PAYOUT CHOICES

A COMPARATIVE STUDY OF THE IMPACT OF SHARE REPURCHASE AND DIVIDEND INCREASE ANNOUNCEMENTS ON ABNORMAL RETURNS IN SWEDEN

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Abstract:

This thesis uses a dataset of dividend increase announcements and share repurchase announcements in Sweden between 2000 and 2019 to investigate their comparative impact on short-term market reactions by estimating cumulative abnormal return over short-run event windows and long-term stock performance by calculating buy-and-hold abnormal returns over longer horizons. Our findings show that firms announcing dividend increases exhibit stronger and more significant average short-term cumulative abnormal returns in windows around the announcement compared to firms announcing buybacks. In our buy-and-hold abnormal return analysis, we find both announcement types to show significant and in similar magnitude abnormal returns in the long-term windows following the announcement. This finding suggests an initial market underreaction for both types of announcements, especially buybacks, with a gradual incorporation into stock prices over time. Further, using a panel data regression with fixed effects for firms and time, we find leverage, assets, and valuation at the time of announcement to be firm characteristics that strongly relate to long-run abnormal returns for both announcement types.

Keywords:

Payout policy, Signalling, Share repurchase, Dividend increase, Announcements, Abnormal returns

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Introduction

Corporate payout policy is a cornerstone of financial decision-making, encompassing the ways in which firms choose to return excess cash to their shareholders. In theory, under the assumption of perfect capital market conditions, a firm's choice of payout policy has no effect on its valuation (Miller and Modigliani, 1961). The theory implies that share repurchases and dividends are perfect substitutes and that neither affect shareholder value, which is dependent solely on investment decisions and cash flow generation of firms. However, markets in the real world deviate from these idealised conditions, making firms' payout choices economically meaningful.

Historically, dividends have been the primary payout method for companies, both in Sweden and internationally, reflecting a longstanding expectation of regular income for shareholders. However, since March 2000, when share repurchases were legalised in Sweden, firms gained a new tool for distributing cash to investors. Following this regulatory change, share repurchases have grown steadily in popularity and become a complement to dividends in Swedish capital markets. The introduction of share repurchases marked a fundamental shift in corporate payout policy in Sweden. Before the legalisation, firms that had surplus cash beyond their investment needs were limited to retaining earnings or issuing extra, special dividends. The choice of repurchasing shares changed firms' payout strategies and aligned Sweden with international trends. For example, in the United States, share repurchases had increased substantially since the 1980s, gradually substituting dividends (Grullon and Michaely, 2002). By the 21st century, share repurchases surpassed dividends as the dominant form of payout in the U.S. (Skinner, 2008). The Swedish legalisation of share repurchases thus creates a natural starting point for our empirical analysis, a market which moved from firms having a single dominant payout method to two viable options. Studying this transition gives insights into how firms' payout choices influence shareholder value in a relatively young buyback market.

According to signalling theory, firms that increase dividends do so to credibly signal sustainable and strong future earnings (Bhattacharya, 1979; Miller and Rock, 1985), while firms initiate share repurchase programs to signal stock undervaluation (Vermaelen, 1981). Further, agency theory suggests that returning free cash flow to shareholders, regardless of payout method, mitigates agency issues by reducing funds under managerial discretion (Jensen, 1986; Easterbrook, 1984). However, the credibility and informational content of the signals differ, as dividends are a long-term commitment to higher payouts, while share repurchases can vary and offer more flexibility (Jagannathan, Stephens, and Weisbach, 2000).

Expanding on these theories, Allen, Bernardo, and Welch (2000) propose that dividends attract favourable investor clientele, particularly tax-exempt institutional investors, that can improve firm oversight and governance.

However, despite the theoretical appeal, evidence from practice shows doubts in how close these theories match actual managerial thinking. Brav, Graham, Harvey, and Michaely (2004) find little support for signalling, agency, or clientele theories as conscious drivers of payout decisions. Managers instead report that dividends are maintained to meet investor expectations and avoid negative market reactions, while share repurchases are used opportunistically for their flexibility, stock price support, and earnings-per-share management. Thus, the question of how investors interpret the two forms of payouts remains open, as well as whether short-term and long-term reactions between them differ. Given this context, the central research question of this thesis is:

How do share repurchase announcements and dividend increase announcements compare in their effects on short-term and long-term shareholder value in Sweden?

This question is further divided into three sub-questions:

Q1: How do short-term market reactions and abnormal returns compare between share repurchases and dividend increase announcements?

Q2: How do long-term abnormal returns compare following share repurchase announcements and dividend increase announcements?

Q3: How do firm characteristics and announcement variables influence the long-term abnormal returns following payout announcements?

The aim of this thesis is to contribute to existing studies with new empirical evidence on the effects of corporate payout policy by examining how dividend increase announcements and share repurchase announcements affect shareholder value in the Swedish market. Sweden presents a particularly interesting setting for this analysis due to its institutional setting, with concentrated ownership, strong governance structure, and distinct tax treatments.

This thesis makes three key contributions to existing literature. First, we conduct a direct empirical comparison of dividend increase announcements and share repurchase announcements using a consistent methodology and time period. While most prior studies examine one payout type in isolation, this approach

allows us to assess the relative credibility, strength, and investor interpretation of each payout announcement. Second, we link short-term effects with long-term stock performance by analysing both cumulative abnormal returns (CARs) in short, symmetrical windows around the announcement dates and buy-and-hold abnormal returns (BHARs) over extended periods following the announcements. By examining both, we are able to see if the initial reaction to the announcements reflects lasting firm value or whether the information is gradually incorporated into the stock prices. Third, explore how firm-specific characteristics influence the long-run abnormal returns following the announcements, providing insights into what types of firms benefit from which type of payout announcement type. Collectively, these contributions aim to improve the understanding of how investors react to different announcements of corporate payout policy in the Swedish market.

Our findings reveal several notable patterns in how Swedish investors respond to the different forms of payout announcements. We observe a more immediate and significantly stronger market reaction to dividend increase announcements in comparison to share repurchase announcements. This pattern diverges from previous evidence in more mature buyback markets, where share repurchase announcements exhibit stronger and more statistically significant short-term announcement returns. While in the short term, the market favours dividend increase announcements, our long-term study shows statistically significant and very similar abnormal returns for both payout announcement types across all observed horizons. This would suggest an initial underreaction from the market for both payout types, especially for buybacks, and a gradual incorporation of the information in the stock price over time. Finally, our panel data regression analysis shows that firm characteristics such as leverage, assets, and price-to-book ratio influence long-term abnormal returns following payout announcements. Together, our findings indicate that dividend increases have a stronger short-term signalling value in Sweden, and although share repurchases are initially met with muted reactions, they offer comparable and even slightly higher long-run abnormal returns.

I. Theoretical Framework and Literature Review

Payout policy has been extensively studied in finance theory, resulting in multiple frameworks to understand how share repurchases and dividends influence firm and shareholder value. Miller and Modigliani (1961) famously argue that under perfect capital market conditions, absent of taxes, transaction costs, and information asymmetry, a firm's payout policy is irrelevant to its valuation. According

to this dividend irrelevance theory, shareholder value is solely determined by the firm's investment policy and cash flow generation and not by how earnings are distributed. Investors who desire cash can replicate dividend payments by selling a portion of their shares, making the payout choice of the firm irrelevant to their overall wealth. This provides a baseline that any impact of payout policy on firm value must stem from market frictions or imperfections.

Information asymmetry does exist in reality, as management often possess information about firm prospects that outside investors do not. Signalling theory suggests that payout decisions can convey some of this private information to the market. Lintner (1956) provides early support for this view and documents a high reluctance from firms to cut dividends and only increase them after confirming that earnings improvements are sustainable. Building on this, Bhattacharya (1979) and Miller and Rock (1985) present models in which management commits to paying higher dividends to signal confidence in future earnings. Maintaining dividends is costly, and firms that are not able to sustain an increase will face market penalties. Therefore, only firms with strong and stable cash flows can afford to send this signal. An announced increase in dividends is thus interpreted as management's indication of robust future performance. Similarly, share repurchases can also serve as signals under asymmetric information. Vermaelen (1981) formalises the idea that open-market share repurchase announcements signal management's belief of stock undervaluation. Insiders, who possess superior information about the firm's actual value, are incentivised to repurchase shares when the stock is temporarily undervalued. Therefore, under signalling theory, both dividend increases and share repurchase announcements should cause positive market reactions, as the information is incorporated into the stock price.

Another set of theories focuses on agency conflicts between management and shareholders. Separation of ownership and control can lead to managers not always acting in the best interest of the shareholder, especially if the firm generates substantial free cash flow. Jensen (1986) introduced the free cash flow hypothesis, arguing that in firms that generate cash in excess of their profitable investment opportunities, managers may engage in value-destroying behaviours. Management could be tempted to invest in inefficient projects or spend on perks rather than returning cash to shareholders. In this context, payouts play a crucial governance role, as distributing excess cash to shareholders through dividend increases or share repurchases can mitigate agency problems by reducing the resources under managerial control. While signalling and agency theories dominate traditional views on payout policy, a more recent perspective offers alternative motivations. Allen et al. (2000) develop a model based on tax clientele effects, where dividend

payments attract tax-exempt institutional investors that enhance firm value through effective monitoring. Firms of high quality use dividends to signal their type and then benefit from the superior governance that institutions provide. Their model also explains that firms smooth dividends over time to maintain this investor clientele. They argue that share repurchases are less efficient in attracting institutional investors as they lack the same regularity and commitment.

Survey evidence from Brav et al. (2005), however, challenges how these theoretical motives reflect corporate behaviour. Based on responses from 384 CFOs in the United States, they find that the primary reasons for dividends being maintained are to meet investors' expectations and avoid negative market reactions. They find share repurchases to be used for other reasons, such as improving earnings-per-share or responding to stock undervaluation. However, they find that if firms were free of the constraint of their historical dividend payout policy, most would substitute dividends for share repurchases. The lack of support for signalling, agency, or clientele theories in practice highlights a gap between academic theory and actual intentions of managers.

As share repurchases have gained popularity, questions have arised regarding whether they serve as substitutes to dividends. The substitution hypothesis posits that firms may prefer share repurchases over dividends due to flexibility and tax advantages. Grullon and Michaely (2002) analyse the rise of share repurchases in the United States and find evidence of substitution driven by taxes. Expenditures on share repurchases increased at an average annual rate of 26.1 percent between 1980 and 2000, while dividends increased by 6.8 percent. They find that many firms did not necessarily cut existing dividends but rather used cash previously allocated for dividend increases for share repurchases. Further, they find that investors treat the two as substitutes, as firms that announced dividend cuts but simultaneously repurchased shares experience little negative market reactions. Skinner (2008) documents that by the 2000s, share repurchases had overtaken dividends as the dominant form of payout in the United States, consistent with the substitution hypothesis.

Consistent with the signalling hypothesis, empirical research agrees that both types of announcements, dividend increases and share repurchases, result in positive abnormal returns around the event. Peyer and Vermaelen (2009) report that open-market share repurchase announcements see significant average CAR of +2.39% in the three-day window around the announcement. An international study by Manconi, Peyer, and Vermaelen (2019) finds that buyback announcements outside of the United States see average significant positive abnormal returns of 1.42%. Grullon, Michaely, and Swaminathan (2002) find an average abnormal

return of 1.34% for dividend increase announcements in the same three-day window, and in another study, Grullon and Michaely (2004) find an average abnormal return of 2.71% for share repurchase announcement in the same window.

Guay and Harford (2000) provide one of the few studies directly comparing the signalling roles of dividend increases and share repurchases, with the main focus being cash flow implications. They find dividend increases to be associated with permanent operating cash flow improvements, while share repurchases are linked to transitory cash flow shocks. Moreover, their findings on stock returns in a ten-day window around announcements show an average of 2.3% for share repurchases and 1.19% around substantial dividend increases. The characteristics of the payout and the firm are also analysed in their impact on the short-term returns, showing more positive market reactions for firms with higher cash holdings and lower market-to-book ratios.

In addition to short-term effects, researchers have explored whether these payout choices lead to any long-run abnormal returns for shareholders. Ikenberry, Lakonishok, and Vermaelen (1995) find that share repurchases announced in the period 1980-1985 saw average buy-and-hold abnormal returns of 16.02% in year three, with a decreasing value of 14.55% in year four. The effects were smaller for announcements in the following period, 1986-1990, where averages were 9.21% in year three and 10.24% in year four. Further, they find that high book-to-market firms experienced 45.3% buy-and-hold abnormal returns on average. Similarly, Manconi et al. (2019) find that firms outside of the United States experience abnormal returns between 21% and 32% over four years following share repurchase announcements. For dividends, Benartzi, Michaely, and Thaler (1997) find that firms that increase dividends show strong past earnings growth but did not experience superior earnings growth in subsequent years but did see significant buy-and-hold abnormal returns of 8.0% on average in the three years after the announcements. Grullon et al. (2002) similarly find that dividend-increasing firms tend to mature, with declining growth and investments, but that such firms exhibit average three-year buy-and-hold abnormal returns of 17.44%.

While the past empirical studies mentioned look at different samples and time periods, their findings show positive short-term and long-term abnormal returns for both share repurchase announcements and dividend increase announcements. In the studies, buyback announcements have been found to produce greater abnormal returns on average, both with initial market reactions and long-term drifts, when compared to dividend increases, which would indicate that its undervaluation signal is perceived stronger than the signal of sustainable future earnings of dividend increases.

II. Data and Sample Selection

A. Data Sources and limitations

Our empirical analysis is based on data from two main sources: S&P Capital IQ and the Swedish House of Finance (SHoF) Research Data Center. These databases collectively provide the necessary event data, firm financials, stock prices, and factor returns.

Capital IQ is the primary source for announcement data for firms on the Stockholm Stock Exchange. For share repurchases, the database is used to obtain information on announcement dates, the percentage of shares sought, and the total number of shares sought in the program. For dividends, announcement dates, dividend yields, and the announced increases are obtained. Moreover, the database is also used to collect the firm-level financial data used as explanatory variables in the panel data regression.

Stock prices are obtained from SHoF's database FinBas. We have extracted daily stock prices, adjusted for corporate actions, of listed firms on the Stockholm Stock Exchange from the time period 1999 to the latest available 2023 in order to have data early enough for the estimation window for short-term expected return calculations and late enough for the long-term abnormal return calculations. Further, SHoF provides Fama-French (1993) factor returns for Swedish stocks. We have extracted Fama-French three-factor data used for estimations of expected returns for our short-term event study. Market return data for our market model estimations is also extracted from the same database, which are daily returns following the SIX Return Index, a value-weighted index including reinvested dividends for all listed stock on the Stockholm Stock Exchange.

While both Capital IQ and SHoF are well-established and widely used academic research, they present some limitations to our study that affect our sample. First, Capital IQ lacks full coverage and consistency for certain event details. Many share repurchase announcements are missing planned program terms, which are used as explanatory variables in our panel data regression. This could be due to either a lack of data on Capital IQ or a lack of disclosure from repurchasing firms. Further, dividend initiation announcements (first-time dividends) are sometimes wrongly labelled as dividend increase announcements, and for a small number of events, increases were recorded even though the announced dividend did not exceed the prior year's payout, these misclassified events have had to be manually removed. Lastly, SHoF's limitation of stock price data available up to 2023 and

FF3 factor data up to 2019 required us to restrict our sample.

B. Sample Selection

The sample of payout announcements in our study spans from 2000 to 2019, which as previously explained is motivated by the Swedish share repurchase legalisation, and restricted due to data availability, and in order to be able to conduct a long-term analysis.

Our repurchase sample consists exclusively of open-market share repurchase announcements to maintain consistency, and as these represent the most common form of buybacks in Sweden. The sample for the short-term event study is constructed from all identified announcements on Capital IQ. Due to the use of the percentage of share sought in a program as an explanatory variable in the panel data regression, we have had to limit this sample to the announcements that include at least one clear measure of the repurchase program's intended size. If a percentage is not available, but the number of shares is, it is calculated by dividing the number of shares by the firm's market capitalisation on the announcement date. While this approach excludes a number of events with insufficient details for our panel data regression, it is necessary in the comparison of the announcement types.

For the dividend sample, we focus on announcements of increases in regular (ordinary) dividends. To ensure a consistent comparison, we do not include announcements of special dividends or stock dividends. The Capital IQ dividend data is screened to include events where a firm's board publicly announces a higher regular dividend per share compared to the previous year. In a number of cases, dividend increases are first "proposed" and then "approved" at a later date, in these cases, we have excluded any later approvals from our sample. This is motivated by the notion that we aim to capture the market reaction when the information first becomes public, as it is not the later approval that is expected to trigger investor response.

Further, in order to capture meaningful investor responses, we choose to include "substantial" dividend increases as defined by Guay and Harford (2000). These are announcements in which the increase in dividends per share is larger than that of the previous year or where no increase was made the prior year. This definition helps exclude predictable and routine adjustments that are unlikely to convey new information, ensuring that the included events represent deliberate decisions with the potential to generate meaningful market responses. As mentioned, dividend initiations are also excluded from the sample as such often represent a new stage in a firm's life cycle and a reduction in risk (Dyl and Weigand, 1998; Venkatesh,

1989).

After constructing the initial list of dividend and share repurchase events following the above mentioned criteria, we check for data quality. A small number of duplicates and conflicting entries, and a few misclassified dividend initiations, are manually removed, and verified across sources, such as company news releases, when possible. The final dataset consists of two samples, one for dividend increase announcements and one for share repurchase announcements, each fulfilling the consistency filters described. These samples form the basis for the empirical analysis that follows.

Table 1
Descriptive Statistics

This table reports descriptive statistics for the samples. In Table 1A, the total open market share repurchases and the total dividend increases are presented under Total Events. The initial cleaning removes all events that occurred after the cutoff date, 2019-12-27, cleans events that are missing a ticker or event date, and removes dividend increases that are not substantial, i.e. larger than prior years increase or after year with no increase. The number of firms that announce the clean events are presented, as well as how many firms that announce both dividend increases and buyback announcers in our sample. Table 1B reports mean firm characteristics that are used in the panel data regression. The table reports the mean leverage, cash-to-assets, assets, percentage of shares sought in buyback announcements, dividend yield and the price-to-book ratio, (market value of equity/book value of equity).

Table 1A. Event and Firm Summary

Metric	**Buybacks**	**Dividends**
Total Events	805	914
Clean Events	637	559
Unique Firms	116	168
Firms in Both Types	91	91

Table 1B. Mean Firm Characteristics

Characteristic	Buybacks	Dividends
Leverage	1.645	1.023
Cash-to-Assets	0.085	0.096
Assets	142,428.243	91,171.890
Pct Shares Sought	3.643	–
Dividend Yield	–	2.807
Price-to-Book Ratio	2.865	4.961

III. Methodology

This section outlines the empirical strategy employed to assess the shareholder value effects of share repurchase and dividend increase announcements, with two complementary approaches being applied. Firstly, a short-term event study focusing on cumulative abnormal returns (CARs) around the announcement dates and a long-term analysis based on buy-and-hold abnormal returns (BHARs) over longer post-announcement periods. Combining short-term and long-term analyses allows us to capture both the immediate and sustained impact of payout announcements. Further, we conduct a panel data regression to identify if firm-specific characteristics can be determinants of long-run abnormal returns.

A. Short-Term Event Study

To measure the immediate stock price reactions to a substantial dividend increase and share repurchase announcements, we follow a standard event study methodology outlined by MacKinlay (1997). This approach, applied by Ikenberry et al. (1995) and Manconi et al. (2019), calculates abnormal returns by comparing observed stock returns around an event to an expected return benchmark. Each event is defined by an announcement date (day 0), which is the first public disclosure of a repurchase program or dividend increase.

Data is prepared by creating a pair of the event and firm and computing the predicted excess return throughout the event window. The Capital Asset Pricing Model and Fama-French three-factor model are then regressed on the estimation window [-120, -20] to estimate the predicted excess return. Subtracting the expected return from the actual return during the event window gives the abnormal return for the different days. This is then summed to give the cumulative abnormal return (CAR) for the three event windows.

We consider several symmetric event windows around the announcement date, specifically [-1, +1], [-2, +2], and [-3, +3] trading days to capture short-term

reactions. The windows measure the CAR over different short intervals, which allows us to see if the market reaction is immediate or if it anticipates or lags the announcement. Using multiple windows helps us assess robustness, a significant effect in the [-1, +1] window would indicate immediate reaction, and including the [-3, +3] window captures potential information leakage or delayed adjustments surrounding the event. Using the market model, we regress the stock's historical return on the SIX Return Index over the pre-event estimation window [-120, -20] trading days. The chosen window is long enough to obtain reliable estimates while stopping well before the event to avoid contamination. Employing both the Capital Asset Pricing Model and the Fama-French three-factor model for robustness ensures that the analysis captures potential risk adjustments and mitigates model specification concerns. For robustness, the same method has been applied with differing event windows. These results are reported in the appendix.

B. Long-Term Buy-and-Hold Performance

To examine long-run stock returns following announcements, we calculate buy-and-hold abnormal returns, following the methodology used by Ikenberry et al. (1995). BHAR measures the total difference in compounded returns between event firms and a portfolio of matched firms for specific post-event horizons. This is to test for any long-term drifts or reversals of returns not reflected in the short-term reaction.

For each event, we calculate the BHAR of the stock from the first calendar month after the announcement up to the chosen horizons of 12, 24, 36, and 48 months. The BHAR model looks at the stock price data at the start of the event, computes daily log returns, and aggregates them at the monthly level. These are then summed and converted into total return for the horizon. The same process is done for the matched benchmark portfolio. The abnormal return is calculated by subtracting the return from the benchmark portfolio from the actual returns of event firms in the event horizons studied.

The benchmark portfolio is constructed based on market value of equity, and book-to-market ratio. Firms are evaluated for the portfolio on the differences in latest available market capitalisation and book-to-market ratio prior to the event. The 10 nearest neighbors are used as the benchmark portfolio. The nearest neighbors are based on a score calculated from the absolute value differences of peers size and book-to-market ratio.

For robustness, the same method has been applied but the BHAR was based on a portfolio constructed only on the absolute differences in size. These results

are reported in the appendix.

C. Panel Data Regression

To investigate which firm characteristics explain the cross-sectional variation in long-run outcomes, we conduct a panel data regression analysis. The structure of our data, containing multiple observations of the same firms at different times, makes a panel data regression analysis the most appropriate alternative to account for unobserved heterogeneity that may bias our results. The panel estimations account for fixed effects for firms and years. The firm fixed effects control for time-invariant, unobserved characteristics within the different firms, while the year fixed effects account for external shocks, such as market downturns. This reduces the omitted variable bias and improves the accuracy of the results. Standard errors are clustered to account for serial correlation within firms over time.

This is to identify factors that make some announcements yield higher BHARs than others. The approach is motivated by prior research suggesting that long-term stock performance following payout announcements can depend on firm attributes, such as size, valuation, and financial profile (Ikenberry et al., 1995). By incorporating firm characteristics, we test whether some types of firms experience larger long run gains following the both types of announcements.

We specify a panel regression model where the dependent variable is long-term abnormal returns for each event, approximated by the BHAR over 12, 24, 36 and 48 months, and the independent variables are firm-specific factors measured prior to and at the time of the announcement date. The key characteristics are largely in line with Guay and Harford (2000), and we use the price-to-book ratio as a proxy for undervaluation. The following explanatory variables capture key firm characteristics likely to influence abnormal returns: leverage, cash-to-assets ratio, ln(Assets), percentage of shares sought in buyback announcement, dividend yield, price-to-book ratio.

The panel regression allows us to determine whether the long-run return is related to characteristics of firms and if these characteristics differ between firm types. It allows us to bridge our findings with the findings and predictions of previous literature.

IV. Results and Discussion

Table 2
Cumulative Abnormal Returns Around Payout Announcements

This table reports the short-term cumulative abnormal returns (CARs) for dividend increases and share repurchase announcements. CARs are calculated based on both the market model (CAPM) and the Fama-French three-factor model (FF3). Event windows are [-1, +1], [-2, +2], and [-3, +3] days relative to the announcement dates. Significance levels are reported as: *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 2A. Short-Term Cumulative Abnormal Returns (CAR) – Buybacks

Model	Window	Mean CAR	t-stat	p-value	N
CAPM	CAR[-1,+1]	0.0027	1.4969	1.35e-01	531
CAPM	CAR[-2,+2]	0.0039**	2.0304	4.28e-02	532
CAPM	CAR[-3,+3]	0.0046**	2.1202	3.45e-02	532
FF3	CAR[-1,+1]	0.0025	1.4010	1.62e-01	531
FF3	CAR[-2,+2]	0.0038**	1.9688	4.95e-02	532
FF3	CAR[-3,+3]	0.0047**	2.1889	2.90e-02	532

Table 2B. Short-Term Cumulative Abnormal Returns (CAR) – Dividends

Model	Window	Mean CAR	t-stat	p-value	N
CAPM	CAR[-1,+1]	0.0128***	5.1954	3.01e-07	489
CAPM	CAR[-2,+2]	0.0120***	4.7613	2.53e-06	493
CAPM	CAR[-3,+3]	0.0130***	5.0229	7.13e-07	494
FF3	CAR[-1,+1]	0.0129***	3.9071	1.07e-04	489
FF3	CAR[-2,+2]	0.0122***	3.5133	4.83e-04	493
FF3	CAR[-3,+3]	0.0132***	3.7331	2.11e-04	494

A. Short-Term Announcement Effects

Table 2 presents the results of the event study on cumulative abnormal returns (CARs) surrounding dividend increase announcements and share repurchase announcements, measured over the three symmetric event windows [-1, +1], [-2, +2], and [-3, +3]. The results are separately reported using both the Capital Asset Pricing Model and the Fama-French three-factor model for calculations of expected returns.

The results for the dividend increase announcements show consistently positive and highly statistically significant CARs across all event windows and both estimation models. The mean CAR ranges from approximately +1.20% to +1.32%. The

T-statistics for dividends consistently exceed 3.5, with p-values below 0.01 in every window, indicating a highly statistically significant market reaction. Notably, the CARs remain relatively stable across all windows, showing only a slight variation with a dip in the [-2, +2] window compared with the [-1, +1] window and a slight increase in the [-3, +3] window. The observed pattern would suggest that most price changes to dividend increases occur very close to the announcement date, and extending the window does not materially change the market reaction.

In contrast, share repurchase announcements produce smaller and less statistically significant abnormal returns. Mean buyback CARs range from approximately +0.25% to +0.47% depending on the event window and estimation model, with t-statistics varying between 1.40 and 2.19. In both estimation models, the p-value is above the 0.1 threshold in the [-1, +1] window, while the two longer windows show p-values below the 0.05 threshold, with window [-3, +3] CAR being the most significant. This would suggest that any positive market reaction to share repurchase announcements unfold more gradually in comparison to dividend increases. Overall, the results show that dividend increases have a quicker, stronger, and more statistically reliable positive market reaction than share repurchase announcements.

The short-term event study results contribute important insights into how investors perceive the different forms of payout announcements in Sweden. Firstly, the strong and significant reaction to dividend increase announcements is consistent with the signalling theory (Bhattacharya, 1979; Miller and Rock, 1985), which holds that dividend increases are credible signals of management's confidence in sustainable future earnings. The CAR remaining stable and statistically significant across all event windows suggests that the market incorporates the information from the signal almost immediately upon announcement. The similarity in CAR magnitudes between the widows indicate little evidence of any delayed adjustments. Interestingly, there is a slight dip observed in the [-2, +2] window compared to the [-1, +1] window. This could possibly reflect some degree of noise or minor fluctuations in investor expectations prior to the announcement, but there is no clear pattern of anticipation. The modest recovery of CAR in the broader [-3, +3] window supports that the overall price reaction is anchored very close to the actual announcement.

The share repurchase announcements generate both smaller and less statistically significant short-term abnormal returns compared to the dividend announcements. This finding stands in contrast to previous studies on U.S. firms such as Peyer and Vermaelen (2009), who find significant and larger positive abnormal returns on average around the announcements of share repurchases. Manconi et al.

(2019), who studied international firms, also found higher average and statistically significant abnormal returns in the same event windows. Our results show higher short-term abnormal returns around dividend announcements than around share repurchase announcements, which is also in contrast to the comparative study by Guay and Harford (2000), which finds higher announcement CARs for repurchase announcements.

An explanation for our results not aligning with those of previous studies could be that the Swedish institutional setting is different. The younger Swedish buyback market could mean that share repurchase announcements do not carry the equal signalling strength as they do in other countries. One potential contributing factor could be that announced repurchases in Sweden are not always completed, which may make investors discount their credibility as signals of undervaluation. Further, Swedish investors might value the payout certainty and commitment of dividend increases over the flexible payout in buybacks, particularly as managers often show reluctance to decrease dividends in the future (Lintner, 1956).

The differences observed across event windows also provide information on market efficiency (Fama, 1970). The relatively stable CARs around dividend announcements across windows imply a fast incorporation of information. The improvement in significance in the [-2, +2] and [-3, +3] windows for share repurchase announcements hints at a slower or more muted reaction, possibly reflecting more uncertainty around the credibility and eventual execution of the announced repurchase program.

Finally, it must be acknowledged that the event studies assume no major confounding events in the event windows. Although short event windows reduce this risk, some residual noise, such as other announcements from the companies at the same time as the payout announcements, may still affect the results.

To summarise, the evidence from our short-term event study suggests that dividend increases are stronger and more credible positive signals in comparison to share repurchases in Sweden, inconsistent with the findings of previous studies on other countries. Further, we will analyse if these short-term patterns persist over longer horizons.

Table 3
Buy-and-Hold Abnormal Returns Following Payout Announcements

This table reports the long-term buy-and-hold abnormal returns (BHARs) for dividend increase announcements and share repurchase announcements. BHARs are calculated as the difference between the firm's compounded return and the returns

of the benchmark portfolio of 10 matched firms based on size and book-to-market ratio. The horizons are 12, 24, 36, and 48 months following the announcement dates. Monthly returns are aggregated from the calendar month after the announcement. Significance levels are reported as: *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

Table 3A. Buy-and-Hold Abnormal Returns (BHAR) – Buyback

Event Type	Horizon	Mean BHAR	t-stat	p-value	N	Annualized
Buyback	12m	0.0758^{***}	5.23	2.49e-07	537	0.0758
Buyback	24m	0.1441^{***}	5.62	3.13e-08	537	0.0578
Buyback	36m	0.2530^{***}	6.83	2.32e-11	537	0.0579
Buyback	48m	0.4087^{***}	7.61	1.26e-13	533	0.0635

Table 3B. Buy-and-Hold Abnormal Returns (BHAR) – Dividends

Event Type	Horizon	Mean BHAR	t-stat	p-value	N	Annualized
Dividend	12m	0.0707^{***}	4.74	2.76e-06	502	0.0707
Dividend	24m	0.1553^{***}	5.47	6.95e-08	502	0.0586
Dividend	36m	0.2507^{***}	5.76	1.44e-08	501	0.0726
Dividend	48m	0.4028^{***}	6.49	2.05e-10	501	0.0627

B. Long-term Buy-and-Hold Abnormal Returns

Table 3 presents the buy-and-hold abnormal returns for firms announcing dividend increases and share repurchase programs over horizons of 12, 24, 36, and 48 months. The BHARs are calculated relative to a matched benchmark portfolio of the ten nearest neighbours based on book-to-market and market capitalisation. Also, to provide a meaningful comparison between horizons we also report the annualised BHARs alongside the cumulative values.

Both payout types show statistically significant positive abnormal returns for all observed time periods. The mean BHAR of share repurchase announcements rises steadily from +7.58% at 12 months to +40.87% at 48 months, with relatively stable corresponding annualised BHARs ranging from the lowest of +5.78% in the 24 month horizon to the highest of +7.58% in the 12 month horizon. The high associated t-statistics and p-values, all well below 0.001, confirm the statistical significance of these results. The dividend increases also yield positive and significant long-run abnormal returns, with mean BHARs of +7.07% after 12 months

and +40.28% after 48 months, with the annualised BHARs ranging from +5.86% in the 24 month horizon to +7.26% in the 36 month horizon. Again, all t-statistics and p-values show the results being highly significant. These findings show that firms announcing either share repurchase or dividend increases experience sustained abnormal returns in the years following the announcements, indicating that both types of announcements convey valuable information that is not fully reflected in the short-term market reactions in the days around the announcements.

The findings in the long-term BHAR analysis reveal substantial and statistically significant abnormal returns following both dividend increase announcements and share repurchase announcements. These results stand in contrast to the modest and, in the case of share repurchases, less significant short-term CARs observed in the event study. The average BHARs for each time period suggest that, although the initial market reaction is limited, especially for share repurchases, the information conveyed through the payout announcements is gradually incorporated over time. The results are consistent with the market underreaction hypothesis (Ikenberry et al., 1995). However, we do acknowledge that these observed long-term abnormal returns can vary with methodology (Fama, 1998).

Notably, both share repurchase announcements and dividend increase announcements yield similar magnitudes of long-term BHARs across the different time periods. However, share repurchases produce slightly higher average BHARs in three out of four periods compared to dividend increases. Although minimal, this difference is consistent with prior studies observing greater long-term abnormal returns following share repurchase announcements (Ikenberry et al., 1995; Manconi et al., 2019), compared to dividend increases (Benartzi et al., 1997). These studies, however, only study one of the payout announcement types in isolation, with differing samples and time periods. In our Swedish sample, the differences in BHAR across the two types of payout announcements are modest and vary between years. However, the slightly higher average BHARs for share repurchase announcements in the 24 month and 36 month horizons align with the theoretical prediction that share repurchases may convey a stronger signal of stock undervaluation. This could also be due to the fact that, as seen in the short-term event study, the information of dividend increase announcements is more quickly incorporated into the stock price by the market, thus leading to less of a long-term adjustment.

The important implication of the result is that, while generating smaller and less significant short-term CARs, the long-run BHARs indicate that investors eventually recognise and respond to the underlying signal. Swedish investors thus show a quicker and more positive short-term reaction to dividend increases

compared to buybacks, but gradually adjust for the value in the undervaluation signal provided by share repurchase announcements. In comparison to the United States and other more mature buyback markets, Sweden's relatively recent history of share repurchase legality could potentially have an impact on the different investor interpretations of such announcements. The consistently positive BHARs following share repurchase announcements suggest that the undervaluation signals may not be fully priced in at the event but rather gradually incorporated, maybe as the market observes the actual executions of the buyback programs.

Furthermore, the similarity of magnitudes between share repurchase and dividend increase BHARs likely stem from overlap in the payout behaviours, as many firms in our samples conduct both share repurchases and dividend increases in the same or adjacent years. This complicates the analysis of attribution and could partially explain why the long-term BHARs are comparable following both types of announcements. If the markets react cumulatively to multiple forms of payouts, the isolated signal of each payout announcement becomes blurred, reducing the observed difference in BHARs.

The consistent upward trajectory of abnormal returns over the multiple yearly horizons suggests a pattern of slow investor learning or information diffusion, possibly driven by the local institutional setting. Sweden's concentrated ownership structures and potential differences in analyst coverage and disclosure regulations compared to previously studied markets may contribute to the slower market reaction to payout announcement signals. In addition, our finding that both dividend increase and share repurchase announcements produce large long-term BHARs, despite relatively muted CARs, raises the question about the Swedish market's efficiency in processing such signals. If the market was fully efficient in incorporating all publicly available information, we would expect stronger short-term reactions and weaker long-term drifts (Pettit, 1972). The presence of these drifts in our result instead supports the view of partial initial pricing, with corrections in the long term as the signals are confirmed.

Finally, some caution should be applied when interpreting these long-term results patterns. Potential confounding factors such as overlapping announcements, concurrent corporate events, and macroeconomic shifts during the long-term measurement windows could bias results. For example, if a firm announces both a substantial dividend increase and a share repurchase in close succession, or if either announcement is followed by corporate events such as changes in investment policy, earnings, or takeover activity, attributing the long-term stock performance solely to the initial payout announcement becomes more difficult. Nevertheless, the magnitude and consistency of the BHARs across horizons do point toward

a meaningful relationship between payout announcements and long-term shareholder value in Sweden.

In summary, the results of the long-term study support the hypothesis that payout announcements convey valuable information that is not immediately reflected in the stock price, While dividend increases signal earnings stability (Aharony and Swary, 1980) and generate early positive market reactions, share repurchases, although initially met with smaller and less significant market responses, lead to marginally higher long-term abnormal returns. This suggests that both signalling and underreaction (Ikenberry et al., 1995) mechanisms are present and also highlights the importance of analysing both short-term and long-term periods when comparing corporate payout decisions.

To further explore the drivers for long-term abnormal returns, we conduct a panel data regression using firm-level characteristics and payout specifics as independent variables. We use BHAR at 12, 24, 36, and 48 months as dependent variables to analyse if the determinants of long-term abnormal returns persist or vary over time. This approach allows us to investigate the consistency of payout-related valuation effects across horizons, and to identify which firm attributes are most predictive of post-announcement performance for each payout type.

Table 4 Panel Data Regression

This table reports the results from panel data regression examining which characteristics explain variation in long-run BHAR. The dependent variable is BHAR at 12, 24, 36, and 48 months. The independent variables are leverage, cash-to-assets, ln(assets), price-to-book ratio and payout-specific variables (Percentage of shares sought in buyback and dividend yield). The regression includes firm and year-fixed effects to control for unobserved heterogeneity and time-specific shocks. Standard errors are clustered at the firm level. Significance levels are reported as: *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level. T-statistics are reported in parenthesis.

Table 4A. Determinants of Buyback BHARs – Panel Regressions

	(+1,+12)	(+1,+24)	(+1,+36)	(+1,+48)
Leverage	0.021**	0.040***	0.048***	0.088***
	(2.34)	(4.30)	(6.40)	(10.05)
Cash-to-Assets	0.119	0.652	-0.247	-0.923
	(0.40)	(0.92)	(-0.31)	(-0.92)
Ln(Assets)	-0.304**	-0.452**	-0.632*	-0.870**
	(-2.55)	(-2.36)	(-1.96)	(-2.15)
% Shares Sought	-0.006	-0.006	-0.003	-0.008
	(-1.34)	(-0.72)	(-0.24)	(-0.43)
Price-to-Book	-0.043***	-0.070***	-0.080***	-0.103***
	(-3.04)	(-2.79)	(-3.35)	(-3.45)
R-squared	0.106	0.108	0.076	0.093
N	538	538	538	534
Firm Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Table 4B. Determinants of Dividend BHARs – Panel Regressions

	(+1,+12)	(+1,+24)	(+1,+36)	(+1,+48)
Leverage	0.066***	0.136**	0.138**	0.167
	(2.66)	(2.56)	(1.98)	(1.40)
Cash-to-Assets	0.572	0.235	0.345	0.054
	(1.06)	(0.38)	(0.44)	(0.04)
Ln(Assets)	-0.215***	-0.338**	-0.446*	-0.493
	(-2.85)	(-2.00)	(-1.91)	(-1.37)
Dividend Yield	0.005	0.003	-0.003	-0.010
	(0.28)	(0.09)	(-0.06)	(-0.20)
Price-to-Book	-0.029***	-0.026	-0.028	-0.085***
	(-6.69)	(-1.31)	(-0.77)	(-2.66)
R-squared	0.100	0.045	0.036	0.063
N	502	502	501	501
Firm Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

C. Firm Characteristics and BHAR: Panel Data Regression Analysis

C1. Share Repurchases

For share repurchases, leverage shows a positive and statistically significant coefficient for all studied horizons. For the 12-month BHAR horizon, the leverage ratio shows a positive coefficient of 0.021, with a p-value below 0.05. The longer horizons see an increase in both the statistical significance and the positive coefficient. For these horizons, the p-value is below the 0.01 threshold, and the coefficient is increasingly positive over the horizons, 0.040, 0.048 and 0.088. The firms announcing share repurchases have cash-to-assets coefficients of 0.119 for 12 months, 0.652 for 24 months, and -0.247 for 48 months, but show no statistical significance for buybacks over all horizons. The cash-to-assets ratio at the time of the event does not have a statistically significant impact on the long-run abnormal returns.

The natural logarithm of assets shows statistical significance for most of the horizons for buybacks with a negative coefficient, being the least significant in the 36-month horizon, still below the 0.1 p-value threshold. The natural logarithm of assets shows the largest magnitude coefficients among the explanatory variables for share repurchase BHAR. For the 12-month horizon, the coefficient is -0.304 with a p-value below 0.05, and for the 24-month horizon, the coefficient is -0.452 with a p-value of below 0.05. It is -0.632 for 46 months with a lower statistical significance, with a p-value under 0.10. For the 48-month horizon, the coefficient is -0.870 with a p-value under 0.05.

The percentage of shares sought in share repurchase programmes does not have a significant impact on the long-term returns of firms initiating buyback programmes. The coefficients are negative, -0.006, -0.006, -0.003, and -0.008 for the horizons 12 to 48 months, respectively, with none of them being statistically significant. How many percent of the shares outstanding that the firm intends to acquire in the programme does not have an effect on the abnormal return that the firm experiences in the long run.

The price-to-book ratio is significant for most of the models with negative coefficients in all horizons. For the buyback announcers, the price-to-book ratio is highly significant for all horizons, with p-values under 1%, but with coefficients of -0.043, -0.070 -0.080 -0.103 for the 12-48 month horizons, respectively. A higher price-to-book ratio, being an indicator of an overvalued company, has a negative impact on the abnormal returns that firms experience in the long run.

Higher leverage shows an effect on the long-term returns of the studied buyback firms, which can have multiple explanations. For instance, the higher leverage could increase risk in the firm, signal confidence from management, or decrease agency costs. A higher leverage can be a signal from management that the firm is confident it will be able to make its interest payments in the future. This, in

combination with a share repurchase programme, creates a strong signal that the firm is confident in its abilities to both pay future interest payments, as well as pay out excess cash now (Ross, 1977) Additionally, according to Jensen's (1986) control hypothesis higher debt can decrease the management's ability to misuse cash, which reduces the agency problem. However, the statistical significance of cash-to-assets could indicate that this is not the reason for leverage driving abnormal returns.

The statistical insignificance of cash-to-assets as a determinant appears inconsistent with the agency theory of Jensen (1986) that lowering cash through payouts should reduce the agency problem, as the lower cash in the firm resulting from the payout should be value-creating due to the decrease of agency costs. The unique market setting of Sweden could explain this, but this would need to be further studied. In Sweden, high cash may not be a negative sign for investors due to, for instance, stricter governance policies or lower perceived risk of management engaging in NPV-negative projects. Another possible explanation could be that the buyback announcement itself may not be enough of a signal that the cash of the firm will decrease as the investor may not be convinced the buyback will be completed.

Firm size, measured here by the natural logarithm of assets, has a negative coefficient. A reason for this could be that firms of larger sizes are more transparent than smaller firms. The value of the signal of a buyback programme for a smaller firm is larger as it carries more information. Bushman, Piotroski and Smith (2004) find that firm size is positively and significantly linked to the financial transparency of the firm.

The statistical insignificance of the percentage of shares sought contradicts that of Manconi et al. (2019), who find that firms with higher percentages sought to receive higher returns. This could be interpreted as the market seeing the initiation of a buyback programme being a strong signal from management, regardless of the size of the programme. Swedish legislation could have an impact here, however, as a firm can only buy back 10% of its outstanding shares in any programme. The similarity of percentage sought, with 26.06% of our sample seeking to repurchase exactly 10% of the outstanding shares and many firms not reporting what percentage of shares they seek to repurchase, may have an impact on the analysis.

The negative coefficient of the price-to-book ratio aligns with theories of undervaluation and signalling theory. This shows support for management using share repurchase programmes as a tool to signal to the market that they believe the share is undervalued (Vermaelen, 1981); Dittmar, 2000). The results point to the market interpreting buyback announcements for firms with a lower price-

to-book ratio as a valid signal from management that they are undervalued. This is in line with the findings of Vermaelen et al. (1995) that undervalued firms, firms with a higher book-to-market ratio, perform better in the long run following share repurchase announcements. Even though the initial reaction of buyback announcements is lower in Sweden than what Manconi et al. (2019) observe in other countries, the market takes in this information and adjusts for it.

C2. Dividend increases

For substantial dividend increases, leverage also has a positive coefficient, but with decreasing statistical significance over longer horizons. The most statistically significant coefficient is in the 12-month horizon, with a p-value below 0.01 and a coefficient of 0.66. There is still moderate statistical significance for the 24 and 36-month horizons, with a p-value below 0.05, and with coefficients of 0.136 and 0.138, respectively. The companies studied with higher leverage experienced higher abnormal returns, but the significance decreases for longer horizons.

While the cash-to-assets coefficients are positive for all the horizons for dividend increases, 0.572, 0.235, 0.345 and 0.054 for the horizons 12 to 48 months, respectively, the results show no statistical significance, with all p-values being above 10%

For ln(assets), the statistical significance decreases the longer the horizons are, indicating that other factors could be responsible for the long-term performance. For the 12-month to 48-month horizons, the coefficients are -0.215, -0.338, -0.446 and -0.493, respectively, with p-value under 1% for the 12-month, 5% for the 24-month, 10% for the 36 months, and no significance for the 48-month horizon.

The equivalent variable for the percentage sought, dividend yield, is not statistically significant for any of the horizons. For the horizons 12 to 48 months, the coefficients are 0.005, 0.003, -0.003, and -0.010, respectively. This indicates that the announced dividend yield does not impact the abnormal returns that the firms experience after the event.

Price-to-book ratio has a negative coefficient, but it is only statistically significant for the 12 and 48 month horizons with p-values under 1% for both these horizons. The coefficients for the horizons 12 to 48 months are -0.029, -0.026, -0.028, and -0.085. Whilst price-to-book ratio, an indicator of a company being overvalued, has an effect over the two longer horizons.

Leverage shows, consistent with the buyback announcements, positive and statistically significant coefficients for dividend increases but with decreasing significance over the longer horizons. The reason for this could be explained in the

same way as for share repurchases, by the agency and signalling theories. As leverage restricts the capital that management can misuse, the value of the firm should increase (Jensen, 1986). As dividends are usually viewed as less flexible than buybacks, as the findings of Jagannathan et al. (2000) indicate, having high leverage in combination with a substantial dividend increase should signal confidence that the firm is confident about their future ability both to pay their interest payments and the higher dividend payments. The diminishing statistical significance indicates that this indicator is not as predictive in the long run, where other factors play a larger part in the long-run abnormal returns of the firm.

The cash-to-asset ratio for dividend increases, as for buybacks, is not statistically significant. The same theories can be applied here as for dividends. While it should theoretically be connected to the agency theory (Jensen, 1986), our results do not show such a connection. This could be, similarly to buyback announcements, because the dividend increase does not remove sufficient cash for management to misuse, or the Swedish market may not have the same view on high levels of cash in firms due to, e.g. different governance policies or lower concerns for agency problems.

The size of the firm's assets shows, like in buybacks, a negative and significant coefficient. Like leverage, the significance diminishes over the longer horizons, possibly due to other factors playing a bigger part in the abnormal return of the firm. The larger firms' opaqueness could be an explanation for the higher returns in smaller firms. This is in line with the findings of Bushman et al. (2004), observing that larger firms are more financially transparent. This entails that the information that the dividends increase carries more information about the future cash flows that the firm will generate for the investor.

The dividend yield at the time of the announcement lacks statistical significance for all studied horizons. This indicates that the market does not view this as a way to predict the performance of the firm after the announcement, even though one might expect a higher yield to indicate undervaluation. This is consistent with the findings of Brav et al. (2005), that dividends are used more as a tool to satisfy the expectations of the investors, rather than for signalling. The market seems to take the act of announcing a substantial dividend increase to be a more important indicator than the dividend yield itself.

The price-to-book ratio is, like in dividends, negative for all horizons but only statistically significant for the 12 and 48-month horizons. The results support the idea that undervaluation carries more information for investors, but the inconsistency in statistical significance points to a weaker tie between dividend increases and undervaluation. This is consistent with the findings of Lintner (1956) and

Bhattacharya (1979), who state that dividends are more tied to signals of profitability and sustaining it in the long run.

C3. Comparison

While there are similarities between the panel data regression of dividends and buybacks, there are some key differences. Leverage is a key indicator for both types of payout alternatives for long-run abnormal returns. The higher leverage in firms gives off stronger signals of future expected performance. The negative coefficient of the price-to-book ratio implies that undervalued firms outperform for either payout type. What is particularly interesting is comparing the magnitude between the panels. For buybacks, the price-to-book ratio has a higher coefficient and is highly statistically significant for all horizons, whilst the coefficient is lower for the dividend issuers and only statistically significant for the 12 and 48-month horizon. This supports the idea that buybacks are tied to undervaluation and dividends are not. The findings on the size of the firm, measured by ln(assets), point to payout announcements of smaller firms carrying stronger signalling value, likely due to being less transparent and having less analyst coverage. The effect is, however, larger and more statistically significant for the firms announcing share repurchases. Cash-to-assets, percentage sought, and dividend yield were all statistically insignificant. The mere act of a substantial dividend increase or buyback is a more important factor to the market than the size of the payout.

The overlap of firms that conduct both share repurchases and dividend increases could be an explanatory factor as to why many of the variables have similar results. The main determining factors for firms that have recently done a buyback are the low price-to-book ratio, signalling undervaluation, high leverage, and smaller assets. For dividends, smaller firms size, lower price-to-book ratio, and high leverage are also most significant, but primarily for shorter horizons.

VI. Conclusion

This thesis provides empirical evidence on the impacts of share repurchase and dividend increase announcements on short-term and long-term shareholder value in the Swedish market. By examining the use of these payout announcements over a period of two decades, the study provides insights into how the Swedish market interprets and reacts to the different changes in corporate payout policy.

The findings show a clear distinction between how the market initially reacts to the two forms of announcements. Dividend increase announcements consistently

generate significant positive abnormal returns around the announcement date, while share repurchase announcements show smaller and less significant abnormal returns. These findings suggest that, in the short term, the Swedish market values the signal of confident future earnings in dividends highly, while the signal of undervaluation in repurchases is interpreted with more skepticism.

However, the short-term reaction differences eventually fade, as both types of announcements are associated with positive significant abnormal returns over longer horizons, with share repurchase announcements leading to a slight outperformance. While this likely reflects our overlapping sample as many firms use both payout methods, the small difference indicates that the market adjusts for the initial underreaction to buybacks in the long term. We find further that, for both types of announcements, firm characteristics such as leverage, size, and market-to-book significantly influence these long-term abnormal returns to different degrees. The comparable variables dividend yield and percentage of shares sought, however, show no significant correlation to their respective abnormal returns.

These results reveal that Swedish investors assign different informational value to the two payout announcements depending on the time frame. The central research question of the thesis, how the two payout announcement types compare in their effects on shareholder value, can thus be answered: dividend announcements dominate short-term credibility, while share repurchase announcements deliver comparable or slightly stronger long-term value. Importantly, the long-term abnormal returns following both types of payout announcements are influenced by firm characteristics, indicating that investors interpret the signals in the broader context of a firm's financial profile.

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APPENDIX

Table 6. Panel Regression Variable Definitions

Variable	Definition
Leverage	The firm's leverage ratio, defined as total liabilities to market value of equity as of the announcement date.
Cash-to-Assets	The ratio of the firm's cash and cash equivalents to total assets as of the announcement date.
% Shares Sought	The announced plan terms of the percentage of outstanding shares being repurchased in a program.
Dividend Yield	The ratio of announced dividends per share to the share price as of the announcement date.
Price-to-Book	Market value of equity divided by book value of equity (from latest pre-event price data).
Ln(Assets)	The natural logarithm of a firm's total assets as of the announcement date.
BHAR	The buy-and-hold abnormal returns, calculated from one month after the announcement.

Figure 1. Daily Abnormal Returns Around Event (Buybacks, FF3)

This table reports the abnormal returns for share repurchase announcements. The abnormal returns are calculated based on both the Fama-French three-factor model (FF3). The event window is [-3, +3]

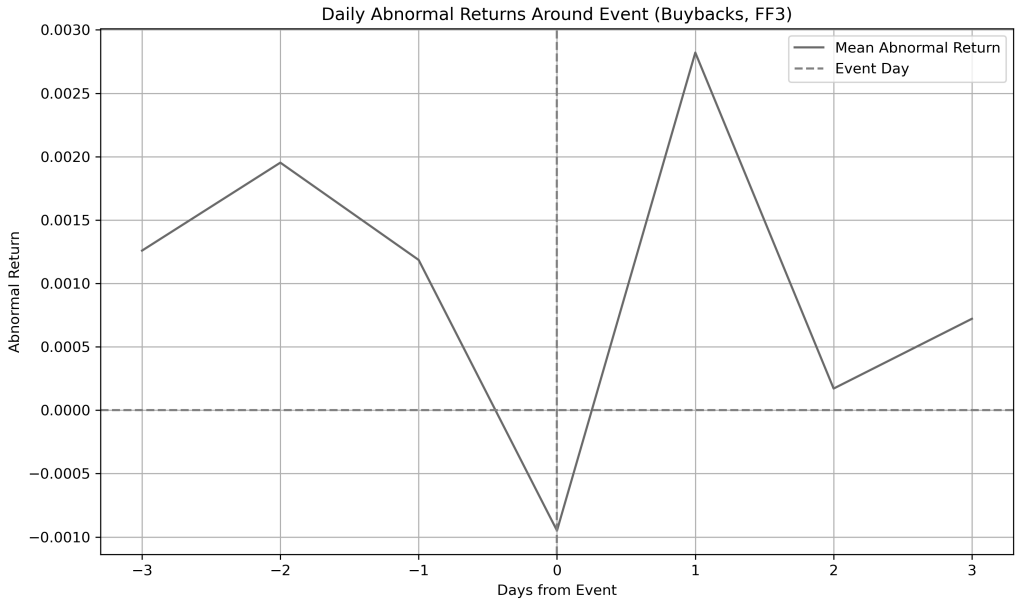


Figure 2. Daily Abnormal Returns Around Event (Dividends, FF3)

This table reports the abnormal returns for substantial dividend increase announcements. The abnormal returns are calculated based on both the Fama-French three-factor model (FF3). The event window is [-3, +3]

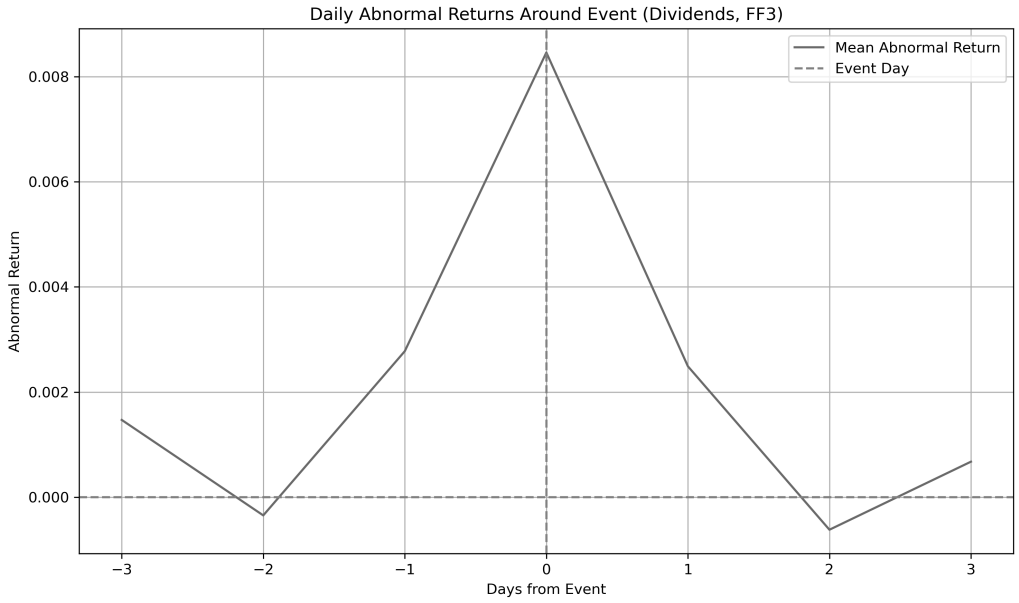


Table 7
Cumulative Abnormal Returns Robustness Test

This table reports the short-term cumulative abnormal returns (CARs) for dividend increases and share repurchase announcements. CARs are calculated based on both the market model (CAPM) and the Fama-French three-factor model (FF3). Event windows are [-5, +5], [0, +2], and [-1, +2] days relative to the announcement dates. Significance levels are reported as: *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level. T-statistics are reported in parenthesis.

Table 7A. Short-Term Cumulative Abnormal Returns (CAR) – Buybacks

Model	Window	Mean CAR	t-stat	p-value	N
CAPM	CAR[-5,+5]	0.0046**	2.12	3.40e-02	532
CAPM	CAR[0,+2]	0.0018	1.02	3.10e-01	530
CAPM	CAR[-1,+2]	0.0028	1.47	1.42e-01	531
FF3	CAR[-5,+5]	0.0047**	2.19	2.90e-02	532
FF3	CAR[0,+2]	0.0016	0.91	3.62e-01	530
FF3	CAR[-1,+2]	0.0026	1.36	1.75e-01	531

Table 7B. Short-Term Cumulative Abnormal Returns (CAR) – Dividends

Model	Window	Mean CAR	t-stat	p-value	N
CAPM	CAR[-5,+5]	0.0130***	5.02	7.13e-07	494
CAPM	CAR[0,+2]	0.0100***	4.02	0.00e+00	488
CAPM	CAR[-1,+2]	0.0122***	4.91	0.00e+00	490
FF3	CAR[-5,+5]	0.0132***	3.73	2.11e-04	494
FF3	CAR[0,+2]	0.0100***	2.88	4.00e-03	488
FF3	CAR[-1,+2]	0.0125***	3.62	0.00e+00	490

Table 8
Buy-and-Hold Abnormal Returns Robustness Test

This table reports the long-term buy-and-hold abnormal returns (BHARs) for dividend increase announcements and share repurchase announcements. BHARs are calculated as the difference between the firm's compounded return and the returns of the benchmark portfolio of 10 matched firms based on size and book-to-market ratio. The horizons are 12, 24, 36, and 48 months following the announcement dates. Monthly returns are aggregated from the calendar month after the announcement. Significance levels are reported as: *** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level. T-statistics are reported in parenthesis.

Table 8A. Buy-and-Hold Abnormal Returns (BHAR) – Buybacks (Size-Only Benchmark)

Event Type	Horizon	Mean BHAR	t-stat	p-value	N	Annualized
Buyback	12m	0.0735***	5.03	6.07e-07	537	0.0735
Buyback	24m	0.1364***	5.24	2.82e-07	537	0.0506
Buyback	36m	0.2338***	6.27	1.13e-09	537	0.0582
Buyback	48m	0.3941***	7.28	2.27e-12	533	0.0617

Table 8B. Buy-and-Hold Abnormal Returns (BHAR) – Dividends (Size-Only Benchmark)

Event Type	Horizon	Mean BHAR	t-stat	p-value	N	Annualized
Dividend	12m	0.0700***	4.64	2.06e-06	501	0.0700
Dividend	24m	0.1232***	2.83	4.86e-03	499	0.0554
Dividend	36m	0.2226***	3.82	1.55e-04	498	0.0705
Dividend	48m	0.3848***	4.80	2.00e-06	498	0.0652

AI Appendix

We have used ChatGPT for help with generating code in Python, and Grammarly to correct grammatical errors.