating

Swedish firms between 1970-2013 find that dividends is the major vehicle firms use to distribute excess cash and that share repurchases has not replaced dividends (Baker and de Ridder, 2018).

Characteristically, dividend paying firms tend to be larger, more profitable and have fewer investment opportunities (e.g. Fama and French, 2001; Denis and Osobov, 2008). DeAngelo et al. (2006) investigates the life-cycle theory of dividends and argue that both the likelihood and magnitude of dividend payments increase with retained earnings, consistent with firms retaining earnings in early stages and distributing them once they reach maturity. Jagannathan et al. (2000) find that dividends tend to be paid by firms with higher permanent and stable cash flows, while firms with more volatile and temporary cash flows are more likely to rely on repurchases due to their inherent flexibility. Survey evidence indicates that managers view dividend policy as a long-term commitment with substantial market penalties for reductions, implying that dividends are typically reduced only in extreme circumstances and that non-payers are hesitant to initiate dividend policies due to the asymmetric market reaction to changes in policy (Brav et al., 2005). Prior literature also recognizes that payout policies vary systematically across industries. De Cesari and Özkan (2015) report that industry affiliation can influence both the likelihood and form of payouts, exemplified by technology-intensive and high-growth industries typically exhibiting lower dividend propensities.

In perfect markets, share prices drop by the amount of the dividend on the ex-dividend date, however, common stock holders should be indifferent because they receive a commensurate cash transfer. Furthermore, Modigliani and Miller (1961) argue that, in perfect capital markets (without taxes, transaction costs, or information asymmetries), dividend policy does not affect firm value, because investors can replicate the cash flow from dividends by selling shares. In practice, empirical studies show that although share prices fall on the ex-dividend date, the drop is typically smaller than the dividend itself (e.g., Bali and Hite, 1998), and real-world investors also exhibit dividend policy preferences (Black, 1976).

The value of non-dividend-protected stock options are reduced on the ex-dividend date because of the reduction in the underlying share price, however, stock option holders are – unlike common stock holders – not compensated by any cash transfer. The adverse effect of dividends on non-protected stock options is a central assumption underpinning the notion that option-holders are dividend-averse (Fenn and Liang, 2001).

2.3 Share Repurchases

The second method companies use to distribute cash to shareholders is through share repurchases. This involves the company buying back its own shares – typically through open-market purchases, tender offers, or privately negotiated transactions – thereby reducing the number of shares outstanding. Sweden became the last major country in Europe to legalize share repurchases in March 2000 (Sakinc, 2017). In Sweden, as in most European countries, executive stock options are typically granted under company-specific incentive programs approved at the annual general meeting and are rarely dividend-protected (Liljeblom and Pasternack, 2006; Burns et al., 2015).

In contrast to dividends, share repurchases do not alter the firm's value on the execution date in a perfect market. However, this is not the case in imperfect markets as repurchase announcements are associated with positive share price reactions. Ikenberry et al. (1995) study 1,239 open-market share repurchase programs in the U.S. between 1980–1990 and document an average abnormal return of circa 3.5% post-announcement. Grullon and Michaely (2004) similarly find positive abnormal returns, arguing that investors view repurchase announcements as signals of greater firm maturity, lower risk, and improved profitability, which leads investors to lower their required rate of return.

The signaling effect offers another explanation for the positive price response to repurchases, arguing that managers use buybacks to convey undervaluation. Under the assumption that managers hold better information about the firm's prospects than outside investors, the market interprets costly actions like repurchases as credible signals of undervaluation, since only firms confident in their future performance would incur such costs (Ikenberry et al., 1995).

Evidence from Sweden largely corroborates the international literature on repurchases, indicating that repurchase announcements generate positive abnormal returns in Sweden (Råsbrant, 2013; de Ridder, 2009). However, the literature suggests that repurchasing behavior in Sweden in some ways differ from other markets. Jansson and Larsson-Olaison (2010) argue that firms in Sweden do not use repurchases as a primary channel to distribute excess cash or signal undervaluation. Instead, Swedish firms use repurchases to complement rather than substitute dividends, and firms continue paying stable or even higher dividends alongside repurchases. Furthermore, repurchasing behavior in Sweden is influenced by governance structures, with firms lacking a controlling owner or being cross-listed repurchasing more.

2.4 Executive Equity Incentives and Payout Policy

Prior literature provides evidence on the relationship between executive stock option holdings and payout policy. Fenn and Liang (2001) examine 1,100 U.S. non-financial firms between 1993-1997 and find that a higher number of executive stock options held are associated with lower dividend payouts and greater share repurchases, while total payouts remain largely unchanged. Similarly, Cook and Zhang (2022) analyze a large sample of U.S. firms between 1996-2016 and find that higher CEO option deltas are associated with a relative shift away from dividends toward repurchases, a tendency that is pronounced when managers perceive the firm to be undervalued. Evidence from Europe, however, suggests a different dynamic. De Cesari and Özkan (2015), using data from 1,650 listed firms across six major European countries (not including Sweden), find that higher CEO stock options deltas are associated with both lower dividend incidence and dividend levels, but is not associated with a comparable increase in repurchases. Burns et al. (2015) similarly document that in Europe, a higher number of CEO stock options and restricted stock units, are associated with lower dividend incidence and higher buyback incidence yet note that when dividend-protection clauses are included in option plans, the relationship reverses.

However, while stock options may incentivize managers to reduce dividends, executive common stock ownership may induce the opposite effect by aligning managerial and shareholder interests. When executives are exposed to common stock in the firm, they directly benefit from dividend payments and thus have less incentive to retain excess cash within the firm. This alignment mechanism is consistent with the outcome model, predicting that higher executive stock ownership led to higher payout levels (La Porta et al., 2000). This is supported by Renneboog and Trojanowski (2011) who find a positive relationship between UK executive stock ownership and dividend payments and payout levels. However, Rozeff (1982) argues that payouts and equity exposure can be viewed as alternative governance mechanisms. This would predict a negative relationship between executive stock ownership and payouts. However, other studies do not consistently find a significant relationship between CEO stock ownership and payouts (Fenn and Liang, 2001; De Cezari and Özkan, 2015).

The extent to which executive equity incentives relate to payout behavior depends on firm-specific characteristics. Jensen and Meckling (1976) argue that the optimal level of executive equity ownership is determined by agency costs, which vary with firm size, monitoring intensity, and investment opportunities. Baker and Hall (1998) further support this notion by demonstrating

that the equity portfolios of CEOs tend to increase with firm size but at a diminishing rate. Similarly, Core and Guay (1999) show that firms actively tailor equity incentive plans to their specific characteristics, such as size, growth prospects, and volatility. Moreover, Smith and Watts (1992) demonstrate that firms with plentiful investment opportunities tend to rely more on option-based compensation and pay lower dividends, while mature firms with fewer investment opportunities distribute a higher share of earnings through dividends.

2.5 Taxes and Payout Policy

From a tax perspective, repurchases are in some jurisdictions preferable to shareholders because capital gains are taxed more favorably than dividend income (Elton and Gruber, 1970). In the Swedish context, dividends and capital gains are taxed at the same rate, implying that investors may be largely indifferent between the two payout forms from a tax perspective (PwC, 2025). Gordon and Dietz (2006) note that because capital-gains taxes are only triggered when shares are sold, investors can defer tax payments, which effectively reduces the tax burden over time. Thus, the time-value perspective can motivate share repurchases, even when dividends and repurchases are taxed the same. In an equal tax environment, Black (1976) argues that the higher transaction costs associated with repurchases may lead shareholders to prefer dividends. Black and Scholes (1974) show that dividend policy is not systematically affected by the tax treatment of dividends relative to capital gains, supporting the dividend irrelevance hypothesis, even under differing tax regimes. This is supported by survey evidence from Brav et al. (2005) indicating that differing tax treatments between dividends and repurchases are not viewed by executives as a primary determinant of payout policy.

2.6 Hypothesis Development

Extensive evidence shows that share prices fall by approximately the dividend amount on the ex-dividend day (e.g., Bali and Hite, 1998), which directly diminishes the value of stock options tied to the share price (Liljeblom and Pasternack, 2006). Unlike shareholders, holders of non-dividend-protected options do not receive any compensating cash transfer, making dividends strictly costly from their perspective. Repurchases operate differently: they distribute cash through price appreciation, a mechanism that benefits both shareholders and option holders (Ikenberry et al.,

1995). This unequal treatment of dividends and repurchases creates incentives for executives to influence payout policy by lowering dividend levels or favoring repurchases, even when such adjustments do not align with shareholder interests. Consistent with this notion, US studies document that higher executive stock option exposure is negatively related to dividends and positively related to repurchases (Fenn and Liang, 2001; Cook and Zhang, 2022), reflecting a substitution away from dividends toward repurchases. Evidence from Europe suggests a less pronounced substitution effect, whereby higher stock option exposure is associated with lower dividend incidence and levels but not with a comparable increase in repurchases (De Cesari and Özkan, 2015; Burns et al., 2015). In both settings, higher stock option exposure is associated with lower dividend incidence and levels and repurchases correspondingly account for a larger share of total distributions. Hence, we formulate the following hypotheses:

H1: The relative importance of stock options in CEO equity compensation is negatively related to the likelihood of dividend distributions

H2: The relative importance of stock options in CEO equity compensation is negatively related to the level of dividend distributions

H3: The relative importance of stock options in CEO equity compensation is positively related to the share of total payouts distributed through repurchases

Our empirical design employs two specifications of incentive variables – a sensitivity-based specification and a value-based specification – and the exact variable used to capture the relative importance of stock options depends on which specification is applied. Specifically, in the sensitivity-based specification we use CEO Option Delta Percent of Portfolio Sensitivity and in the value-based specification we use CEO Option Value Percent of Portfolio Value.

Because prior research has produced inconclusive evidence on the relationship between measures of equity incentive magnitude and payout policy (Fenn and Liang, 2001; De Cesari and Özkan, 2015), we are unable to formulate ex-ante hypotheses for the variables capturing the magnitude of CEO equity incentives. However, the relationship between the magnitude of equity incentives and payout policy remains firmly within the scope of our study. Only by studying both the magnitude and composition of equity incentives are we able to comprehensively assess the relationship between equity incentives and payout policy – the purpose of our study.

3. Data Description

3.1 Sample Description

The sample consists of firms domiciled in Sweden and listed on the Nasdaq Stockholm Main Market as of 18 September 2025. Firms traded on the First North Growth Market are excluded, as are firms listed in Sweden but domiciled abroad. These restrictions ensure consistent reporting standards and improve the availability of detailed information on CEO option holdings.

The observation period spans 2020–2024, coinciding with the implementation of the EU Shareholder Rights Directive II (SRD II) in Sweden. The directive, effective from 2020, increased transparency in executive remuneration reporting, allowing for consistent identification of CEO equity incentive structures across firms and years. To be included in the sample, each firm-year observation must satisfy a set criteria related to the availability of accounting and market data. Applying these restrictions yields an unbalanced panel of 1,222 firm-year observations across 296 unique firms. Table 1 presents the stepwise reduction in observations and unique firms as progressively stricter criteria are imposed.

3.2 Payout Variables

The data on the payout variables – dividends and share repurchases – is sourced from two commercial databases: dividend data is retrieved from Refinitiv Eikon, while share repurchase data is retrieved from Holdings. Dividends are filtered by announcement date, as this marks the key decision point and reflects the firm’s policy given the information available at the time, whereas repurchases are filtered by transaction date, as repurchase program announcements typically specify only the upper limit and firms may adjust repurchase amounts in response to changing conditions. In addition to dividend and repurchase amounts, we construct a third measure – payout amount – as the sum of the two, representing the firm’s combined in-year distributions to shareholders.

Using the payout magnitude measures, we construct seven variables that capture firms’ payout behavior in interpretable terms. For each of the three measures, we construct one binary variable to capture incidence and one continuous variable scaled by market capitalization. Lastly, we divide repurchases by payout to obtain an additional continuous variable capturing the relative importance of repurchases in the firm’s payout policy. The three binary variables (Dividend Dummy, Buyback Dummy, and Payout Dummy) serve as dependent variables in our logistic

regressions, while the four scaled variables (Dividend Percent, Buyback Percent, Payout Percent, and Buyback Percent of Payout) serve as dependent variables in our multiple linear regressions.

3.3 Incentive Variables

The data on CEO equity incentives comes from two sources: common stock holdings are obtained from Holdings, and stock option holdings are extracted from company filings – primarily annual reports and remuneration reports. Unlike the US and the major European economies where comparable studies have previously been conducted, Sweden lacks a commercial database aggregating executive option data. We therefore rely on company filings to record the number of options, the shares per option, the strike price, and the exercise window for each option program the CEO participates in. Using share prices, volatilities, dividend yields, and risk-free rates sourced from Capital IQ, we calculate option values and option deltas using the Black–Scholes model. To our knowledge, our compilation represents the first aggregation of Swedish CEO option holdings following the implementation of SRD II in 2020.

We use data on CEO equity incentives to capture three dimensions of the CEO's position that may influence a firm's payout policy decisions: the composition of incentives, the magnitude of incentives, and the degree of CEO influence. The composition of incentives captures how the mix between option- and stock-based exposure may shape the CEO's payout policy preference. A CEO with only a small share of total exposure through options may disregard or tolerate the adverse effect of dividends on option value, whereas a CEO whose portfolio has a significant option component is more likely to consider this effect when shaping payout policy. The magnitude of equity incentives reflects the extent to which the CEO's personal wealth is tied to the firm's stock performance. Lastly, CEO influence represents the CEO's ability to influence corporate policy outcomes, including payout decisions.

CEO influence is proxied by CEO Stock Percent, defined as the market value of common stock held by the CEO relative to the firm's market capitalization. While influence is not directly observable and likely reflects a range of factors such as tenure, relationships, and ownership concentration, share ownership remains a plausible and common proxy for managerial influence.

We construct two alternative variables to capture the magnitude of equity incentives: CEO Portfolio Value and CEO Portfolio Sensitivity. CEO Portfolio Value measures the total market value of the CEO's common stock and option holdings in the firm. Ideally, we would have

preferred to scale this measure by the CEO's total wealth; however, because the wealth held outside the firm is difficult to obtain, it serves as a reasonable approximation under the assumption that the CEO's holdings in the firm represent a significant portion of total wealth. CEO Portfolio Sensitivity builds on the same concept but incorporates the fact that options are more sensitive to changes in firm value than common stock. It is defined as the SEK change in the CEO's portfolio value resulting from a 1% increase in the firm's share price. It should be noted that the CEO's overall sensitivity to firm performance also stems from other components not captured here, such as performance share programs, cash bonuses, and the value associated with continued employment at the firm.

Consistent with the magnitude measures, we include one value-based and one sensitivity-based variable to describe the composition of equity incentives: CEO Option Value Percent of Portfolio Value and CEO Delta Percent of Portfolio Sensitivity. Option values and deltas are calculated using the Black–Scholes model and all incentive variables are measured as snapshots at the opening of each calendar year, aligning with the timing of major payout decisions typically announced in connection with the annual general meeting.

3.4 Control Variables

To isolate the relationship between CEO equity incentives and payout policy, we include a set of control variables commonly used in the payout policy literature (Fenn & Liang, 2001; De Cesari, 2015; Cook & Zhang, 2022). These variables account for firm profitability, investment opportunities, size, financing costs, maturity, liquidity, volatility, and valuation. Additionally, we run regressions with firm and year fixed effects to control for unobservable industry-wide shocks and changes in economic conditions over time that may influence payout policy. All control variables are based on accounting and market data from Capital IQ databases.

Firm profitability is proxied by EBITDA scaled by assets, which reflects a company's internal capacity to generate cash. As a rule, firms need to make money to distribute money, and the expectation of future self-financing capacity allows firms to distribute cash today while maintaining investment flexibility. Tobin's Q, the ratio of a firm's market value to its book value, serves as a proxy for investment opportunities. All else equal, firms with plentiful investment opportunities are more likely to allocate resources toward reinvestment rather than shareholder distributions (Core and Guay, 1999).

We use firm size, defined as the natural logarithm of market capitalization, as a proxy for external financing costs. Larger firms tend to be more stable and reduce information asymmetry through broader disclosure and analyst coverage, leading to lower external financing costs. Lower financing costs, in turn, provide greater flexibility in capital structure management and may lead to increased shareholder distributions. Although endogenous, leverage, measured as the book value of liabilities relative to the market value of the firm, can have important implications for payout policy. Firstly, because leverage can proxy for a firm's external financing costs. Furthermore, leverage can act as a substitute for payouts to shareholders and alleviate the agency costs of free cash flow by limiting managers' discretion over excess cash that might otherwise be used for unprofitable investments (Jensen, 1986; Berger et al., 1997). Both perspectives suggest that higher leverage is associated with lower payouts.

Retained earnings serve as a proxy for firm maturity and life-cycle stage. According to DeAngelo et al. (2006), firms with higher retained earnings are more likely to be mature and self-financing, with the ability to distribute cash to shareholders. Cash over assets is included as a control variable based on the intuitive notion that firms holding large cash reserves are more likely to pursue payouts than cash-constrained firms. However, a reverse relationship may also exist, as firms could accumulate large cash balances precisely because they refrain from distributing them.

We include volatility of operating income as a proxy for the uncertainty of firms' future cash-generating ability. Greater uncertainty may lead firms to accumulate larger cash buffers, thereby reducing payouts (Jagannathan et al., 2000). Volatility may also lead firms to prefer repurchases over dividends due to their greater flexibility. In addition to operating income volatility, we include stock return volatility as a market-based measure of performance uncertainty. Finally, we add the trailing twelve-month stock return as a simple proxy for perceived undervaluation, under the assumption that executives are more likely to pursue repurchases when they view the firm's stock as undervalued.

To limit the influence of outliers on our results, we winsorize all continuous variables at the 0.5% level in both tails and apply a stricter 2.5% winsorization to variables that are mechanically prone to extreme and economically uninformative values – namely EBITDA volatility, stock volatility, and stock returns. A full overview of all variable definitions is provided in Table A.1. Table 1 reports descriptive statistics for the full sample, Table A.2 presents the corresponding correlation matrix, and Table A.3 reports descriptive statistics by industry.

Table 1: Summary Statistics

Descriptive statistics for all variables included in the analysis, including means, medians, standard deviations, 25th percentiles, 75th percentiles, and the number of observations. Both tails of all continuous variables are winsorized at the 0.5th percentile, and the outlier-prone variables (EBITDA volatility, stock volatility, and stock return) at the 2.5th percentile.

Variable	Mean	Median	SD	P25	P75	N
Dividend Dummy	0.627	1.000	0.484	0.000	1.000	1222
Buyback Dummy	0.146	0.000	0.354	0.000	0.000	1222
Payout Dummy	0.655	1.000	0.475	0.000	1.000	1222
Dividend Percent	0.020	0.012	0.027	0.000	0.030	1222
Buyback Percent	0.002	0.000	0.007	0.000	0.000	1222
Payout Percent	0.022	0.014	0.029	0.000	0.031	1222
Buyback Percent of Payout	0.079	0.000	0.227	0.000	0.000	801
CEO Stock Percent	0.025	0.001	0.073	0.000	0.009	1222
CEO Portfolio Value	620.4	10.6	3201.1	2.5	44.5	1222
CEO Portfolio Sensitivity	6.253	0.122	32.014	0.028	0.502	1222
CEO Option Value Percent of Portfolio Value	0.147	0.000	0.282	0.000	0.113	1222
CEO Option Delta Percent of Portfolio Sensitivity	0.186	0.000	0.320	0.000	0.254	1222
EBITDA over Assets	0.035	0.080	0.221	0.030	0.127	1222
Tobin's Q	2.565	1.566	2.867	1.114	2.675	1222
Log MCAP	8.698	8.699	1.881	7.329	10.000	1222
Leverage	0.327	0.308	0.222	0.137	0.482	1222
Retained Earnings over Assets	0.227	0.211	0.207	0.008	0.357	1222
Cash over Assets	0.141	0.073	0.182	0.034	0.163	1222
EBITDA Volatility	0.051	0.023	0.082	0.012	0.047	1222
Stock Return	0.175	0.075	0.558	-0.219	0.465	1222
Stock Volatility	0.440	0.406	0.171	0.324	0.513	1222

4. Empirical Findings

4.1 Methodology

To investigate the relationship between CEO equity incentives and corporate payout policy, we estimate logistic regressions on three binary dependent variables – Dividend Dummy, Buyback Dummy, and Payout Dummy – and multiple linear regressions on four continuous dependent variables – Dividend Percent, Buyback Percent, Payout Percent, and Buyback Percent of Payout. By jointly capturing the incidence and the level of payouts, the logistic and linear regressions offer complementary perspectives that enable a comprehensive analysis of the relationship between CEO equity incentives and payout policy.

Each regression is estimated twice using two alternative sets of CEO incentive variables: a value-based specification and a sensitivity-based specification. Although the two are closely related, the sensitivity-based variables may more accurately reflect the CEO's equity exposure by accounting for the disproportionate influence of options on portfolio sensitivity. All regressions are reported with and without industry and year fixed effects and for the logistic models we present average marginal effects scaled by standard deviation alongside the original log-odds coefficients for ease of interpretation. Firm-level panel data characteristically display heteroskedasticity across firms and serial correlation within firms due to systematic differences in scale, volatility, and persistence in firm behavior over time. To account for these features, all regressions employ standard errors clustered at the firm level. This adjustment provides robustness to arbitrary heteroskedasticity and serial correlation within firms (Arellano, 1987), and we therefore do not present separate diagnostic tests.

4.2 CEO Equity Incentives and the Level of Payout

Table 2 presents the results from the multiple linear regression models assessing how the sensitivity-based specification of CEO equity incentives relates to Dividend Percent, Buyback Percent, Payout Percent, and Buyback Percent of Payout. All coefficients are expressed in decimal form, and the models are reported both without and with industry and year fixed effects. Unless otherwise indicated, statements about significance refer to coefficients that are statistically different from zero at the 5% significance level or stricter thresholds.

CEO Portfolio Sensitivity is negatively related to Dividend Percent, Buyback Percent, and Payout Percent; however, the relationships are statistically significant only in the case of dividends and total payout. Taken together, these results suggest that the decrease in payouts is mainly driven by lower dividends. Nonetheless, the coefficient on Buyback Percent of Payout is negative but not significant, suggesting that the disproportionate decline in dividends is offset by the noisy and declining repurchase activity. The negative sign and lack of significance may also stem from the fact that Buyback Percent of Payout is estimated on a reduced sample, as the variable is undefined for firm-year observations with no payout. Controlling for industry and year fixed effects does not alter the direction of the CEO Portfolio Sensitivity coefficients, and the estimates remain statistically significant. Illustratively, a SEK 1 million increase in CEO Portfolio Sensitivity is associated with a 0.9 basis point reduction in Payout Percent after controlling for fixed effects.

While the economic significance is limited, this should be considered in light of the fact that the average firm in our sample distributes only about 200 basis points of its market capitalization, and roughly one third of firms pay no dividends at all.

CEO Option Delta Percent of Portfolio Sensitivity is negatively and significantly related to Dividend Percent, and positively – though not significantly – related to Buyback Percent. Overall, the small increase in repurchases is insufficient to offset the decline in dividends, yielding a negative and significant coefficient on total payout. Accordingly, the coefficient on Buyback Percent of Payout is positive, but the estimate falls short of significance at the 5% level. Although weaker, these relationships generally persist with the inclusion of fixed effects. For illustration, a one percentage point increase in CEO Option Delta Percent of Portfolio Sensitivity is associated with a 0.6 basis point decrease in Dividend Percent and a 7.2 basis point increase in Buyback Percent of Payout.

The coefficients of CEO Stock Percent follow the same directional pattern as those of CEO Option Delta Percent of Portfolio Sensitivity, but the estimates are far from any conventional significance threshold. Thus, we are unable discern any meaningful relationship between our proxy for CEO influence and payout behavior. The control variables perform largely in line with our ex-ante expectations. For variables where we anticipated a relationship with the overall level of payouts, the estimated coefficients are generally significant and of the expected sign, with the exception of leverage, whose coefficient is unexpectedly positive. This unexpected positive relationship may reflect that leverage is not fully exogenous – shareholder distributions mechanically increase leverage all else equal – or that a firm’s ability to sustain higher leverage may proxy for being stable and cash generative, making it more likely to distribute cash. Generally, we observe that the estimated signs of the payout-level controls are the same on both dividends and repurchases, which suggests that the two payout channels respond similarly to underlying firm characteristics and may function as close substitutes. For the variables where we instead anticipated a relationship with the composition of payouts – operating income volatility, stock volatility, and stock returns – the estimated coefficients are all of the expected sign: higher volatility and lower lagged stock returns are associated with a greater repurchase propensity, however the estimated relationship is not significant in the case of operating income volatility. Overall, these patterns corroborate previous research on the determinants of payout policy

Table 2: Multiple Linear Regressions – Sensitivity-Based Incentives

Estimates capturing the relationship between the sensitivity-based specification of equity incentives and the level of payout. All included variables are in decimal form, except for CEO Portfolio Sensitivity (SEK Million) and Market Capitalization (natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects

Independent Variables	Without FEs				With FEs			
	Dividend Percent	Dividend Dummy	Payout Percent	Buyback Percent of Payout	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout
<i>Incentive Variables</i>								
(Intercept)	0.007 (0.007)	-0.004** (0.002)	0.003 (0.008)	0.039 (0.108)				
CEO Stock Percent	-0.011 (0.019)	-0.002 (0.003)	-0.013 (0.019)	0.027 (0.155)	-0.008 (0.019)	-0.002 (0.003)	-0.010 (0.019)	-0.026 (0.178)
CEO Portfolio Sensitivity	-0.000*** (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000 (0.000)	-0.000** (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000 (0.000)
CEO Option Delta Percent of Portfolio Sensitivity	-0.007** (0.003)	0.001 (0.001)	-0.006** (0.003)	0.071* (0.038)	-0.006** (0.003)	0.001 (0.001)	-0.005* (0.003)	0.072* (0.039)
<i>Control Variables</i>								
EBITDA over Assets	0.017*** (0.005)	0.005*** (0.002)	0.021*** (0.006)	-0.159 (0.145)	0.013** (0.005)	0.004*** (0.001)	0.017*** (0.006)	-0.117 (0.141)
Tobin's Q	-0.001*** (0.000)	-0.000 (0.000)	-0.001*** (0.000)	-0.011* (0.006)	-0.001*** (0.000)	-0.000 (0.000)	-0.001*** (0.000)	-0.010* (0.006)
Log MCAP	0.001* (0.001)	0.000** (0.000)	0.002** (0.001)	0.003 (0.006)	0.001 (0.001)	0.000*** (0.000)	0.002** (0.001)	0.004 (0.006)
Leverage	0.025*** (0.006)	0.004** (0.002)	0.029*** (0.006)	-0.092 (0.102)	0.021*** (0.007)	0.006** (0.002)	0.026*** (0.007)	-0.077 (0.120)
Retained Earnings over Assets	0.023*** (0.007)	-0.001 (0.002)	0.022*** (0.007)	-0.231** (0.090)	0.021*** (0.008)	0.002 (0.002)	0.022*** (0.008)	-0.217** (0.108)
Cash over Assets	0.024*** (0.007)	0.004** (0.002)	0.028*** (0.008)	0.309* (0.158)	0.028*** (0.008)	0.004** (0.002)	0.032*** (0.008)	0.280* (0.162)
EBITDA Volatility	0.006 (0.012)	0.002 (0.004)	0.008 (0.012)	0.100 (0.227)	0.012 (0.011)	0.001 (0.004)	0.013 (0.012)	0.087 (0.224)
Stock Return	0.002 (0.001)	-0.001*** (0.000)	0.001 (0.001)	-0.067*** (0.016)	0.001 (0.001)	-0.001*** (0.000)	-0.000 (0.002)	-0.063*** (0.021)
Stock Volatility	-0.027*** (0.005)	0.003 (0.002)	-0.024*** (0.006)	0.321*** (0.108)	-0.024*** (0.006)	0.002 (0.002)	-0.022*** (0.007)	0.274** (0.117)
Num.Obs.	1222	1222	1222	801	1222	1222	1222	801
R2	0.180	0.039	0.177	0.128	0.202	0.066	0.193	0.162
R2 Adj.	0.172	0.029	0.169	0.114	0.187	0.049	0.178	0.137
R2 Within					0.106	0.038	0.113	0.094
R2 Within Adj.					0.097	0.028	0.104	0.080
RMSE	0.02	0.01	0.03	0.21	0.02	0.01	0.03	0.21
Std.Errors	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker
FE: year					X	X	X	X
FE: industry					X	X	X	X

p < 0.1, ** p < 0.05, *** p < 0.01

4.3 CEO Equity Incentives and the Likelihood of Payout

Table 3 presents the results from logistic regressions examining how the sensitivity-based CEO equity incentives relate to the likelihood of dividend payments, share repurchases, and overall payout incidence. Average marginal effects scaled by the standard deviation of the independent variables are presented alongside the log-odds coefficients to facilitate interpretation, and as in the linear specification the models are estimated both without and with industry and year fixed effects.

As in the multiple linear regressions, CEO Portfolio Sensitivity is negatively and significantly related to dividend incidence, repurchase incidence, and overall payout incidence, and the estimated association with repurchase incidence is not significant. These estimates indicate that the reduction in payout likelihood is largely driven by the dividend channel and taken together the results may suggest a heightened relative inclination toward repurchases. The inclusion of fixed effects does not alter these conclusions; rather, it reinforces them. Interpretation of the scaled average marginal effects indicates that a one-standard deviation increase in portfolio sensitivity is associated with a 4.2 percentage point lower likelihood of payout, although we note that a one-standard deviation is very large relative to the median due to positive skewness.

Although not as pronounced, the estimated coefficients on CEO Option Delta Percent of Portfolio Sensitivity exhibit a similar pattern. Higher option exposure is associated with lower dividend incidence and higher repurchase incidence, but the estimate is significant only in the case of dividends. Accordingly, the association with overall payout incidence is attenuated but nonetheless negative. These findings indicate that the decline in dividend incidence associated with greater relative importance of options is not fully offset by an increase in repurchase incidence. After controlling for industry and year fixed effects, the relationship to dividend incidence no longer reaches the 5% threshold, suggesting that part of the variation previously attributed to the relative importance of options is absorbed by persistent industry characteristics or time-specific shocks. In terms of economic significance a one standard deviation increase in CEO Option Delta Percent of Portfolio Sensitivity is associated with a 2.7 percentage point lower dividend likelihood.

As in the multiple linear regressions, CEO Stock Percent exhibits no discernible association with any measure of payout incidence. The estimates relating to the control variables are largely consistent with our ex-ante expectations and with the results from the multiple linear regressions. For the sake of brevity, we highlight only the most notable deviations from the previously observed pattern. Notably, neither the coefficient on Leverage nor Cash over Assets is statistically different

from zero at any conventional significance level in any of the payout-incidence specifications. Furthermore, we observe that the estimated significance of our firm size proxy is reinforced and now consistently surpassing the 1% level. On the other hand, we are now only able to discern a significant association between Tobin's Q and overall payout incidence. Although overall similar, these findings suggest that some firm characteristics account for variation in payout incidence more effectively than for variation in payout levels, and vice versa.

Table 3: Logistic Regressions – Sensitivity-Based Incentives

Estimates capturing the relationship between the sensitivity-based specification of equity incentives and the level of payout. All included variables are in decimal form, except for CEO Portfolio Sensitivity (SEK Million) and Market Capitalization (natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects

Independent Variables	Without FEs						With FEs					
	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Dummy (scaled AME)	Buyback Dummy (scaled AME)	Payout Dummy (scaled AME)	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Dummy (scaled AME)	Buyback Dummy (scaled AME)	Payout Dummy (scaled AME)
<i>Incentive Variables</i>												
(Intercept)	-2.974*** (0.981)	-4.770*** (0.946)	-2.904*** (0.967)									
CEO Stock Percent	-1.159 (1.772)	-0.077 (1.995)	-1.203 (1.751)	-0.010	-0.001	-0.010	-0.516 (1.757)	-0.415 (2.057)	-0.628 (1.730)	-0.004	-0.003	-0.005
CEO Portfolio Sensitivity	-0.010** (0.005)	-0.006 (0.004)	-0.011** (0.005)	-0.036	-0.023	-0.038	-0.011** (0.005)	-0.007 (0.005)	-0.013*** (0.005)	-0.038	-0.025	-0.042
CEO Option Delta Percent of Portfolio Sensitivity	-0.942** (0.394)	0.245 (0.389)	-0.709* (0.421)	-0.034	0.009	-0.025	-0.779* (0.402)	0.222 (0.398)	-0.552 (0.430)	-0.027	0.008	-0.019
<i>Control Variables</i>												
EBITDA over Assets	9.698*** (2.266)	5.020*** (1.916)	9.427*** (2.140)	0.242	0.129	0.230	9.691*** (2.409)	4.591** (2.064)	9.492*** (2.234)	0.230	0.115	0.220
Tobin's Q	-0.108 (0.087)	-0.072 (0.056)	-0.174** (0.079)	-0.035	-0.024	-0.055	-0.092 (0.074)	-0.069 (0.058)	-0.163** (0.065)	-0.028	-0.023	-0.049
Log MCAP	0.454*** (0.094)	0.311*** (0.080)	0.494*** (0.097)	0.096	0.068	0.103	0.468*** (0.099)	0.333*** (0.084)	0.516*** (0.101)	0.095	0.071	0.102
Leverage	0.592 (0.716)	0.245 (0.687)	0.175 (0.671)	0.015	0.006	0.004	0.231 (0.833)	0.114 (0.928)	-0.296 (0.796)	0.006	0.003	-0.007
Retained Earnings over Assets	5.105*** (0.918)	-1.318 (1.084)	4.665*** (0.897)	0.119	-0.032	0.106	4.594*** (0.943)	-0.909 (1.341)	4.113*** (0.922)	0.102	-0.021	0.089
Cash over Assets	-0.788 (1.066)	0.889 (1.068)	0.558 (0.995)	-0.016	0.019	0.011	-0.296 (1.172)	1.281 (1.150)	1.177 (1.071)	-0.006	0.027	0.023
EBITDA Volatility	-0.520 (2.212)	0.701 (1.843)	-1.144 (1.929)	-0.005	0.007	-0.010	-0.975 (2.021)	1.317 (1.801)	-1.656 (1.792)	-0.009	0.012	-0.014
Stock Return	0.233* (0.129)	-0.328** (0.143)	0.041 (0.144)	0.015	-0.021	0.003	0.087 (0.163)	-0.402** (0.182)	-0.079 (0.175)	0.005	-0.026	-0.005
Stock Volatility	-3.630*** (0.712)	0.246 (0.839)	-3.301*** (0.692)	-0.070	0.005	-0.062	-3.408*** (0.802)	-0.206 (0.907)	-3.316*** (0.778)	-0.062	-0.004	-0.060
Num.Obs.	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222
R2	0.462	0.080	0.458	0.462	0.080	0.458	0.487	0.106	0.482	0.487	0.106	0.482
R2 Adj.	0.447	0.057	0.442	0.447	0.057	0.442	0.458	0.061	0.453	0.458	0.061	0.453
R2 Within							0.379	0.074	0.378	0.379	0.074	0.378
R2 Within Adj.							0.361	0.049	0.360	0.361	0.049	0.360
RMSE	0.33	0.34	0.33	0.33	0.34	0.33	0.32	0.34	0.32	0.32	0.34	0.32
Std.Errors	by: ticker	by: ticker	by: ticker				by: ticker	by: ticker	by: ticker			

p < 0.1, ** p < 0.05, *** p < 0.01

4.4 Specifications with Value-based Incentives

As an alternative to our sensitivity-based measures, we re-estimate all models using value-based CEO equity incentives, replacing CEO Portfolio Sensitivity with CEO Portfolio Value and CEO Option Delta Percent of Portfolio Sensitivity with CEO Option Value Percent of Portfolio Value. Aside from these substitutions, the models remain identical. This specification is closer in spirit to earlier studies that measure executive incentives using either the value or number of equity incentive instruments, rather than their sensitivity (e.g., Fenn & Liang, 2001; Burns, McTier, & Minnick, 2015). Ex-ante, we expect the value-based specification to yield results similar to those from the sensitivity-based specification, as the sensitivity of common stock is directly proportional to its value and common stock typically constitutes the largest component of a CEO's equity exposure.

Overall, the value-based multiple linear regressions (table A.4) perform very similarly to their sensitivity-based counterparts, and the estimated signs on all incentive-related coefficients remain unchanged. This underscores the close alignment between the two specifications. However, whereas CEO Portfolio Sensitivity was strongly associated with both dividend levels and overall payout levels – surpassing the 1% threshold – the corresponding estimates of CEO Portfolio Value are not statistically different from zero at any conventional level. As anticipated, the estimates relating to other firm characteristics behave almost identically across specifications, both in terms of sign and precision.

Across the logistic regressions, the value-based specification yields results that closely parallel those from the sensitivity-based models. All incentive and control variable coefficients carry the same signs and reach the same significance thresholds as in the main specification, indicating that the underlying patterns are largely invariant to the choice of incentive measure. The only noteworthy deviation concerns CEO Option Value Percent of Portfolio Value, which exhibits a slightly stronger association with dividend incidence relative to its sensitivity-based counterpart. Nonetheless, the overall conclusions from the logistic models remain effectively unchanged. We note that the explanatory power of the models remains largely unchanged, underscoring the dominant role of the control variables, which are held constant across specifications.

4.5 Specifications with Log-Transformed Incentives

As a further robustness check, we re-estimate our models using a natural logarithm transformation on the independent variables capturing the magnitude of CEO equity incentives – CEO Portfolio Sensitivity and CEO Portfolio Value. Illustratively, the median CEO Portfolio Value in our sample is SEK 10.6 million, whereas the mean is SEK 620.4 million even after winsorizing 0.5 percent of the tail, reflecting a distribution with substantial positive skew. Although real-world wealth distributions are generally right-skewed, this pattern is amplified in our setting by the presence of CEOs who are also founders or heirs in family-controlled conglomerates. The most extreme case in our sample is the CEO of the eponymously named firm L E Lundbergföretagen, whose stake in the company consistently exceeds SEK 40 billion. While clustering standard errors by firm helps address the heteroscedasticity that such a distribution may entail, the long tail of extreme observations may still exert disproportionate influence on the estimated coefficients. A log transformation mitigates these concerns by disproportionately compressing the right tail and thereby reducing both skewness and the influence of extreme observations.

In the sensitivity-based multiple linear regressions, log-transforming CEO Portfolio Sensitivity leaves the directional pattern of the estimates broadly unchanged relative to the main specification. The only departures from this pattern concern CEO Stock Percent and CEO Portfolio Sensitivity, whose associations with, respectively, payout composition and repurchase levels have flipped; however, neither association is statistically significant in either specification. Unlike in the main specification, the negative association between CEO Stock Percent and repurchase levels becomes significant in the log-transformed models. Conversely, CEO Portfolio Sensitivity is no longer significantly associated with lower overall payout levels, but its association with lower dividend levels remains. Likewise, our main variable of interest – CEO Option Delta Percent of Portfolio Sensitivity – remains significantly associated with lower dividend levels only.

In the value-based multiple linear regressions, the log-transformed specification produces a broadly similar pattern. Relative to the non-log-transformed value-based specification, the direction of all the estimated relationships remains unchanged. However, the effect of the log transformation on the incentive variables is generally one of heightened significance. Unlike in the non-log-transformed specification, higher CEO Portfolio Value is now significantly associated with lower dividend levels. Moreover, the relative option exposure of the CEO becomes significantly related not only to lower dividend levels but also to lower overall payout levels and

a heightened repurchase propensity. These results contrast with those from the log-transformed sensitivity-based models, where heightened significance was generally not observed, suggesting that the log transformation has a more pronounced effect in the value-based specification. This contrast may reflect the relatively greater skew and longer right tail of the value-based incentive measures.

The effect of log-transforming the variables capturing the magnitude of equity incentives in our sensitivity-based logistic regressions mirrors the effect observed in the sensitivity-based multiple linear regressions. We observe that CEO Stock Percent becomes significantly and negatively associated with repurchase incidence, while CEO Portfolio Sensitivity fails to remain significantly associated with any dependent variable after the transformation. The coefficients and standard errors relating to CEO Option Delta Percent of Portfolio Sensitivity are not materially affected by the transformation, and the variable remains associated with lower dividend incidence at the same significance thresholds as before.

The log transformation affects the value-based logistic regressions in the same way it affects the sensitivity-based logistic regressions: CEO Stock Percent becomes negatively and significantly associated with buyback incidence, CEO Portfolio Value fails to remain significantly associated with any dependent variable, and CEO Option Value Percent of Portfolio Value remains negatively and significantly associated with dividend incidence.

Taken together, the log-transformed specifications yield a more coherent pattern of results than their non-log-transformed counterparts. While the specifications with incentive magnitudes measured in SEK millions occasionally produced fleeting significance, the log-transformed variables reveal more stable relationships. Across specifications, CEO Stock Percent is negatively associated with both repurchase incidence and repurchase levels. The variables capturing the magnitude of equity incentives are consistently negatively related to dividend levels, although we do not discern a significant relationship with dividend incidence. The variables capturing the relative importance of options display a consistent pattern of negative association with both dividend incidence and dividend levels. However, only the value-based specification indicates that the relative importance of options is also significant in explaining variation in overall payout levels and payout composition.

5. Validity and Robustness

5.1 Sample and Selection Issues

5.1.1 Sample Bias

Sampling bias arises when the procedure used to construct a sample makes certain types of firms systematically more likely to be included than others. When this occurs, the resulting sample becomes less representative of the broader population of interest, and the estimated relationships may partly reflect characteristics shared by the over-represented firms, thereby reducing the external validity of our findings.

Our study aims to inform remuneration policy, and because stock options rarely constitute a practical alternative for decision-makers in unlisted firms, we define our population of interest as listed firms, in particular Swedish listed firms. Among these, we draw a relatively exhaustive sample, including all Swedish-domiciled firms listed on Nasdaq Stockholm and excluding only firms listed on the First North Growth Market due to their more limited executive remuneration disclosures. However, because our sample includes only firms listed as of 18 September 2025, it necessarily introduces some survivorship bias, as firms delisted prior to this date are not captured. Instead, our sample is constrained mainly by the availability of the data needed to construct our independent variables. Table 1 presents the stepwise reduction in remaining observations and unique firms in our sample after imposing progressively stricter criteria. The most restrictive market-data constraint is imposed by the variables Stock Return and Stock Volatility, both of which effectively require that a firm be listed for the entirety of the calendar year preceding the observation year. The most restrictive accounting-data constraint is imposed by the construction of operating income volatility, which effectively requires data availability extending five years back from the observation year. After also excluding firms whose CEOs are exposed to neither common stock nor options, the sample is reduced to 1,222 observations across 296 firms.

As our criteria disproportionately exclude recently listed firms with limited data availability, the omitted firms are likely to be smaller in size and earlier in their life cycle. Moreover, excluding CEOs without equity exposure to the firm may lead to the underrepresentation of newly appointed CEOs, who often have not yet accumulated any stock or option holdings. Despite these exclusions the final sample remains broad: it contains many small-cap firms, numerous newly appointed CEOs with equity exposure and the large majority of firms listed on the Stockholm Stock Exchange. For this reason we consider the remaining sample

sufficiently representative for generalization not only to Swedish listed firms but to a lesser extent also to listed firms in other domiciles with similar equity-incentive characteristics and comparable distribution tax treatment.

Table 4: Sample Description

Number of unique firms and firm-year observations remaining in the sample after the introduction of progressive stricter criteria

Criteria	Variable (e.g.)	Firms remaining	Observations remaining
Swedish domiciled firm listed on Nasdaq Stockholm	n.m.	342	n.m.
End-of-year Market Capitalization available	Payout Percent	334	1595
Beginning-of-year Market Capitalization available	Payout Percent	327	1547
Beginning-of-prior-year Market Capitalization available	Stock Return	319	1439
Annual EBITDA from four preceding years available	EBITDA Volatility	300	1321
CEO Portfolio Value not equal to zero	CEO Option Value Percent of Portfolio Value	296	1222
Payout not equal to zero	Buyback Percent of Payout	217	801

5.1.2 Selection Bias

As a complement to our two-step regression process and a robustness check of our findings, we re-estimate the multiple linear regressions on a reduced sample that excludes firm-year observations with zero payout. This adjustment is motivated by the fact that roughly one third of all observations in the our sample record no payout activity, which may challenge the normality and homoscedasticity assumptions underlying linear regression. Re-estimating the models on the reduced sample allows us to assess whether the patterns observed in the full sample are driven by a large share of structural zeros or whether they continue to hold when restricting attention to firms that distribute. Across all models, we restrict our samples based on overall payout rather than specific channels. We do this because we believe the fundamental decision to distribute – or not – is what systematically differentiates firms, not their choice of distribution channel. In our comparison of the reduced sample models, we focus on the three payout-level models rather than the payout-composition model, as the sample for the latter has always been constrained by the construction of its dependent variable – Buyback Percent of Payout.

Generally, all estimated coefficients in the reduced sample models share the same sign as their counterparts in the unrestricted models, and the few exceptions are not statistically different from zero. Across all models, several coefficients that were significant in the full sample lose significance or weaken in the reduced sample, affecting both incentive variables and controls. Notably, the coefficients on CEO Portfolio Sensitivity are no longer statistically significant in the reduced sample. Similarly, the association between CEO Option Delta Percent of Portfolio Sensitivity and Dividend Percent is now significant only at the 10% level; however, its positive association with Buyback Percent becomes more pronounced. Illustratively, a one-percentage point increase in CEO Option Delta Percent of Portfolio Sensitivity is associated with a 0.6 basis point decrease in Dividend Percent and a 0.3 basis point increase in Buyback Percent – effects that equal the corresponding coefficients in the full sample but remain of limited economic significance.

Taken at face value, the reduced sample results suggest that the relative shift away from dividends toward repurchases operates through a different mechanism: in the full sample through a significant decline in dividends, and in the reduced sample through a significant increase in repurchases. Overall, the reduced-sample results remain directionally consistent with the full-sample models but are less precise, owing both to fewer observations and to weaker model fit, reflected in higher residual standard deviations. Therefore, we are more reluctant to reject the null hypothesis underpinning our research question.

5.2 Multicollinearity

Multicollinearity refers to a high degree of correlation among independent variables, which can inflate standard errors. Given the conceptual overlap among our variables, multicollinearity is a natural concern. Although multicollinearity does not bias coefficient estimates, it can materially affect their precision, making it important to evaluate its extent in our models.

To assess whether our models are affected by multicollinearity, we compute variance inflation factors (VIFs) for all independent variables. VIFs indicate how much a coefficient's variance is inflated relative to the case where its regressor is linearly independent of the other independent variables, while their reciprocal reflects the share of a variable's variance not explained by the remaining predictors. As a rule of thumb, a VIF of 1 indicates no correlation with other variables, values between 1 and 5 indicate moderate correlation, and values above 5 indicate

high correlation. We evaluate our models against these thresholds to determine whether multicollinearity is likely to distort inference.

Table A.12 shows that all independent variables exhibit low to moderate collinearity. The VIFs of CEO Stock Percent and CEO Portfolio Sensitivity are both roughly 2.0, while the VIF of CEO Option Delta Percent of Portfolio Sensitivity is only 1.1. The sensitivity- and value-based specifications yield nearly identical results, and the average VIF is 1.7 in both cases. Hence, we conclude that multicollinearity is of limited concern for our inference.

5.3 Endogeneity

5.3.1 Omitted Variable Bias and Confounding Variables

Omitted variable bias may occur if unobservable firm characteristics influence both CEO incentives and payout behaviour. In our context, two such factors may be particularly relevant: the governance preferences of the board of directors and the ability of the CEO. These unobserved characteristics can vary across firms and over time, potentially generating spurious relationships between equity incentives and payout outcomes.

The governance preferences of the board of directors may jointly shape both the characteristics of CEO incentives and the firm's payout policy. In most firms, both policy relating to executive remuneration and payout must be approved by the board. Because we cannot directly observe the preferences of the board, the relationship we estimate between equity incentives and payout policy may simply reflect these underlying preferences rather than a causal effect. If boards view equity incentives and payout policy as alternative ways to address agency problems, this unobserved preference can generate a negative relationship between the magnitude of equity incentives and payout levels or incidence (Rozeff, 1982).

Second, CEO ability is another unobservable factor that plausibly influences both the magnitude of equity incentives and the firm's payout behaviour. If high-performing CEOs are rewarded with greater equity incentives and the firms they lead exhibit stronger profitability and a greater capacity to distribute cash, we may observe a positive relationship between equity incentives and payout that reflects underlying ability rather than a causal effect.

To address this, we include a comprehensive set of firm characteristics. Some of these, namely profitability and stock return, may partially reflect differences in CEO ability. Industry fixed effects may absorb persistent differences in governance norms across sectors, while year

fixed effects capture time-specific shifts that may influence remuneration and distribution preferences. Nonetheless, these adjustments cannot fully capture the underlying preferences of the board or the ability of the CEO. A natural way to address firm-specific omitted variables would be to include firm fixed effects, but this is not feasible in our setting: many firms have only a small number of observations, and several key variables exhibit limited within-firm variation over time. Standard errors clustered at the firm level does help remedy inference in the presence of unobserved firm-specific heterogeneity, but they cannot correct for bias in the coefficient estimates. Consequently, we cannot rule out omitted variable bias or its potential influence on our results.

5.3.2 Reverse Causality

Reverse causality arises when the dependent variable influences the independent variable rather than the other way around, and in our context this is well documented and most clearly evidenced by the mechanical price drop on the ex-dividend date (Elton & Gruber, 1970). In fact, the adverse effect of dividends on non-protected stock options is a central assumption underpinning the notion that CEOs may be dividend-averse. This interaction motivates examining the potential impact of reverse or simultaneous causality.

The presence of reverse causality could plausibly bias our coefficient estimates in either direction. Because dividend distributions, all else equal, reduce the value of common stock and stock options, we may observe a negative relationship between the magnitude of equity incentives and dividends. On the other hand, several studies find that dividend announcements and share repurchase programs are associated with positive abnormal returns in various contexts, which could generate a positive relationship between equity incentives and both payout channels (e.g., Ikenberry, Lakonishok & Vermaelen, 1995). In either case, the association does not arise because incentives shape payout behavior, but rather because payouts influence measured equity incentives.

To mitigate these concerns, we rely on lagged incentive variables, using equity incentive data from the end of year $t-1$ to explain payout behaviour in year t . This separation ensures that the incentive measures we regress on payout decisions are not themselves directly affected by those decisions. However, payout policy tends to be persistent, meaning that incentive measures may still be systematically affected by payout decisions made in earlier years. One method we considered to mitigate reverse causality was to estimate models in which the independent variables predict binary indicators for dividend and repurchase initiation events. In this setup, the variable

dividend start takes the value 1 if a firm announces a dividend in year t but did not do so in year $t-1$. However, we were unable to discern any robust pattern, and the results are therefore not tabulated for the sake of brevity. The lacking pattern could suggest that equity incentives do not causally explain dividend or repurchase incidence, but it may also reflect the rarity of payout-start events in our sample. Lastly, we note that our variables capturing the relative importance of options may be less sensitive to reverse causality than the variables capturing the magnitude of equity incentives, because both the numerator and denominator of these ratios are affected in a largely commensurate manner by payout decisions.

5.3.3 Measurement Error

Measurement error occurs when the independent variables do not perfectly capture the true constructs they are intended to represent, leading to correlation with the error term. Such error can bias coefficient estimates or attenuate them toward zero.

While all variables are subject to some degree of measurement error, a key source in our setting lies in the calculation and availability of incentive data. The variables we construct do not exhaustively capture all incentives influencing the CEO, as they exclude fixed salary, cash bonuses, share-matching programmes, restricted stock units, and performance stock units. Because these components are not included in our measures, the magnitude of equity incentives is understated, and the relative importance of options is correspondingly overstated. Furthermore, the valuation of stock options relies on two simplifying assumptions: first, that options are exercisable only on the final date of their exercise window; and second, that our calculations do not account for performance conditions attached to certain option programmes. These simplifications may distort both the estimated value and delta of the option portfolio.

Taken together, these limitations imply that our incentive measures diverge from the true incentive environment faced by CEOs. However, because we believe the measurement error to be largely independent of the true values and other independent variables, we expect its primary effect to be attenuation of coefficients rather than severe bias.

5.3.4 Instrumental Variables

Instrumental variables (IV) estimation is a common approach to addressing endogeneity. For an instrument to be valid, it must satisfy two conditions: it must be relevant, meaning correlated with

the endogenous variable, and exogenous, meaning uncorrelated with other determinants of the dependent variable (Wooldridge, 2020). In our setting, it is highly difficult to identify an instrument that is sufficiently relevant for CEO equity incentives, and virtually impossible to find one that is also exogenous. De Cesari and Özkan (2015) explores this approach by using CEO age and tenure as instruments for executive incentives but finds that these variables are not entirely exogenous. Given the absence of credible instruments that satisfy both criteria, we do not incorporate an IV approach in our study.

6. Conclusion

This thesis examines the relationship between CEO equity incentives and payout policy on a sample of 296 firms listed on the Stockholm Stock Exchange over the period 2020 to 2024. By manually collecting data on CEO stock option holdings, we are able to address a gap in the literature by examining this relationship in Sweden, a market with distinct institutional features. In doing so, we offer insights into a topic of clear relevance for corporate governance and policy. We employ a two-step regression approach to assess the relationship between equity incentives and both payout incidence and payout levels. Although the scope of our study spans both the magnitude and composition of equity incentives, we are, due to inconclusive prior literature, only able to formulate ex-ante hypotheses for the latter.

H1: The relative importance of stock options in CEO equity compensation is negatively related to the likelihood of dividend distributions

H2: The relative importance of stock options in CEO equity compensation is negatively related to the level of dividend distributions

H3: The relative importance of stock options in CEO equity compensation is positively related to the share of total payouts distributed through repurchases

Across specifications, our findings indicate that greater relative importance of options is negatively related to both dividend incidence and dividend levels. However, only one specification links this measure to lower overall payout levels and higher repurchase propensity, and we therefore fail to reject the latter of our three ex-ante null hypotheses. Taken together, these findings support the notion that CEOs with greater relative option exposure may be dividend-averse and therefore reduce dividend distributions; however, we cannot conclude that overall payouts are commensurately reduced, as suggested by prior research in Europe (De Cesari, 2015). Instead, our findings suggest that the reduction in dividends is only partially offset by an increase in repurchases, similar to the substitution effect documented by Fenn & Liang (2001).

Furthermore, our findings indicate that greater magnitude of equity incentives is associated with both lower dividend incidence and dividend levels, as well as lower overall payout incidence. This is contrary to the incentive-alignment effect predicted by La Porta et al. (2000) and observed in by Renneboog and Trojanowski (2011); rather, it is aligned with Rozeff (1982), who argues that equity incentives and payout policy serve as alternative approaches to addressing agency problems.

Because the findings relating to our magnitude-based incentive measures do not hold under robustness checks, we interpret these results with caution and regard them as inconclusive.

Although our empirical design allows us to establish robust associations, we cannot rule out endogeneity concerns and are therefore reluctant to draw causal conclusions. With a longer panel, future research could better address omitted variable bias through within-firm analysis and mitigate reverse-causality concerns by focusing on dividend and repurchase initiation events.

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8. Appendix

8.1 Variable Definitions and Descriptive Statistics

Table A.1: Variable Definitions

Definitions of the full set of variables used in the thesis

Variable Definition

Payout variables	
<i>Dividend Percent</i>	Dividends announced during the calendar year divided by the average of the beginning-of-year and end-of-year market capitalization
<i>Dividend Dummy</i>	Binary variable equal to one if <i>Dividend Percent</i> is positive, and zero otherwise
<i>Buyback Percent</i>	Share repurchases executed during the calendar year divided by the average of the beginning-of-year and end-of-year market capitalization
<i>Buyback Dummy</i>	Binary variable equal to one if <i>Buyback Percent</i> is positive, and zero otherwise
<i>Payout Percent</i>	Sum of <i>Dividend Percent</i> and <i>Buyback Percent</i>
<i>Payout Dummy</i>	Binary variable equal to one if <i>Payout Percent</i> is positive, and zero otherwise
<i>Buyback Percent of Payout</i>	Share repurchases executed during the calendar year divided by the sum of share repurchases executed and dividends announced during the calendar year
Incentive variables	
<i>CEO Stock Percent</i>	Value of common stock held by the CEO at the beginning of the calendar year, calculated as the number of shares held multiplied by the share price on the same date, divided by the beginning-of-year market capitalization
<i>CEO Portfolio Value</i>	Sum of the value of common stock and options held by the CEO at the beginning of the calendar year, where common stock value is calculated as the number of shares held multiplied by the share price on the same date, and option value is the aggregate value of options held by the CEO calculated using the Black–Scholes model
<i>CEO Portfolio Sensitivity</i>	SEK change in the CEO's portfolio value resulting from a 1% increase in the firm's share price, where common stock sensitivity is defined as 1% of common stock value, and option sensitivity is the aggregate value of deltas on options held by the CEO calculated using the Black–Scholes model
<i>CEO Option Value Percent of Portfolio Value</i>	Aggregate value of options held by the CEO at the beginning of the calendar year, calculated using the Black–Scholes model, divided by <i>CEO Portfolio Value</i>

Variable Definition

<i>CEO Option Delta Percent of Portfolio Sensitivity</i>	Aggregate value of deltas on options held by the CEO at the beginning of the calendar year, calculated using the Black–Scholes model, divided by <i>CEO Portfolio Sensitivity</i>
Control variables	
<i>EBITDA over Assets</i>	Prior-year EBITDA divided by beginning-of-year total assets
<i>Tobin's Q</i>	Sum of beginning-of-year book value of liabilities and market capitalization divided by beginning-of-year total assets
<i>Log MCAP</i>	Natural logarithm of beginning-of-year market capitalization
<i>Leverage</i>	Beginning-of-year book value of liabilities divided by the sum of beginning-of-year book value of liabilities and market capitalization
<i>Retained Earnings over Assets</i>	Beginning-of-year retained earnings divided by beginning-of-year total assets
<i>Cash over Assets</i>	Beginning-of-year cash and cash equivalents divided by beginning-of-year total assets
<i>EBITDA Volatility</i>	Standard deviation of EBITDA over the past 4 years divided by beginning-of-year total assets, NA if fewer than 4 observations available
<i>Stock Return</i>	Beginning-of-year dividend-adjusted share price divided by beginning-of-prior-year share price minus 1
<i>Stock Volatility</i>	Standard deviation of monthly dividend-adjusted stock returns over the past 24 months multiplied by the square root of 12, NA if fewer than 12 observations available
Fixed Effects	
<i>Industry</i>	Categorical variable taking one of nine primary industry classifications provided by Capital IQ: Consumer; Healthcare; Real Estate; Industrials; Financials; Materials; Technology, Media & Telecommunications (TMT); Energy & Utilities.
<i>Year</i>	Categorical variable indicating the calendar year of observation, taking values from 2020 through 2024.

Table A.2: Correlation Matrix

Pearson correlations based on pairwise complete observations for all continuous payout variables, CEO equity incentive measures and firm-level controls. The matrix summarizes linear relationships among the variables, offering a simple diagnostic for multicollinearity and aiding interpretation of empirical results

	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout	CEO Stock Percent	CEO Portfolio Value	CEO Portfolio Sensitivity	CEO Option Value Percent of Value	CEO Option Delta Percent of Portfolio Sensitivity	EBITDA over Assets	Tobins Q	Log MCAP	Leverage	Retained Earnings over Assets	Cash over Assets	EBITDA Volatility	Stock Return	Stock Volatility
Dividend Dummy	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Buyback Dummy	.152	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Payout Dummy	.940	.300	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dividend Percent	.572	.109	.537	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Buyback Percent	.041	.595	.179	.091	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Payout Percent	.552	.253	.554	.966	.341	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Buyback Percent of Payout	-.866	.652	NA	-.208	.706	.014	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CEO Stock Percent	-.048	-.049	-.059	-.074	-.037	-.080	-.031	1	.	.	.	.	.	.	.	.	.	.	.	.	.
CEO Portfolio Value	.010	-.031	-.000	-.078	-.038	-.084	-.046	.659	1	.	.	.	.	.	.	.	.	.	.	.	.
CEO Portfolio Sensitivity	.011	-.029	.000	-.078	-.037	-.084	-.046	.658	1.000	1	.	.	.	.	.	.	.	.	.	.	.
CEO Option Value Percent of Portfolio Value	-.186	.018	-.167	-.147	.018	-.135	.124	-.167	-.094	-.092	1	.	.	.	.	.	.	.	.	.	.
CEO Option Delta Percent of Portfolio Sensitivity	-.175	.025	-.157	-.145	.035	-.129	.124	-.185	-.105	-.103	.977	1	.	.	.	.	.	.	.	.	.
EBITDA over Assets	.443	.132	.458	.244	.072	.249	-.090	.038	.037	.037	-.151	-.134	1	.	.	.	.	.	.	.	.
Tobin's Q	-.080	-.015	-.102	-.162	-.066	-.171	-.049	-.021	-.000	.001	.104	.092	-.053	1	.	.	.	.	.	.	.
Log MCAP	.444	.185	.439	.160	.030	.162	-.097	.032	.234	.236	-.017	-.017	.353	.118	1	.	.	.	.	.	.
Leverage	.018	.012	.027	.160	.106	.177	.056	.093	.007	.006	-.170	-.165	.102	-.550	-.145	1	.	.	.	.	.
Retained Earnings over Assets	.507	.041	.490	.237	-.024	.217	-.202	.027	.067	.068	-.156	-.155	.371	-.018	.367	-.252	1	.	.	.	.
Cash over Assets	-.346	-.072	-.343	-.170	-.022	-.168	.146	-.110	-.085	-.085	.223	.211	-.517	.452	-.265	-.441	-.235	1	.	.	.
EBITDA Volatility	-.245	-.056	-.258	-.137	-.032	-.137	.034	-.076	-.082	-.082	.111	.095	-.523	.158	-.219	-.263	-.016	.412	1	.	.
Stock Return	.057	-.026	.040	-.002	-.084	-.023	-.109	.049	.052	.053	.079	.068	.147	.227	.159	-.204	.055	.066	-.085	1	.
Stock Volatility	-.462	-.083	-.459	-.288	.015	-.270	.197	.039	-.067	-.068	.199	.171	-.377	.161	-.359	-.101	-.345	.380	.333	.117	1

Table A.3: Variable Averages by Industry

Industry-level mean values for all variables included in the analysis.

Variable	Consumer	Energy and Utilities	Financials	Healthcare	Industrials	Materials	Real Estate	TMT
Dividend Dummy	0.712	0.385	0.746	0.237	0.851	0.857	0.685	0.504
Buyback Dummy	0.212	0.231	0.099	0.061	0.141	0.102	0.145	0.217
Payout Dummy	0.731	0.462	0.775	0.263	0.868	0.857	0.718	0.562
Dividend Percent	0.023	0.013	0.021	0.005	0.028	0.032	0.025	0.017
Buyback Percent	0.003	0.005	0.001	0.001	0.001	0.001	0.002	0.003
Payout Percent	0.026	0.020	0.021	0.006	0.028	0.034	0.027	0.020
Buyback Percent of Payout	0.088	0.341	0.049	0.162	0.035	0.021	0.081	0.160
CEO Stock Percent	0.017	0.010	0.047	0.018	0.011	0.003	0.089	0.023
CEO Portfolio Value	161.2	29.1	2417.6	127.8	182.3	17.8	2956.2	440.6
CEO Portfolio Sensitivity	1.786	0.301	24.200	1.318	1.858	0.189	29.588	4.437
CEO Option Value Percent of Portfolio Value	0.135	0.139	0.089	0.253	0.112	0.050	0.060	0.190
CEO Option Delta Percent of Portfolio Sensitivity	0.177	0.145	0.126	0.307	0.150	0.063	0.075	0.238
EBITDA over Assets	0.105	0.108	0.048	-0.188	0.107	0.094	0.036	0.078
Tobin's Q	2.296	1.695	1.303	4.311	2.591	1.302	1.076	2.485
Log MCAP	9.119	8.460	9.121	7.862	9.082	9.495	9.202	8.079
Leverage	0.407	0.352	0.230	0.180	0.339	0.318	0.567	0.299
Retained Earnings over Assets	0.221	0.069	0.537	0.104	0.272	0.336	0.255	0.160
Cash over Assets	0.095	0.136	0.095	0.342	0.099	0.079	0.020	0.128
EBITDA Volatility	0.035	0.138	0.119	0.100	0.033	0.028	0.014	0.039
Stock Return	0.123	0.299	0.234	0.136	0.194	0.123	0.181	0.205
Stock Volatility	0.417	0.560	0.407	0.540	0.395	0.354	0.406	0.468
N	156	13	71	228	355	49	124	226

8.2 Specifications with Value-Based Incentives

Table A.4: Multiple Linear Regression – Value Incentives

Estimates capturing the relationship between the value-based specification of equity incentives and the level of payout. All included variables are in decimal form, except for CEO Portfolio Value (SEK Million) and Market Capitalization (natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects

Independent Variables	Without FEs				With FEs			
	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout
<i>Incentive Variables</i>								
(Intercept)	0.006 (0.007)	-0.004** (0.002)	0.002 (0.008)	0.040 (0.108)				
CEO Stock Percent	-0.010 (0.019)	-0.002 (0.003)	-0.012 (0.019)	0.025 (0.155)	-0.007 (0.019)	-0.002 (0.003)	-0.010 (0.019)	-0.025 (0.178)
CEO Portfolio Value	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
CEO Option Value Percent of Portfolio Value	-0.007** (0.003)	0.001 (0.001)	-0.007** (0.003)	0.087* (0.046)	-0.006** (0.003)	0.000 (0.001)	-0.006* (0.003)	0.088* (0.048)
<i>Control Variables</i>								
EBITDA over Assets	0.017*** (0.005)	0.005*** (0.002)	0.021*** (0.006)	-0.158 (0.144)	0.013** (0.005)	0.004*** (0.001)	0.017*** (0.006)	-0.115 (0.140)
Tobin's Q	-0.001*** (0.000)	-0.000 (0.000)	-0.001*** (0.000)	-0.011* (0.006)	-0.001*** (0.000)	-0.000 (0.000)	-0.001*** (0.000)	-0.010* (0.006)
Log MCAP	0.001* (0.001)	0.000** (0.000)	0.002** (0.001)	0.003 (0.006)	0.001 (0.001)	0.000*** (0.000)	0.002** (0.001)	0.004 (0.006)
Leverage	0.025*** (0.006)	0.004** (0.002)	0.029*** (0.006)	-0.089 (0.101)	0.021*** (0.007)	0.006** (0.002)	0.026*** (0.007)	-0.073 (0.119)
Retained Earnings over Assets	0.023*** (0.007)	-0.001 (0.002)	0.022*** (0.007)	-0.230** (0.090)	0.021*** (0.008)	0.002 (0.002)	0.022*** (0.008)	-0.217** (0.108)
Cash over Assets	0.024*** (0.007)	0.004** (0.002)	0.028*** (0.008)	0.306* (0.157)	0.028*** (0.008)	0.004** (0.002)	0.032*** (0.008)	0.276* (0.161)
EBITDA Volatility	0.006 (0.012)	0.002 (0.004)	0.008 (0.012)	0.102 (0.227)	0.012 (0.011)	0.001 (0.004)	0.013 (0.012)	0.086 (0.224)
Stock Return	0.002 (0.001)	-0.001*** (0.000)	0.001 (0.001)	-0.067*** (0.017)	0.001 (0.001)	-0.001*** (0.000)	-0.000 (0.002)	-0.064*** (0.021)
Stock Volatility	-0.027*** (0.005)	0.003 (0.002)	-0.024*** (0.006)	0.321*** (0.107)	-0.024*** (0.006)	0.002 (0.002)	-0.022*** (0.007)	0.272** (0.116)
Num.Obs.	1222	1222	1222	801	1222	1222	1222	801
R2	0.179	0.038	0.177	0.128	0.202	0.066	0.193	0.163
R2 Adj.	0.171	0.028	0.169	0.115	0.186	0.048	0.178	0.138
R2 Within					0.106	0.037	0.113	0.095
R2 Within Adj.					0.097	0.027	0.104	0.081
RMSE	0.02	0.01	0.03	0.21	0.02	0.01	0.03	0.21
Std.Errors	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker
FE: year					X	X	X	X
FE: industry					X	X	X	X

p < 0.1, ** p < 0.05, *** p < 0.01

Table A.5: Logistic Model – Value-Based Specification

Estimates capturing the relationship between the value-based specification of equity incentives and the incidence of payout. All included variables are in decimal form, except for CEO Portfolio Value (SEK Million) and Market Capitalization (natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects

Independent Variables	Without FEs						With FEs					
	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Dummy (scaled AME)	Buyback Dummy (scaled AME)	Payout Dummy (scaled AME)	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Dummy (scaled AME)	Buyback Dummy (scaled AME)	Payout Dummy (scaled AME)
<i>Incentive Variables</i>												
(Intercept)	-3.048*** (0.981)	-4.755*** (0.946)	-2.960*** (0.966)									
CEO Stock Percent	-1.113 (1.763)	-0.064 (1.984)	-1.137 (1.741)	-0.009	-0.001	-0.009	-0.514 (1.750)	-0.392 (2.047)	-0.590 (1.721)	-0.004	-0.003	-0.005
CEO Portfolio Value	-0.000** (0.000)	-0.000 (0.000)	-0.000** (0.000)	-0.036	-0.024	-0.038	-0.000** (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.038	-0.025	-0.042
CEO Option Value Percent of Portfolio Value	-1.128** (0.454)	0.250 (0.435)	-0.789 (0.495)	-0.036	0.008	-0.025	-0.955** (0.465)	0.238 (0.440)	-0.622 (0.510)	-0.029	0.008	-0.018
<i>Control Variables</i>												
EBITDA over Assets	9.666*** (2.263)	5.026*** (1.916)	9.393*** (2.135)	0.241	0.130	0.229	9.671*** (2.415)	4.598** (2.064)	9.457*** (2.237)	0.229	0.115	0.220
Tobin's Q	-0.108 (0.088)	-0.072 (0.056)	-0.174** (0.079)	-0.035	-0.024	-0.055	-0.092 (0.075)	-0.070 (0.058)	-0.163** (0.066)	-0.028	-0.023	-0.049
Log MCAP	0.458*** (0.095)	0.312*** (0.080)	0.496*** (0.097)	0.097	0.068	0.103	0.471*** (0.100)	0.333*** (0.084)	0.517*** (0.102)	0.095	0.071	0.102
Leverage	0.597 (0.717)	0.235 (0.683)	0.186 (0.672)	0.015	0.006	0.005	0.226 (0.835)	0.108 (0.921)	-0.294 (0.798)	0.005	0.003	-0.007
Retained Earnings over Assets	5.110*** (0.916)	-1.327 (1.082)	4.676*** (0.892)	0.119	-0.032	0.107	4.592*** (0.942)	-0.915 (1.338)	4.120*** (0.918)	0.102	-0.021	0.090
Cash over Assets	-0.770 (1.069)	0.895 (1.066)	0.563 (0.996)	-0.016	0.019	0.011	-0.271 (1.172)	1.285 (1.149)	1.189 (1.069)	-0.005	0.027	0.023
EBITDA Volatility	-0.519 (2.201)	0.694 (1.840)	-1.135 (1.921)	-0.005	0.007	-0.010	-0.992 (2.012)	1.312 (1.798)	-1.665 (1.786)	-0.009	0.012	-0.014
Stock Return	0.246* (0.129)	-0.330** (0.143)	0.046 (0.143)	0.015	-0.021	0.003	0.101 (0.164)	-0.404** (0.182)	-0.074 (0.175)	0.006	-0.026	-0.004
Stock Volatility	-3.585*** (0.710)	0.240 (0.840)	-3.272*** (0.690)	-0.069	0.005	-0.062	-3.362*** (0.802)	-0.218 (0.908)	-3.290*** (0.779)	-0.062	-0.004	-0.059
Num.Obs.	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222
R2	0.463	0.080	0.457	0.463	0.080	0.457	0.487	0.106	0.482	0.487	0.106	0.482
R2 Adj.	0.448	0.057	0.442	0.448	0.057	0.442	0.459	0.061	0.453	0.459	0.061	0.453
R2 Within							0.380	0.074	0.378	0.380	0.074	0.378
R2 Within Adj.							0.362	0.049	0.360	0.362	0.049	0.360
RMSE	0.33	0.34	0.33	0.33	0.34	0.33	0.32	0.34	0.32	0.32	0.34	0.32
Std.Errors	by: ticker	by: ticker	by: ticker				by: ticker	by: ticker	by: ticker			

p < 0.1, ** p < 0.05, *** p < 0.01

8.3 Specifications with Log-Transformed Incentives

Table A.6: Multiple Linear Regression (Log-Transformed) – Sensitivity-Based Incentives

Estimates capturing the relationship between the sensitivity-based specification of equity incentives and the level of payout. All included variables are in decimal form, except for CEO Portfolio Sensitivity and Market Capitalization (both in the natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects

Independent Variables	Without FEs				With FEs			
	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout
<i>Incentive Variables</i>								
(Intercept)	-0.000 (0.008)	-0.002 (0.002)	-0.002 (0.009)	0.064 (0.118)				
CEO Stock Percent	-0.012 (0.018)	-0.008*** (0.003)	-0.020 (0.019)	-0.065 (0.152)	-0.007 (0.019)	-0.009*** (0.003)	-0.016 (0.020)	-0.183 (0.152)
Log CEO Portfolio Sensitivity	-0.001** (0.001)	0.000 (0.000)	-0.001 (0.001)	0.003 (0.008)	-0.001** (0.001)	0.000* (0.000)	-0.001 (0.001)	0.005 (0.008)
CEO Option Delta Percent of Portfolio Sensitivity	-0.006** (0.003)	0.001 (0.001)	-0.006* (0.003)	0.070* (0.039)	-0.005* (0.003)	0.001 (0.001)	-0.005 (0.003)	0.071* (0.040)
<i>Control Variables</i>								
EBITDA over Assets	0.019*** (0.005)	0.005*** (0.002)	0.023*** (0.006)	-0.158 (0.144)	0.015*** (0.005)	0.004*** (0.001)	0.019*** (0.006)	-0.118 (0.140)
Tobin's Q	-0.001*** (0.000)	-0.000* (0.000)	-0.001*** (0.000)	-0.011* (0.006)	-0.001*** (0.000)	-0.000 (0.000)	-0.001*** (0.000)	-0.011* (0.006)
Log MCAP	0.002** (0.001)	0.000 (0.000)	0.002** (0.001)	0.001 (0.007)	0.002* (0.001)	0.000 (0.000)	0.002** (0.001)	0.001 (0.008)
Leverage	0.024*** (0.006)	0.004** (0.002)	0.028*** (0.007)	-0.087 (0.102)	0.020*** (0.007)	0.006** (0.002)	0.025*** (0.007)	-0.070 (0.120)
Retained Earnings over Assets	0.023*** (0.007)	-0.000 (0.002)	0.022*** (0.008)	-0.227** (0.090)	0.021*** (0.008)	0.002 (0.002)	0.023*** (0.008)	-0.207** (0.104)
Cash over Assets	0.022*** (0.007)	0.004** (0.002)	0.026*** (0.008)	0.315** (0.157)	0.026*** (0.007)	0.004** (0.002)	0.030*** (0.008)	0.289* (0.162)
EBITDA Volatility	0.010 (0.012)	0.001 (0.004)	0.011 (0.013)	0.090 (0.222)	0.015 (0.011)	0.001 (0.004)	0.016 (0.013)	0.081 (0.220)
Stock Return	0.002* (0.001)	-0.001*** (0.000)	0.001 (0.001)	-0.067*** (0.016)	0.002 (0.001)	-0.001*** (0.000)	0.000 (0.002)	-0.065*** (0.020)
Stock Volatility	-0.025*** (0.005)	0.003 (0.002)	-0.022*** (0.006)	0.314*** (0.109)	-0.021*** (0.006)	0.002 (0.002)	-0.020*** (0.006)	0.262** (0.119)
Num.Obs.	1222	1222	1222	801	1222	1222	1222	801
R2	0.179	0.040	0.174	0.128	0.202	0.069	0.190	0.163
R2 Adj.	0.171	0.031	0.166	0.115	0.186	0.051	0.175	0.138
R2 Within					0.106	0.040	0.110	0.095
R2 Within Adj.					0.097	0.031	0.101	0.081
RMSE	0.02	0.01	0.03	0.21	0.02	0.01	0.03	0.21
Std.Errors	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker
FE: year					X	X	X	X
FE: industry					X	X	X	X

p < 0.1, ** p < 0.05, *** p < 0.01

Table A.7: Multiple Linear Regression (Log-Transformed) – Value-Based Incentives

Estimates capturing the relationship between the value-based specification of equity incentives and the level of payout. All included variables are in decimal form, except for CEO Portfolio Value and Market Capitalization (both in the natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects

Independent Variables	Without FEs				With FEs			
	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout
<i>Incentive Variables</i>								
(Intercept)	0.005 (0.007)	-0.003** (0.002)	0.002 (0.008)	0.052 (0.109)				
CEO Stock Percent	-0.011 (0.018)	-0.008*** (0.003)	-0.019 (0.019)	-0.080 (0.147)	-0.006 (0.019)	-0.009*** (0.003)	-0.015 (0.020)	-0.195 (0.148)
Log CEO Portfolio Value	-0.001** (0.001)	0.000 (0.000)	-0.001 (0.001)	0.004 (0.008)	-0.001** (0.001)	0.000* (0.000)	-0.001 (0.001)	0.006 (0.008)
CEO Option Value Percent of Portfolio Value	-0.008** (0.003)	0.001 (0.001)	-0.007** (0.003)	0.089** (0.045)	-0.007** (0.003)	0.001 (0.001)	-0.006** (0.003)	0.093** (0.047)
<i>Control Variables</i>								
EBITDA over Assets	0.018*** (0.005)	0.005*** (0.002)	0.023*** (0.006)	-0.157 (0.143)	0.015*** (0.005)	0.004*** (0.001)	0.018*** (0.006)	-0.117 (0.139)
Tobin's Q	-0.001*** (0.000)	-0.000* (0.000)	-0.001*** (0.000)	-0.011* (0.006)	-0.001*** (0.000)	-0.000 (0.000)	-0.001*** (0.000)	-0.011* (0.006)
Log MCAP	0.002** (0.001)	0.000 (0.000)	0.002** (0.001)	0.001 (0.007)	0.002* (0.001)	0.000 (0.000)	0.002** (0.001)	0.000 (0.008)
Leverage	0.024*** (0.006)	0.004** (0.002)	0.028*** (0.007)	-0.084 (0.102)	0.020*** (0.007)	0.006** (0.002)	0.025*** (0.007)	-0.066 (0.119)
Retained Earnings over Assets	0.023*** (0.007)	-0.001 (0.002)	0.022*** (0.007)	-0.226** (0.089)	0.021*** (0.008)	0.002 (0.002)	0.023*** (0.008)	-0.206** (0.103)
Cash over Assets	0.022*** (0.007)	0.004** (0.002)	0.026*** (0.008)	0.314** (0.156)	0.026*** (0.007)	0.004** (0.002)	0.030*** (0.008)	0.286* (0.161)
EBITDA Volatility	0.010 (0.012)	0.001 (0.004)	0.011 (0.013)	0.089 (0.223)	0.016 (0.012)	0.001 (0.004)	0.017 (0.013)	0.080 (0.220)
Stock Return	0.002* (0.001)	-0.001*** (0.000)	0.001 (0.001)	-0.068*** (0.016)	0.002 (0.001)	-0.001*** (0.000)	0.000 (0.002)	-0.066*** (0.020)
Stock Volatility	-0.024*** (0.005)	0.003 (0.002)	-0.021*** (0.006)	0.312*** (0.109)	-0.021*** (0.006)	0.002 (0.002)	-0.019*** (0.007)	0.258** (0.118)
Num.Obs.	1222	1222	1222	801	1222	1222	1222	801
R2	0.178	0.039	0.174	0.128	0.201	0.068	0.191	0.163
R2 Adj.	0.170	0.030	0.166	0.115	0.186	0.050	0.175	0.139
R2 Within					0.105	0.039	0.110	0.096
R2 Within Adj.					0.096	0.030	0.101	0.082
RMSE	0.02	0.01	0.03	0.21	0.02	0.01	0.03	0.21
Std.Errors	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker
FE: year					X	X	X	X
FE: industry					X	X	X	X

p < 0.1, ** p < 0.05, *** p < 0.01

Table A.8: Logistic Model (Log-Transformed) – Sensitivity-Based Incentives

Estimates capturing the relationship between the sensitivity-based specification of equity incentives and the incidence of payout. All included variables are in decimal form, except for CEO Portfolio Sensitivity and Market Capitalization (both in the natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects

Independent Variables	Without FEs						With FEs					
	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Dummy (scaled AME)	Buyback Dummy (scaled AME)	Payout Dummy (scaled AME)	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Dummy (scaled AME)	Buyback Dummy (scaled AME)	Payout Dummy (scaled AME)
<i>Incentive Variables</i>												
(Intercept)	-2.454** (1.140)	-3.906*** (1.018)	-2.285** (1.135)									
CEO Stock Percent	-4.281 (2.742)	-4.012* (2.177)	-4.621* (2.751)	-0.035	-0.034	-0.037	-3.241 (2.788)	-4.974** (2.298)	-3.741 (2.796)	-0.026	-0.041	-0.029
Log CEO Portfolio Sensitivity	0.014 (0.085)	0.093 (0.075)	0.019 (0.083)	0.004	0.027	0.005	-0.016 (0.091)	0.110 (0.079)	-0.013 (0.088)	-0.004	0.031	-0.003
CEO Option Delta Percent of Sensitivity	-0.944** (0.385)	0.211 (0.396)	-0.717* (0.411)	-0.034	0.008	-0.026	-0.759* (0.393)	0.183 (0.406)	-0.540 (0.415)	-0.026	0.007	-0.018
<i>Control Variables</i>												
EBITDA over Assets	9.742*** (2.244)	4.975** (1.935)	9.467*** (2.125)	0.245	0.128	0.233	9.684*** (2.399)	4.520** (2.095)	9.475*** (2.238)	0.232	0.113	0.224
Tobin's Q	-0.099 (0.087)	-0.083 (0.057)	-0.163** (0.079)	-0.032	-0.028	-0.052	-0.081 (0.074)	-0.083 (0.059)	-0.149** (0.066)	-0.025	-0.027	-0.046
Log MCAP	0.382*** (0.099)	0.240*** (0.091)	0.409*** (0.101)	0.082	0.053	0.086	0.407*** (0.107)	0.253*** (0.091)	0.438*** (0.107)	0.083	0.054	0.088
Leverage	0.657 (0.723)	0.400 (0.715)	0.249 (0.675)	0.017	0.010	0.006	0.259 (0.838)	0.347 (0.967)	-0.258 (0.794)	0.006	0.009	-0.006
Retained Earnings over Assets	5.096*** (0.921)	-1.193 (1.098)	4.650*** (0.902)	0.120	-0.029	0.107	4.623*** (0.934)	-0.676 (1.338)	4.146*** (0.926)	0.104	-0.016	0.092
Cash over Assets	-0.982 (1.069)	1.023 (1.072)	0.335 (0.998)	-0.020	0.022	0.007	-0.558 (1.181)	1.393 (1.164)	0.838 (1.085)	-0.011	0.029	0.016
EBITDA Volatility	-0.517 (2.193)	0.502 (1.822)	-1.135 (1.928)	-0.005	0.005	-0.010	-0.792 (1.987)	1.217 (1.765)	-1.455 (1.779)	-0.007	0.011	-0.013
Stock Return	0.230* (0.126)	-0.361** (0.143)	0.040 (0.140)	0.015	-0.024	0.002	0.099 (0.158)	-0.456** (0.182)	-0.065 (0.171)	0.006	-0.029	-0.004
Stock Volatility	-3.382*** (0.700)	0.118 (0.818)	-3.029*** (0.678)	-0.066	0.002	-0.058	-3.066*** (0.787)	-0.371 (0.881)	-2.915*** (0.760)	-0.057	-0.007	-0.053
Num.Obs.	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222
R2	0.457	0.081	0.450	0.457	0.081	0.450	0.480	0.107	0.473	0.480	0.107	0.473
R2 Adj.	0.442	0.057	0.435	0.442	0.057	0.435	0.452	0.062	0.444	0.452	0.062	0.444
R2 Within							0.371	0.075	0.367	0.371	0.075	0.367
R2 Within Adj.							0.353	0.050	0.349	0.353	0.050	0.349
RMSE	0.33	0.34	0.33	0.33	0.34	0.33	0.33	0.34	0.32	0.33	0.34	0.32
Std.Errors	by: ticker	by: ticker	by: ticker				by: ticker	by: ticker	by: ticker			

p < 0.1, ** p < 0.05, *** p < 0.01

Table A.9: Logistic Model (Log-Transformed) – Value-Based Incentives

Estimates capturing the relationship between the value-based specification of equity incentives and the incidence of payout. All included variables are in decimal form, except for CEO Portfolio Value and Market Capitalization (both in the natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects

Independent Variables	Without FEs						With FEs					
	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Dummy (scaled AME)	Buyback Dummy (scaled AME)	Payout Dummy (scaled AME)	Dividend Dummy	Buyback Dummy	Payout Dummy	Dividend Dummy (scaled AME)	Buyback Dummy (scaled AME)	Payout Dummy (scaled AME)
<i>Incentive Variables</i>												
(Intercept)	-2.626*** (0.999)	-4.328*** (0.929)	-2.462** (0.990)									
CEO Stock Percent	-4.041 (2.731)	-3.900* (2.149)	-4.361 (2.738)	-0.033	-0.033	-0.035	-3.037 (2.775)	-4.806** (2.269)	-3.495 (2.786)	-0.024	-0.040	-0.027
Log CEO Portfolio Value	0.004 (0.084)	0.087 (0.073)	0.009 (0.082)	0.001	0.026	0.003	-0.026 (0.090)	0.102 (0.077)	-0.023 (0.087)	-0.007	0.029	-0.006
CEO Option Value Percent of Portfolio Value	-1.116** (0.446)	0.305 (0.439)	-0.780 (0.483)	-0.036	0.010	-0.025	-0.945** (0.453)	0.300 (0.445)	-0.618 (0.489)	-0.029	0.010	-0.019
<i>Control Variables</i>												
EBITDA over Assets	9.734*** (2.240)	5.004*** (1.936)	9.457*** (2.123)	0.245	0.129	0.233	9.698*** (2.403)	4.556** (2.095)	9.471*** (2.241)	0.232	0.114	0.224
Tobin's Q	-0.097 (0.088)	-0.083 (0.057)	-0.162** (0.079)	-0.032	-0.028	-0.052	-0.080 (0.074)	-0.083 (0.059)	-0.147** (0.066)	-0.025	-0.027	-0.045
Log MCAP	0.391*** (0.100)	0.243*** (0.091)	0.417*** (0.102)	0.084	0.053	0.088	0.416*** (0.108)	0.256*** (0.091)	0.446*** (0.107)	0.085	0.055	0.090
Leverage	0.653 (0.724)	0.390 (0.712)	0.252 (0.676)	0.017	0.010	0.006	0.235 (0.839)	0.338 (0.958)	-0.274 (0.796)	0.006	0.009	-0.007
Retained Earnings over Assets	5.096*** (0.921)	-1.193 (1.098)	4.650*** (0.902)	0.120	-0.029	0.107	4.609*** (0.931)	-0.680 (1.338)	4.141*** (0.921)	0.103	-0.016	0.092
Cash over Assets	-0.979 (1.070)	1.017 (1.070)	0.327 (0.997)	-0.020	0.022	0.007	-0.553 (1.179)	1.383 (1.161)	0.834 (1.083)	-0.011	0.029	0.016
EBITDA Volatility	-0.479 (2.186)	0.503 (1.821)	-1.093 (1.927)	-0.004	0.005	-0.010	-0.768 (1.983)	1.216 (1.767)	-1.426 (1.780)	-0.007	0.011	-0.012
Stock Return	0.245** (0.124)	-0.364** (0.143)	0.047 (0.139)	0.016	-0.024	0.003	0.117 (0.157)	-0.459** (0.181)	-0.055 (0.170)	0.007	-0.029	-0.003
Stock Volatility	-3.328*** (0.701)	0.106 (0.819)	-2.994*** (0.679)	-0.065	0.002	-0.057	-3.004*** (0.790)	-0.387 (0.881)	-2.876*** (0.762)	-0.056	-0.008	-0.053
Num.Obs.	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222
R2	0.457	0.080	0.450	0.457	0.080	0.450	0.480	0.107	0.473	0.480	0.107	0.473
R2 Adj.	0.442	0.057	0.435	0.442	0.057	0.435	0.452	0.062	0.444	0.452	0.062	0.444
R2 Within							0.371	0.075	0.367	0.371	0.075	0.367
R2 Within Adj.							0.353	0.050	0.349	0.353	0.050	0.349
RMSE	0.33	0.34	0.33	0.33	0.34	0.33	0.33	0.34	0.32	0.33	0.34	0.32
Std.Errors	by: ticker	by: ticker	by: ticker				by: ticker	by: ticker	by: ticker			

p < 0.1, ** p < 0.05, *** p < 0.01

8.4 Specifications with Restricted Samples

Table A.10: Multiple Linear Regression – Sensitivity-Based Incentives – Reduced Sample

Estimates capturing the relationship between the sensitivity-based specification of equity incentives and the level of payout. All included variables are in decimal form, except for CEO Portfolio Sensitivity (SEK million) and Market Capitalization (natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects. Sample is restricted to firm-year observations with non-zero payout

Independent Variables	Without FEs				With FEs			
	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout
<i>Incentive Variables</i>								
(Intercept)	0.021*	-0.008**	0.013	0.039				
	(0.012)	(0.003)	(0.013)	(0.108)				
CEO Stock Percent	-0.007	-0.003	-0.010	0.027	-0.010	-0.005	-0.015	-0.026
	(0.028)	(0.005)	(0.029)	(0.155)	(0.031)	(0.005)	(0.031)	(0.178)
CEO Portfolio Sensitivity	-0.000	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CEO Option Delta Percent of Portfolio Sensitivity	-0.007*	0.002*	-0.005	0.071*	-0.006	0.003**	-0.003	0.072*
	(0.004)	(0.001)	(0.004)	(0.038)	(0.004)	(0.001)	(0.004)	(0.039)
<i>Control Variables</i>								
EBITDA over Assets	0.049**	0.006	0.054**	-0.159	0.046**	0.004	0.050**	-0.117
	(0.021)	(0.004)	(0.022)	(0.145)	(0.023)	(0.004)	(0.023)	(0.141)
Tobin's Q	-0.002***	-0.000	-0.002***	-0.011*	-0.002***	-0.000	-0.002***	-0.010*
	(0.001)	(0.000)	(0.001)	(0.006)	(0.001)	(0.000)	(0.001)	(0.006)
Log MCAP	-0.001	0.000	-0.000	0.003	-0.000	0.000*	0.000	0.004
	(0.001)	(0.000)	(0.001)	(0.006)	(0.001)	(0.000)	(0.001)	(0.006)
Leverage	0.044***	0.007*	0.050***	-0.092	0.044***	0.010**	0.053***	-0.077
	(0.012)	(0.004)	(0.012)	(0.102)	(0.013)	(0.004)	(0.013)	(0.120)
Retained Earnings over Assets	0.010	-0.002	0.007	-0.231**	0.010	0.001	0.009	-0.217**
	(0.010)	(0.003)	(0.010)	(0.090)	(0.011)	(0.003)	(0.011)	(0.108)
Cash over Assets	0.045***	0.009*	0.053***	0.309*	0.051***	0.007	0.057***	0.280*
	(0.016)	(0.005)	(0.016)	(0.158)	(0.017)	(0.005)	(0.016)	(0.162)
EBITDA Volatility	0.033*	0.007	0.041*	0.100	0.038*	0.009	0.047*	0.087
	(0.019)	(0.008)	(0.022)	(0.227)	(0.023)	(0.009)	(0.027)	(0.224)
Stock Return	0.003*	-0.003***	0.001	-0.067***	0.002	-0.003***	-0.001	-0.063***
	(0.002)	(0.001)	(0.002)	(0.016)	(0.003)	(0.001)	(0.003)	(0.021)
Stock Volatility	-0.023**	0.013***	-0.009	0.321***	-0.019	0.012***	-0.007	0.274**
	(0.011)	(0.004)	(0.012)	(0.108)	(0.014)	(0.004)	(0.014)	(0.117)
Num.Obs.	801	801	801	801	801	801	801	801
R2	0.133	0.100	0.147	0.128	0.154	0.151	0.165	0.162
R2 Adj.	0.120	0.087	0.134	0.114	0.129	0.126	0.141	0.137
R2 Within					0.126	0.087	0.146	0.094
R2 Within Adj.					0.112	0.073	0.133	0.080
RMSE	0.03	0.01	0.03	0.21	0.03	0.01	0.03	0.21
Std.Errors	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker
FE: year					X	X	X	X
FE: industry					X	X	X	X

p < 0.1, ** p < 0.05, *** p < 0.01

Table A.11: Multiple Linear Regression – Value-Based Incentives – Reduced Sample

Estimates capturing the relationship between the value-based specification of equity incentives and the level of payout. All included variables are in decimal form, except for CEO Portfolio Value (SEK Million) and Market Capitalization (natural logarithm of SEK Million). Results are presented with (right) and without (left) industry and year fixed effects. Sample is restricted to firm-year observations with non-zero payout

Independent Variables	Without FEs				With FEs			
	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout	Dividend Percent	Buyback Percent	Payout Percent	Buyback Percent of Payout
<i>Incentive Variables</i>								
(Intercept)	0.021*	-0.008**	0.013	0.040				
	(0.012)	(0.003)	(0.013)	(0.108)				
CEO Stock Percent	-0.006	-0.003	-0.010	0.025	-0.009	-0.005	-0.015	-0.025
	(0.028)	(0.005)	(0.028)	(0.155)	(0.031)	(0.005)	(0.031)	(0.178)
CEO Portfolio Value	-0.000	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CEO Option Value Percent of Portfolio Value	-0.008*	0.002	-0.006	0.087*	-0.006	0.003*	-0.004	0.088*
	(0.005)	(0.001)	(0.005)	(0.046)	(0.005)	(0.001)	(0.005)	(0.048)
<i>Control Variables</i>								
EBITDA over Assets	0.049**	0.006	0.054**	-0.158	0.046**	0.004	0.050**	-0.115
	(0.021)	(0.004)	(0.022)	(0.144)	(0.023)	(0.004)	(0.024)	(0.140)
Tobin's Q	-0.002***	-0.000	-0.002***	-0.011*	-0.002***	-0.000	-0.002***	-0.010*
	(0.001)	(0.000)	(0.001)	(0.006)	(0.001)	(0.000)	(0.001)	(0.006)
Log MCAP	-0.001	0.000	-0.000	0.003	-0.000	0.000*	0.000	0.004
	(0.001)	(0.000)	(0.001)	(0.006)	(0.001)	(0.000)	(0.001)	(0.006)
Leverage	0.044***	0.007*	0.050***	-0.089	0.044***	0.010**	0.053***	-0.073
	(0.012)	(0.004)	(0.012)	(0.101)	(0.013)	(0.004)	(0.013)	(0.119)
Retained Earnings over Assets	0.010	-0.003	0.007	-0.230**	0.010	0.000	0.009	-0.217**
	(0.010)	(0.003)	(0.010)	(0.090)	(0.011)	(0.003)	(0.011)	(0.108)
Cash over Assets	0.044***	0.009*	0.053***	0.306*	0.051***	0.007	0.057***	0.276*
	(0.016)	(0.005)	(0.016)	(0.157)	(0.017)	(0.005)	(0.017)	(0.161)
EBITDA Volatility	0.033*	0.007	0.040*	0.102	0.038*	0.009	0.047*	0.086
	(0.019)	(0.008)	(0.022)	(0.227)	(0.023)	(0.009)	(0.027)	(0.224)
Stock Return	0.003*	-0.003***	0.001	-0.067***	0.002	-0.003***	-0.001	-0.064***
	(0.002)	(0.001)	(0.002)	(0.017)	(0.003)	(0.001)	(0.003)	(0.021)
Stock Volatility	-0.023**	0.013***	-0.009	0.321***	-0.019	0.012***	-0.007	0.272**
	(0.011)	(0.004)	(0.012)	(0.107)	(0.014)	(0.004)	(0.014)	(0.116)
Num.Obs.	801	801	801	801	801	801	801	801
R2	0.132	0.098	0.147	0.128	0.154	0.149	0.165	0.163
R2 Adj.	0.119	0.085	0.134	0.115	0.129	0.124	0.141	0.138
R2 Within					0.125	0.085	0.146	0.095
R2 Within Adj.					0.112	0.071	0.133	0.081
RMSE	0.03	0.01	0.03	0.21	0.03	0.01	0.03	0.21
Std.Errors	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker	by: ticker
FE: year					X	X	X	X
FE: industry					X	X	X	X

p < 0.1, ** p < 0.05, *** p < 0.01

8.5 Variance Inflation Factors

Table A.12: Variance Inflation Factors

Variance inflation factors for all independent variables included in the regressions. The VIFs indicate low to moderate multicollinearity across specifications, confirming that no variable exhibits inflation levels that would threaten the reliability of coefficient estimates

Variable	<i>Sensitivity incentives</i>		<i>Value incentives</i>	
	VIF	1/VIF	VIF	1/VIF
CEO Stock Percent	1.93	0.52	1.92	0.52
CEO Portfolio Sensitivity (Value)	1.96	0.51	1.95	0.51
CEO Option Delta (Value) Percent of Portfolio Sensitivity (Value)	1.13	0.88	1.14	0.88
EBITDA over Assets	2.03	0.49	2.03	0.49
Tobin's Q	1.73	0.58	1.73	0.58
Log MCAP	1.54	0.65	1.54	0.65
Leverage	1.95	0.51	1.95	0.51
Retained Earnings over Assets	1.64	0.61	1.63	0.61
Cash over Assets	2.17	0.46	2.17	0.46
EBITDA Volatility	1.63	0.61	1.63	0.61
Stock Return	1.16	0.86	1.16	0.86
Stock Volatility	1.50	0.67	1.51	0.66
Mean	1.70	0.61	1.70	0.61

8.6 Artificial Intelligence

Artificial intelligence, specifically ChatGPT, was used in a limited and supportive capacity during the preparation of this thesis. The large language model (LLM) primarily assisted with language refinement, including grammatical corrections, improved conciseness, and enhanced sentence clarity by providing suggestions of refinement to the text we had written. Its use contributed to the overall language quality and writing efficiency of the thesis. No substantive risks were identified, and the tool was applied to refine our own text rather than to generate original content. All outputs were nonetheless carefully and critically reviewed.