CORPORATE GOVERNANCE AS A DRIFT ANCHOR?

POST-EARNINGS ANNOUNCEMENT DRIFT AND CORPORATE GOVERNANCE QUALITY IN THE SWEDISH STOCK MARKET

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Corporate governance as a drift anchor? Post-earnings announcement drift and corporate governance quality in the Swedish stock market

Abstract

This paper examines whether post-earnings announcement drift is present in the Swedish stock market and extends the analysis by exploring whether corporate governance quality mitigates the magnitude of the drift. The study is based on non-financial firms listed on the Nasdaq Stockholm Stock Exchange between January 2010 and December 2022, employing an event study methodology complemented by cross-sectional regression analysis. First, the presence of PEAD is investigated, followed by an analysis of the impact of corporate governance quality on PEAD for the subsample of firms for which governance data is available. The findings confirm the presence of PEAD in the Swedish stock market, with earnings surprises serving as a significant predictor of future abnormal returns for up to 12-months following the earnings announcement. However, the study provides limited evidence that corporate governance quality mitigates PEAD, despite the interaction term being negative and statistically significant for the 6-month holding period. Since the governance data primarily includes larger firms that may already exhibit more efficient pricing, attributing the less persistent PEAD solely to governance quality is less conclusive.

Keywords:

Post-earnings announcement drift, market efficiency, earnings surprises, information uncertainty, corporate governance quality

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1. Introduction

The efficient market hypothesis stands as a cornerstone of modern financial theory. In its semi-strong form, the efficient market hypothesis holds that all publicly available, value-relevant information is quickly and continuously incorporated into stock prices (Fama, 1970). This in turn implies that investors cannot consistently achieve abnormal returns through active trading strategies. Since the publication of Fama's (1970) paper, extensive research has further explored market efficiency, with particular focus on whether trading strategies can be designed around observed anomalies that appear to challenge the core assumptions of the efficient market hypothesis. One particularly transformative anomaly was identified by Ball and Brown (1968), who documented a systematic relationship between changes in firm earnings and corresponding stock returns. The event study demonstrated that stock prices began to adjust to earnings information prior to official announcements, suggesting that markets partially anticipate financial data. More notably, the study revealed that stock prices continued to drift after the earnings announcement. Building on these findings, Bernard and Thomas (1989) conducted a more detailed investigation by formulating a trading strategy to study the anomaly. Their trading strategy involved calculating earnings surprises by comparing reported earnings to expected earnings, and then ranking firms based on the magnitude of these surprises. Firms exceeding expectations were grouped into "good news" portfolios, while those falling short were placed into "bad news" portfolios. By taking long positions in the most positive "good news" stocks and short positions in the most negative "bad news" stocks one day after the announcement, the strategy generated abnormal returns of 18 percent over a 12-month holding period.

Bernard and Thomas (1989) demonstrated that while earnings surprises influence stock price reactions, only part of the adjustment occurs immediately. The remaining adjustment unfolds gradually, causing prices to drift in the direction of the earnings surprise over subsequent periods and enabling investors to earn abnormal returns through a systematic trading strategy. Their findings were considered highly influential, both in challenging theories of market efficiency and in establishing the empirical significance of the anomaly which they termed the "post-earnings announcement drift". The past decades, a large body of research has investigated the anomaly across different markets and time periods and found evidence of the drift being present in both developed and emerging markets (Fricke et al., 2014; Milian, 2015; Truong, 2011). Its enduring presence in global research led Fama (1998) to refer to it as the "granddaddy of underreaction events." Although most studies continue to find evidence that PEAD persists across different markets and contexts, its prevalence appears to have declined in recent years. Prior literature suggests that improvements in market efficiency, the rise of algorithmic trading, and broader access to financial information may have contributed to a reduction in both the magnitude and persistence of the anomaly (Chordia et al., 2014; Richardson

et al., 2010). Moreover, the anomaly remains more pronounced in emerging and smaller or less liquid markets, where information asymmetry is higher and investor sophistication generally lower (Truong, 2011), while it appears considerably weaker in developed and highly liquid markets (Fricke et al., 2014; Milian, 2015). Despite extensive research on PEAD in international markets, empirical evidence from the Nordic region remains limited, particularly in the case of Sweden. To date, Setterberg (2011) provides the only comprehensive examination of the anomaly in the Swedish market. Based on a sample of large-cap firms, the study reported statistically significant PEAD only over a 12-month holding period, with no significant effect observed for the 6-month holding period.

The variation in the strength and persistence of PEAD across markets and over time has raised questions about the underlying mechanisms of the anomaly. Research generally explains the drivers of PEAD through behavioral theories and rational factors (Setterberg, 2011). While behavioral theories suggest that cognitive biases, such as conservatism and overconfidence, delay the market's full incorporation of earnings information into stock prices (Barberis et al., 1998; Daniel et al., 1998), rational explanations focus on market frictions and information asymmetry, such as transaction costs and liquidity constraints, which limit arbitrage and allow mispricings to persist (Bernard & Thomas, 1990; Ng et al., 2008). Among the drivers of PEAD, information uncertainty is recognised as a common contributor. Prior research demonstrates that earnings announcements characterised by ambiguity, low transparency, or lower disclosure quality are associated with stronger and more prolonged drifts, suggesting that the quality and clarity of firm disclosures are critical factors influencing the speed at which stock prices adjust to value-relevant information (Francis et al., 2007; Zhang, 2006).

While considerable attention has been devoted to identifying the underlying drivers of PEAD, less emphasis has been placed on firm-specific factors that may reduce the drift following earnings announcements. Given the central role of information uncertainty in explaining the anomaly, factors that shape the quality of firms' information environments and thereby potentially impacting PEAD warrant closer examination. In related literature, corporate governance has been examined for its influence on disclosure practices and overall information transparency. Strong governance frameworks are associated with more transparent, timely, and credible financial reporting, which reduces information uncertainty and enables investors to interpret firm announcements with greater confidence (Cai et al., 2006; Lau et al., 2016). Governance mechanisms such as board independence, CEO-chair separation, and director equity ownership strengthen oversight and align managerial incentives with shareholder interests, further contributing to reduced asymmetry (Brickley et al., 1997; Hermalin & Weisbach, 1998). While previous literature does not directly address corporate governance in relation to post-earnings announcement drift, the observed improvements in information environments suggest that it could play an important role in mitigating delayed market reactions. Higher corporate governance

quality may therefore not only enhance disclosure quality but also improve overall market responsiveness by reducing the conditions that allow anomalies like PEAD to persist.

Given the observed decline in PEAD's prevalence globally and the time elapsed since Setterberg's (2011) study, a re-examination of the Swedish market may offer valuable and updated insights on the anomaly's existence and relevance. Further, while the underlying drivers of PEAD have been extensively studied, with information uncertainty standing out as a well documented contributor, less focus has been placed on firm-specific factors that may reduce the drift following earnings announcements. In separate streams of research, corporate governance quality has been identified as a factor reducing information uncertainty associated with firm disclosures. Building on this notion, corporate governance quality may therefore facilitate quicker stock price incorporation and leave less room for post-announcement adjustments. To the best of our knowledge, no previous study has investigated the relationship between corporate governance quality and post-earnings announcement drift. Hence, this study aims to contribute to the current PEAD literature by examining the following research question:

Is post-earnings announcement drift present in the Swedish stock market, and does corporate governance quality affect its magnitude?

Examining the relationship between post-earnings announcement drift and its interaction with corporate governance quality is valuable for academic research, practical application, and standard setters. From a research perspective, examining PEAD remains important, as its persistence challenges the efficient market hypothesis. Investigating whether and how governance quality affects the magnitude of PEAD further contributes to the broader literature on how accounting information is incorporated into stock prices. For practitioners, including both investors and reporting firms, insights into the conditional nature of PEAD are of practical relevance, as they can enable more risk-adjusted and responsive decision making. For investors, such knowledge may support the development of more effective trading strategies by identifying firm characteristics, in this case corporate governance quality, associated with predictable return patterns. For firms, understanding how governance quality influences post-announcement price dynamics may help mitigate stock price volatility following earnings releases. For standard setters and policymakers, the study offers perspective on the informational efficiency of financial reporting. If governance mechanisms are found to mitigate or amplify mispricing around earnings announcements, this could indicate a need to strengthen disclosure practices or governance frameworks to enhance transparency and protect investors.

This study is limited to non-financial firms listed on the Nasdaq Stockholm Stock Exchange between January 2010 and December 2022. The reason for focusing on this particular market is twofold. First, we aim to provide updated insight on the PEAD

anomaly on this market, following previous findings by Setterberg (2011). Second, reducing the scope to a single country helps mitigate the effects of currency fluctuations, tax structures, and regulatory differences that could potentially impair the results. The start date is set to 2010 due to limitations in the availability of corporate governance data, and the end date is restricted to 2022 to ensure access to sufficient stock price and market index data. Financial firms are excluded due to their distinct regulatory frameworks and accounting practices, which limit comparability. Consequently, the full sample consists of 410 firms and 10,587 firm-quarter observations, while the subsample used to examine corporate governance's effect on PEAD comprises 266 firms and 4,063 corresponding firm-quarter observations. The study does not examine the progression of PEAD over the sample period, but rather on its presence during that time frame.

This study contributes to the existing PEAD literature in two main ways. First, it re-examines the presence and magnitude of PEAD in the Swedish market using updated data from 2010 to 2022. In doing so, it extends the scope of Setterberg (2011), who focused exclusively on large-cap firms, by including companies listed on the small- and mid-cap segments. It also investigates PEAD over holding periods of 1, 3, 6, and 12 months, compared to the 6 and 12-month horizons examined by Setterberg. Second, it investigates whether the quality of corporate governance influences the strength of post-earnings announcement drift by moderating information uncertainty. While information uncertainty has been identified as a key driver of PEAD, to the best of our knowledge, no prior study has explored the role of corporate governance in affecting this uncertainty within a PEAD context. By addressing this gap, the study aims to provide new insights into factors that may moderate the effect.

The remaining parts of this study are structured as follows. Section 2 provides an overview of the existing literature, which serves as the foundation for both the development of the hypotheses and the subsequent analysis. Section 3 describes the methodological framework applied, sample selection and descriptive statistics. Section 4 presents the results of the empirical study, followed by section 5 in which the results are analyzed and discussed in relation to the hypotheses and literature review. Lastly, section 6 concludes the findings of the study, and provides suggestions for future research.

2. Literature Review

2.1. Post-earnings announcement drift

Post-earnings announcement drift (PEAD)[1] refers to the tendency of stock prices to continue drifting in the same direction as the earnings surprise (Bernard & Thomas, 1989). Ball and Brown (1968) were the first to empirically document the phenomenon in

[1] PEAD is also referred to as "the anomaly" and "the drift" throughout the paper

their seminal study of the U.S. equity market. Their analysis revealed a pattern in which stock prices began adjusting prior to the earnings announcement and, depending on the reported outcome, continued to drift in the period after announcement. The observed systematic relationship between changes in firm earnings and post-announcement stock returns indicated that investors not only anticipated financial results to some extent but also underreacted to newly released information, which led to delayed price adjustments and a subsequent drift in the stock price. By highlighting this inefficiency, Ball and Brown (1968) constituted a significant challenge to prevailing theories of efficient markets, which exhibit that all publicly available information is quickly and accurately incorporated into stock prices.

Foster et al. (1984) confirmed the persistence of stock price drift following quarterly earnings announcements in the U.S. market, while also identifying an inverse relationship between firm size, measured by market capitalization, and the magnitude of the drift. Bernard and Thomas (1989) further expanded on Ball and Brown's (1968) findings by conducting a more detailed study of the anomaly in the U.S. market between 1974 and 1986. By sorting firms into portfolios of "good news" and "bad news" based on the magnitude of firms' earnings surprises, they demonstrated that a strategy of buying firms with the most positive surprises and short-selling those with the most negative could generate annualized abnormal returns of about 18%. Their findings suggested that investors underestimated the link between past and future earnings surprises, causing a delayed and gradual price adjustment rather than an immediate response. Bernard and Thomas (1989) study formalized the anomaly by giving it the name "the post-earnings announcement drift". The anomaly is visually illustrated in Figure 1.

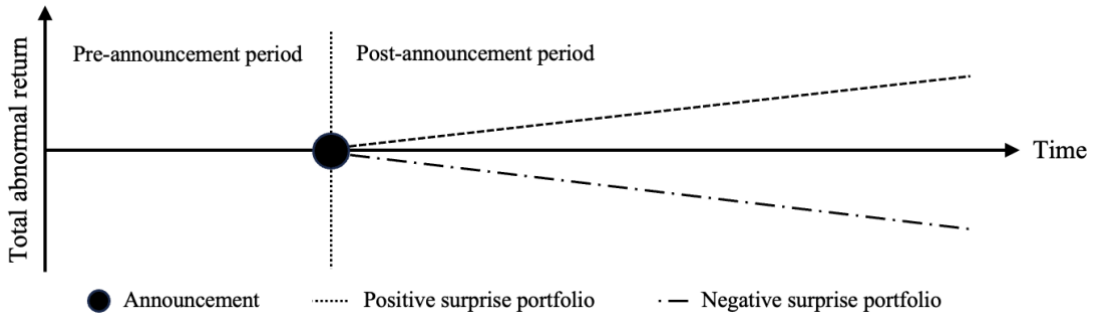

Figure 1. Illustration of PEAD

Since Bernard and Thomas (1989), extensive research has examined PEAD across various market contexts, with evidence of its presence in both developed and emerging markets (Griffin et al., 2010). The empirical evidence has been shown to vary depending on the methodological framework employed, with differences arising from the selection of expected earnings benchmarks and the specification of abnormal returns. In the U.K., Liu et al. (2003) found a significant post-announcement drift of 10.8% over a 12-month holding period, while Dische (2002) reported a six-month cumulative abnormal return of

6.6% in Germany. Forner and Sanabria (2010) provided similar evidence in Spain, where earnings surprise-based strategies yielded average cumulative returns of 7.3% over one year. Further studies have linked the persistence of the drift to market frictions and investor behavior. In the U.K., Dargenidou et al. (2018) reported a 3.4% return spread over six months, attributing it to investors gradually updating their beliefs about whether an earnings surprise reflects a temporary fluctuation or a permanent change in the company's earnings trajectory. Clement et al. (2019) found that analyst-based earnings surprises in the U.S. led to higher abnormal returns (7.0%) than model-based ones (6.1%) over a three-month period, suggesting a stronger investor response to forward-looking signals. Similarly, Li et al. (2020) showed that delayed disclosure of financial items slowed market reaction, emphasizing the role of information availability. Zhang and Gregoriou (2020) observed stronger abnormal returns among illiquid, zero-leverage firms in the U.K., linking the effect to higher information asymmetry. In emerging markets, Sen (2009) found evidence of PEAD in India while Truong (2011) documented it in China, attributing its persistence to lower institutional ownership and weaker market efficiency. However, not all studies have documented the existence of PEAD. Studies such as van Huffel et al. (1996) in Belgium and Ariff et al. (1997) in Singapore found no significant drift, suggesting that its presence may depend on market structure, regulation, and investor composition. According to van Huffel et al. (1996), PEAD tends to be stronger and more persistent in larger markets, while smaller markets often see a weaker price reaction due to lower investor attention and analysis.

Despite the extensive literature on PEAD in major financial markets, empirical research on Nordic markets remains limited. Kallunki (1996) was among the first to explore the phenomenon in this region, focusing on the Finnish market. Using a time-series model, he found that firms with negative earnings surprises experienced stronger post-earnings announcement drift over the following ten days than those with positive surprises, which was attributed to short-selling restrictions in the Finnish stock market. Booth et al. (1996) extended the analysis and confirmed the previous findings of a greater continued drift in the aftermath of negative earnings surprises compared to positive ones. Later, Booth et al. (2011) suggested that this asymmetric pattern may be partly explained by foreign investors, who process earnings information more efficiently and influence market reactions. PEAD in Finland appears to manifest mainly through negative drift. Research on PEAD in the Swedish market is even more limited. The most comprehensive study to date is by Setterberg (2011), covering Swedish large-cap firms during the period 1990 to 2005. Using a trading strategy that, like Bernard and Thomas (1989), involved buying stocks with the highest earnings surprises and short selling those with the lowest, Setterberg (2011) reported an annualized abnormal return of 11.4% for the hedge position, mainly driven by the positive surprise portfolio. While no significant drift was identified on a semi-annual basis, Setterberg (2011) found that significant effects occurred during a 12-month holding period, suggesting lower informational efficiency compared to other developed markets. Contrary to the studies carried out in Finland, the

drift in Sweden was more pronounced for firms with positive earnings surprises than those with negative ones, suggesting that market frictions or omitted risk factors may limit the effectiveness of short-selling in response to bad news.

A substantial body of research has shown that the magnitude and persistence of PEAD have changed over time. Since its initial discovery, advances in trading technologies and greater market liquidity have contributed to a general decline in both the economic and statistical significance of PEAD and similar stock market anomalies (Chordia et al., 2014). Earlier, Richardson et al. (2010) showed that after accounting for transaction costs, the profitability of PEAD-based trading strategies was only marginally significant in the U.S. market. Several factors have been proposed to explain the weakening of the anomaly. As awareness of PEAD has increased, it has drawn arbitrageurs whose trading activity narrows the window for drift. At the same time, growing involvement from less sophisticated investors may cause short-term overreactions, leading to reversals rather than continued drift (Milian, 2015). Additionally, improvements in financial reporting and easier access to firm-specific data have enhanced investors' ability to process earnings news, accelerating price adjustments and further reducing the anomaly (Fricke et al., 2014). Nevertheless, despite these developments, many studies still report evidence of PEAD. Much of the current research focuses on refining empirical methods or examining new explanatory factors, reflecting continued academic interest in understanding what drives or limits the anomaly.

Table 1 provides a non-exhaustive overview of influential prior studies on PEAD that are particularly relevant to this study. It details the geographical market and time period examined in each paper, along with a summary of the methodological framework, including the definition of expected earnings, event-window design, holding period, and measure of abnormal returns. The table also presents the main findings, indicating the returns generated by the trading strategy and whether statistically significant PEAD is documented.

Table 1. Overview of previous PEAD studies

Authors	Market	Time period	Expected earnings	Event window	Holding period	Abnormal return	Results	PEAD
Foster et al. (1984)	US	1974-1981	TS	± 1 day	60 days	CAR	-	Yes
Bernard and Thomas (1989)	US	1974-1986	TS	± 1 day	12 months	CAR, BHAR, monthly alpha	18% annual return	Yes
Liu et al. (2003)	UK	1988-1998	TS, AF and EWR	n.a	3, 6, 9, 12 months	BHAR, monthly alpha	10.8% annual return	Yes
Livnat & Mendenhall (2006)	US	1987-2003	MG and AF	+ 1 day	3 months	CAR	5.2% quarterly return	Yes
Francis et al. (2007)	US	1982-2001	AF	n.a	6 months	Monthly alpha	-	Yes
Ayers et al. (2011)	US	1995-2003	MG and AF	± 5 days	60 days	CAR	-	Yes
Booth et al. (2011)	Finland	1995-2003	EWR	± 1 day	30 days	CAR	-	Yes
Setterberg (2011)	Sweden	1990-2005	TS	n.a	6, 12 months	BHAR, monthly alpha	11.4% annual return	Yes
Milian (2015)	US	1996-2010	AF and EWR	+ 1 day	30, 60 days	CAR	-	Yes
Wang et al. (2018)	US	1996-2014	AF	+ 2 Days	60 days	BHAR	-	Yes
Dargenidou et al. (2018)	UK	1995-2013	AF	+ 10 days	6 months	BHAR	3.4% semi-annual return	Yes
Clement et al. (2019)	US	1984-2010	MG and AF	+ 2 Days	3 months	CAR	6.1% vs 7.0% quarterly return	Yes
Li et al. (2020)	US	1990-2013	AF	+ 2 Days	3 months	CAR	-	Yes
Zhang and Gregoriou (2020)	UK	2000-2015	MG	± 1 day	60 days	CAR	-	Yes

Note: Expected earnings abbreviations: time-series (TS), analyst forecast (AF), event-window return (EWR), seasonal martingale (MG). All studies measure earnings surprises on a quarterly basis, except for van Huffel et al. (1996), Liu et al. (2003) and Dargenidou et al. (2018) who measure on a semi-annual basis. Studies marked with "n.a" in the Event-window column apply a calendar-month approach instead of an event-window one. Studies marked with "–" in the Results column do not report abnormal returns for the hedge portfolio (PEAD position) in their study.

2.1.1. Drivers of post-earnings announcement drift

Post-earnings announcement drift remains one of the most persistent and widely studied anomalies in financial markets, yet there is still no clear answer regarding what causes the underreaction. By indicating that stock prices respond slowly to earnings news, PEAD challenges both traditional asset pricing models and the concept of market efficiency. Explanations for the anomaly generally fall into two broad categories: behavioral biases that influence investor decisions, and rational factors such as market frictions and information uncertainty (Setterberg, 2011).

A prominent behavioral explanation for PEAD focuses on investor conservatism and cognitive biases. Barberis et al. (1998) argue that investors update their beliefs slowly in response to new earnings information, resulting in an immediate underreaction and a gradual price adjustment. This is consistent with the view of Bernard and Thomas (1989), showing that investors often fail to fully absorb the implications of earnings surprises, allowing the drift to persist. Hung et al. (2015) extend this argument by suggesting that coinciding earnings announcements can distract investors and reduce their ability to process information effectively. Similarly, Chan et al. (2004) find that limited information sources contribute to the underreaction. Another observed behavioral factor is investor overconfidence. Daniel et al. (1998) proposes that investors place too much weight on private signals while underreacting to the actual earnings news publicly available, further delaying price adjustment. Fama (1998) argues that behavioral explanations for PEAD are often retrospective and lack generalizability, as they tend to be constructed post hoc to fit observed anomalies rather than offering consistent, predictive frameworks. Supporting this view, Forner and Sanabria (2010) find no consistent evidence that behavioral biases are the primary drivers of PEAD, suggesting that other explanations may be more relevant.

An alternative explanation for PEAD focuses on rational factors such as market frictions, particularly in terms of transaction costs and liquidity constraints. Bernard and Thomas (1990) suggest that trading costs hinder immediate price adjustments following earnings announcements, particularly in smaller, less liquid firms where such costs are more substantial. Ng et al. (2008) support this view by showing that stocks with higher transaction costs tend to exhibit more pronounced PEAD, as these frictions discourage arbitrage activity. Their findings highlight that small cap firms typically face higher trading costs, which may explain the stronger drift observed in these stocks. The strength of PEAD is consistently found to be inversely related to firm size, expressed in terms of market capitalization, with smaller firms showing larger abnormal returns (Bernard & Thomas, 1989; Foster et al., 1984). This relationship is not only attributed to the fact that smaller firms face higher transaction costs, as previously noted, but it is also a consequence of smaller firms providing less transparent information. However, firm size alone does not fully account for the drift. Foster et al. (1984) found that factors such as

the direction and magnitude of earnings forecast errors, along with firm size, accounted for up to 85% of the variation in post-announcement drift. Several studies suggest that firm size mainly reflects other underlying factors such as liquidity and information quality, rather than being a direct cause of PEAD. As a result, it is often used as a general proxy for broader market influences (Bartov et al., 2000; Bhushan, 1994; Chan et al., 1996). More recent research finds that PEAD is largely absent among large, liquid U.S. stocks, possibly because these stocks are easier to trade and investors have become more familiar with the anomaly (Milian, 2015). Chordia et al. (2014) also find that a broader reduction in market frictions over time has coincided with a weakening of PEAD.

Moreover, information uncertainty has been widely recognized as a possible explanation for the post-earnings announcement drift, particularly in how investors interpret firm disclosures. Investors tend to respond more cautiously and delay the full incorporation of new information into stock prices when earnings announcements are unclear, whether due to volatile performance, poor disclosure quality, or limited external monitoring. Francis et al. (2007) finds that firms with higher earnings volatility, lower analyst coverage, or weaker financial transparency exhibit stronger PEAD, suggesting that elevated uncertainty leads to more gradual price adjustments. These results align with a rational learning framework, in which investors place less weight on earnings news from firms operating in uncertain informational environments (Brav & Heaton, 2002). From a behavioral perspective, Zhang (2006) argues that uncertainty intensifies psychological biases, making investors more likely to underreact. Poorly communicated or ambiguous announcements may weaken the perceived signal, especially when a firm lacks credibility or operates in a noisy reporting environment. Chen et al. (2017) adds that liquidity risk may serve as a channel through which information uncertainty influences PEAD, as investors demand additional compensation for holding less transparent and less liquid stocks. Other studies suggest that this effect may be asymmetric, with stronger drift observed following positive surprises under high uncertainty (Basu, 1997; Hirshleifer et al., 2009). Evidence also indicates that PEAD tends to persist in markets characterized by greater information asymmetry, where access to relevant data is unevenly distributed among investors (Setterberg, 2011). Zhang (2006) finds a direct relationship between the level of uncertainty surrounding earnings announcements and the extent of price underreaction, reinforcing the argument that ambiguous or incomplete disclosures contribute meaningfully to the anomaly. While some studies interpret these effects within a rational framework (Brav & Heaton, 2002; Liang & Zhang, 2020), others emphasize the role of behavioral biases in driving systematic underreaction (Dische, 2002; Zhang, 2006). Nevertheless, prior research suggests that information uncertainty, especially when it relates to the quality and clarity of earnings communication, is a notable driver behind the persistence of PEAD.

2.2. Corporate governance quality

2.2.1. Information uncertainty and corporate governance

Investor reactions to earnings announcements are shaped not only by the content of the disclosed information but also by its clarity, credibility, and perceived reliability (Lau et al., 2016). Incomplete or ambiguous disclosures can delay market responses, contributing to post-earnings announcement drift (Francis et al., 2007; Williams, 2015; Zhang, 2006). Although not specifically examined in the context of post-earnings announcement drift, strong corporate governance frameworks have been shown to reduce information asymmetry by improving the transparency, consistency, and timeliness of financial reporting. Prior literature suggests that firms with higher governance quality tend to provide more frequent and comprehensive disclosures, allowing investors to interpret and react to earnings news with greater confidence (Cai et al., 2006; Kanagaretnam et al., 2007; Lau et al., 2016). From a PEAD perspective, this enhanced informativeness may lead to faster price adjustments and reduce the likelihood of delayed market reactions. Moreover, prior research (Bebchuk et al., 2009; Core et al., 2006) indicates that firms with stronger corporate governance structures and greater responsiveness to market oversight are generally associated with higher firm valuations relative to those with weaker governance. Given Foster et al.'s (1984) identification of an inverse relationship between firm size and the magnitude of the PEAD, this association may imply a reduced drift for firms exhibiting stronger governance characteristics.

Specific governance mechanisms can also help reduce such asymmetry. For instance, board independence enhances monitoring effectiveness and strengthens oversight of managerial decisions, which contributes to more transparent and higher-quality financial reporting (Hermalin & Weisbach, 1998). Similarly, the separation of CEO and chairman roles improves the board's objectivity, while director equity ownership aligns the interests of the board with those of shareholders (Brickley et al., 1997). These governance attributes are associated with reduced earnings management and enhanced disclosure credibility, both of which lower information asymmetry. By improving the quality and reliability of financial communication, such mechanisms may allow investors to form more precise expectations and react more efficiently and promptly to earnings announcements. Ownership structure is another governance dimension with potential implications for PEAD. In the Swedish market, dual-class share structures are common and allow controlling shareholders to exercise significant influence despite limited cash flow rights (Swedish Corporate Governance Board, 2024). Prior research indicates that this separation weakens the credibility of financial disclosures and undermines the firm's overall information environment (Fan & Wong, 2002; Francis et al., 2005). With information uncertainty as a common contributor to PEAD (Francis et al., 2007; Zhang, 2006), firms with more concentrated control and weaker governance structure may experience more persistent post-earnings announcement price adjustments. Board-level

governance activity thus also plays a central role in shaping the information environment. Kanagaretnam et al. (2007) and Elbadry et al. (2015) find that firms with active and independent boards exhibit lower information asymmetry around earnings announcements. They identify indicators such as narrower bid-ask spreads, reduced return volatility, and improved liquidity as common proxies for information uncertainty, all of which are positively influenced by strong board engagement. Given that these same market characteristics have been shown to moderate the magnitude of PEAD in earlier studies (e.g., Zhang, 2006), board activity can be viewed as another channel through which corporate governance may mitigate investor underreaction and reduce the persistence of post-announcement drift.

Furthermore, empirical studies on corporate governance's influence on immediate price reactions to various firm disclosures offer indirect but valuable insights into how it may impact PEAD. Lau et al. (2016) examine the immediate market response to earnings announcements and find that firms with stronger governance structures experience more timely and pronounced price reactions. While their analysis is limited to the earnings announcement window and does not cover the post-announcement period, the findings suggest that such firms face lower information frictions, enabling investors to process and incorporate new information more efficiently. As a result, there may be less residual price adjustment required after the initial announcement window, implying a reduced scope for PEAD. This interpretation is supported by Cheng et al. (2019), who show that earnings announcements by well-governed firms elicit sharper and more complete investor responses within the immediate announcement window. They suggest that investors view disclosures from well-governed firms as more credible and trustworthy, resulting in less underreaction by the market participants. These results reinforce the idea that reduced information uncertainty under strong governance facilitates faster and more accurate market pricing, creating an environment less conducive to PEAD. An alternative perspective is offered by Liang (2003), who argues that investors may underreact more to information that is perceived as highly reliable, especially when it lacks salience or emotional relevance. Based on this reasoning, PEAD could, in certain cases, be more pronounced among well-governed firms. However, this interpretation remains largely theoretical and is less supported empirically. Nevertheless, the majority of prior research consistently highlights the role of corporate governance in reducing information uncertainty, which by itself has been identified as a common contributor to the occurrence of PEAD (see Appendix 1).

2.3. Hypotheses development

First identified by Ball and Brown (1968), post-earnings announcement drift (PEAD) has been widely examined in both developed and emerging markets. Although it remains present, particularly in less transparent or less efficient markets, its magnitude varies across time and regions. While many studies confirm its existence, more recent research reports a decline or limited evidence of the anomaly. This reduction has been attributed to institutional and structural improvements such as enhanced market liquidity, stronger regulation, and greater investor sophistication. In particular, advancements in trading technology, faster information dissemination, and increased arbitrage activity have been associated with a decline in the size and persistence of PEAD, although it continues to appear in various settings.

In the Swedish context, Setterberg (2011) conducted the most comprehensive study to date, focusing on large-cap firms over the period 1990 to 2005. Using 6 and 12-month holding periods, the study found a significant drift only for the 12-month holding period. However, recent international research has documented evidence of PEAD over shorter holding periods, typically between 1 and 6 months, suggesting that the anomaly may also persist over shorter horizons that were not captured in Setterberg's study. Building on this foundation, this study investigates PEAD across 1, 3, 6, and 12-month holding periods to provide a more complete assessment of the anomaly in the Swedish market. Based on Setterberg's findings for longer holding periods and international evidence of short-term drift, it is reasonable to expect that PEAD may still exist in Sweden, albeit potentially in a modified form. In addition, this study expands the sample to include small- and mid-cap firms, offering broader market coverage and allowing for the investigation of size effects. This is particularly relevant given prior findings of a stronger PEAD effect among smaller firms. These considerations form the basis of the study's first hypothesis:

H1: Post-earnings announcement drift exists in the Swedish stock market

Furthermore, among the drivers documented in previous studies, information uncertainty has emerged as an important contributor influencing PEAD, as it shapes how investors interpret and respond to earnings announcements. When disclosures lack clarity due to volatile performance, poor transparency, or limited analyst coverage, investors tend to react more cautiously, delaying full price adjustment and increasing the likelihood of post-announcement drift. Although corporate governance has not been directly studied in relation to PEAD, it has been examined in connection with firms' information environments and the market's immediate reaction to various firm disclosures. Stronger governance structures have been associated with more timely, transparent, and credible financial reporting, which can help reduce information asymmetry. Studies also show that firms with higher governance quality often trigger faster and more pronounced market reactions to earnings news, indicating that investors may view their disclosures as more

reliable and informative. Still, this relationship may not always result in faster price adjustments. In cases where the earnings news is perceived as expected, routine, or lacking in salience, even credible disclosures may fail to generate a strong immediate response. As a result, some drift could persist regardless of governance quality. Nevertheless, prior literature has identified information uncertainty as an important driver of PEAD, while other studies have connected corporate governance as a mitigating factor of information uncertainty. Thus, we expect PEAD to be less pronounced among well-governed firms, which leads us to the study's second hypothesis:

H2: Firms with higher corporate governance quality show less post-earnings announcement drift

3. Method and data

This study adopts the event study methodology developed by Bernard and Thomas (1989), which provides the foundation to analyze abnormal returns following earnings announcements. To ensure contextual relevance, the approach is adapted to the Swedish market, following the application in Setterberg (2011). The analysis covers multiple post-announcement holding periods to capture both the magnitude and persistence of the drift. Given the study's research question and dual hypotheses, PEAD is first investigated for the full sample and subsample throughout the research period, whereafter corporate governance quality's influence on PEAD is studied for the subsample for which corporate governance data is available (see Appendix 2). For both samples, firm-specific earnings surprises are measured and scaled into standardized unexpected earnings (SUE), which are thereafter used to divide firms into portfolios after which buy-and-hold abnormal returns (BHAR) are calculated. The abnormal returns are thereafter regressed on SUE alone, followed by a re-estimation that includes controls for a set of accounting-based firm characteristics. To investigate the second hypothesis, the abnormal returns are further regressed on firm-specific corporate governance scores, to test for a moderating effect.

3.1. Earnings surprise

Since PEAD refers to the tendency of stock prices to continue moving in the direction of the earnings surprise after the announcement, the first step is to determine the firm's earnings surprise. An earnings surprise occurs when a firm's reported earnings, typically expressed as earnings per share, differ from the expected earnings prior to the announcement. A positive difference is considered "good news," while a negative surprise signals "bad news" (Bernard & Thomas, 1989). Prior research has introduced several approaches for estimating expected earnings (see Table 1). These methods generally fall into three categories: analyst forecast-based models, return-based models, and historical performance-based models. The characteristics and strength of the drift

have been shown to vary depending on the approach used, as demonstrated in previous studies (e.g., Ayers et al., 2011; Kallunki, 1996; Liu et al., 2003).

The analyst forecast model is widely used by investors in practice, as earnings estimates and investment decisions are often based on analyst projections rather than statistical models (Brown et al., 1987). Since these forecasts aggregate insights from multiple independent analysts, they are generally considered more accurate than other estimation methods. However, as noted by Livnat and Mendenhall (2006), this approach is limited by data availability. Moreover, analyst coverage tends to be concentrated among large firms, which introduces selection bias into the sample. Simultaneously, research suggests that these estimates may still be imperfect predictors of future earnings, as forecasts can be biased and may not fully reflect all publicly available information (Lee, 2012).

An alternative approach is to use return-based models that examine abnormal stock returns during the event window surrounding earnings announcements. This method assumes that stock prices react not only to reported earnings but also to broader signals, including revenue trends, management tone, and strategic guidance, whose influence is reflected in the market's reaction. By capturing these reactions, return-based models offer a broader proxy for earnings surprises and are valued for their simplicity, as they rely solely on stock price data (Gerard, 2012). Research suggests they often produce a stronger PEAD effect by capturing information missed by models based only on earnings figures. However, the approach faces several challenges, including the difficulty of selecting appropriate benchmarks for expected returns and sensitivity to short-term price fluctuations, both of which can introduce noise and reduce the reliability of results (Liu et al., 2003).

A third approach is to apply historical performance-based models. This can be implemented through various methods, with the most straightforward one being the seasonal martingale model (Ayers et al., 2011; Clement et al., 2019). In the seasonal martingale model, earnings from the corresponding quarter of the previous year serve as the benchmark for expected earnings in the current quarter. As a result, any deviation from this benchmark is classified as an earnings surprise. The method's simplicity and straightforwardness make it convenient to use. However, the simplicity can also be regarded as a limitation, as it neglects firm-specific factors and macroeconomic developments that may have taken place over the prior year (Ayers et al., 2011). Despite this limitation, MacKinley (1997) indicates that more complex estimation techniques do not necessarily lead to materially different outcomes in event study settings. A more complex method for estimating expected earnings based on historical data is the time-series approach, which incorporates trends in earnings development over time (Bernard & Thomas, 1989; Liu et al., 2003; Setterberg, 2011; van Huffel et al., 1996). The advantage of this method lies in its ability to capture earnings momentum, supported by the empirical observation of autocorrelation across quarterly earnings (Bernard &

Thomas, 1990). However, since the time-series model relies on past performance, it may fail to reflect current market expectations or firm-specific developments that could materially influence upcoming earnings (Bernard & Thomas, 1989; Livnat & Mendenhall, 2006). Even so, the time-series model is favored for its objectivity, consistency, and ability to capture earnings momentum.

Considering these arguments and following the methodology of Bernard and Thomas (1989) and Setterberg (2011), this study adopts the time-series model to estimate expected earnings. This choice is motivated by the model's ability to capture firm-specific earnings trends based on historical data, while avoiding the limitations associated with analyst forecasts, such as selection bias and potential forecast inaccuracies. In contrast to return-based approaches, which depend on short-term price movements that may introduce noise, the time-series model provides a structured and objective framework suited for large-sample empirical analysis (Livnat & Mendenhall, 2006).

3.1.1. Time-series model

While Setterberg (2011) measures earnings using earnings before extraordinary items, this study employs earnings per share (EPS), consistent with the majority of prior literature (e.g., Bernard & Thomas, 1989; Dargenidou et al., 2018; Wang et al., 2018). Although Setterberg acknowledged EPS as the standard and preferred measure, data limitations at the time of her study resulted in the use of earnings before extraordinary items as the earnings metric. The yearly change in EPS is modeled as a function of the prior year's change using an autoregressive framework, consistent with earlier studies (Bernard and Thomas, 1989; Foster et al., 1984; Setterberg, 2011). For each firm-quarter observation, the beta coefficient is estimated based on a rolling window including the nine most recent quarters with available data. The model is specified as follows:

$$EPS_{i,t} - EPS_{i,t-4} = \alpha_{i,t} + \beta_{i,t} * \left[EPS_{i,t-4} - EPS_{i,t-8}\right] + \varepsilon_{i,t} \quad (1)$$

where:
$EPS_{i,t}$ = the reported earnings per share of firm *i* in quarter *t*
$\alpha_{i,t}$ = the firm-specific intercept
$\beta_{i,t}$ = the autoregressive term for firm *i* in quarter *t*
$\varepsilon_{i,t}$ = the error term for firm *i* in quarter *t*

The estimated change in EPS from Equation (1) is then used to forecast the expected EPS for quarter t. This is done by adding the predicted seasonal difference to the actual EPS from the same quarter in the prior year, as expressed below:

$$E_{t-1}^{TS}\left[EPS_{i,t}\right] = EPS_{i,t-4} + E_{i,t-1}\left[\Delta EPS_{i,t}\right] \quad (2)$$

where:
$E_{t-1}^{TS}[EPS_{i,t}]$ = the expected value of EPS for firm *i* in quarter *t-1* based on time-series prediction
$EPS_{i,t}$ = the reported earnings per share of firm *i* in quarter *t*
$\Delta EPS_{i,t}$ = the change in earnings per share between quarter t and t-4

3.2. Standardized unexpected earnings

The earnings surprise is defined as the difference between reported EPS and expected EPS. To improve comparability across firms and reduce the effects of heteroskedasticity, the surprise is standardized by dividing it by the standard deviation of expected EPS, following Bernard and Thomas (1989), Liu et al. (2003), and Setterberg (2011). The underlying idea is that the more certain a forecast is, as indicated by a lower standard deviation, the stronger the surprise signal. Since the standard deviation is based on historical changes in EPS, surprises in firms with more stable earnings patterns are interpreted as more meaningful when a deviation occurs (Bernard & Thomas, 1989). However, this scaling approach also introduces data constraints. To ensure a reliable estimate of earnings variability, the model requires a continuous series of quarterly earnings. If this continuity is broken, the subsequent nine quarters must be excluded because the estimation procedure depends on an unbroken sequence of observations. This can occur, for example, if a firm is delisted and later relisted, or if there is missing or irregular data in the earnings history. The formula used to calculate SUE is shown below:

$$SUE_{i,t} = \frac{EPS_{i,t} - E_{t-1}^{TS}[EPS_{i,t}]}{\sigma_i} \tag{3}$$

where:
$SUE_{i,t}$ = standardized unexpected earnings for firm *i* in quarter *t*
$EPS_{i,t}$ = the reported earnings per share of firm *i* in quarter *t*
$E_{t-1}^{TS}[\ldots]$ = expected value of […] for firm *i* in quarter *t*
σ_i = standard deviation of expected earnings per share for firm *i* in quarter *t*

Table 2. Descriptive statistics of earnings estimates for the full sample and the subsample

Panel A: Descriptive statistics of earnings estimates for the full sample

Variables	N	Mean	Std. Dev.	Min	Max
Reported EPS	10,587	0.63	2.23	-32.93	19.95
Expected EPS	10,587	0.60	1.91	-24.93	14.00
Earnings surprise	10,587	0.03	1.79	-35.47	19.39
SUE	10,587	0.00	1.83	-30.70	8.37

Panel B: Descriptive statistics of earnings estimates for the corporate governance subsample

Variables	N	Mean	Std. Dev.	Min	Max
Reported EPS	4,063	1.27	2.37	-30.15	19.95
Expected EPS	4,063	1.22	1.88	-9.55	14.00
Earnings surprise	4,063	0.06	2.05	-35.47	18.53
SUE	4,063	0.10	1.92	-30.70	8.28

Note: Earnings surprise is defined as the difference between Reported EPS and Expected EPS. SUE is computed by scaling the Unexpected EPS by the firm-specific standard deviation of Expected EPS. All figures expressed in SEK.

3.3. Portfolio formation

To capture the drift in stock prices following earnings announcements, firms are sorted into portfolios each quarter based on the sign and magnitude of their earnings surprises, expressed as SUE. Consistent with Bernard and Thomas (1989), Liu et al. (2003), and Setterberg (2011), firms are first divided into two groups: those reporting positive surprises (SUE $\geq$ 0) and those with negative surprises (SUE $<$ 0). The underlying assumption is that a positive surprise represents "good news", while a negative surprise reflects "bad news", regardless of market-wide developments or peer performance during the same period. This classification ensures directional consistency within each portfolio and addresses the skewed distribution of surprises that may occur in certain quarters, which could otherwise lead to signal-mixed portfolios (Bernard & Thomas, 1989).

For the full sample, firms are ranked each quarter based on the magnitude of their SUE and assigned to five equally sized groups within both the negative and positive surprise ranges, resulting in ten portfolios. Portfolios 1 to 5 include firms with negative earnings surprises ("bad news"), while portfolios 6 to 10 comprise firms with positive surprises ("good news"). Hence, portfolios 1 and 10 represent the most extreme negative and positive surprises, respectively. Similarly, the corporate governance subsample is ranked based on SUE. However, due to the smaller sample size, firms are grouped into quartile portfolios rather than deciles. This results in four portfolios being constructed for each

quarterly observation, two “good news” portfolios and two “bad news” portfolios, irrespective of firm-specific Governance Pillar Score (see Figure 2). While decile-based sorting is more common in the PEAD literature (e.g., Bernard & Thomas, 1989; Setterberg, 2011), Livnat and Mendenhall (2006), among others, have constructed portfolios based on quintiles, suggesting that the applied approach for the subsample remains consistent with established empirical practice. For both the full sample and corporate governance subsample, portfolios are equally weighted to limit the disproportionate impact of large firms on the results (described in Section 3.6). While this approach ensures a more balanced representation, it may lead to a bias toward smaller firms. This is relevant, as prior research (Foster et al., 1984) found that smaller firms tend to exhibit stronger post-earnings announcement drift. Since the analysis is conducted quarterly from Q1 2010 to Q4 2022, this methodology produces ten (four) portfolios per quarter for the full sample (subsample), resulting in a total of 520 (208) portfolios across the sample period.

Classification	Definition	Full sample	Corporate governance subsample
Positive earnings surprise (SUE ≥ 0)	"Good news" portfolios	Portfolio 10	Portfolio 4
		Portfolio 9	
		Portfolio 8	
		Portfolio 7	Portfolio 3
		Portfolio 6	
Negative earnings surprise (SUE < 0)	"Bad news" portfolios	Portfolio 5	Portfolio 2
		Portfolio 4	
		Portfolio 3	
		Portfolio 2	Portfolio 1
		Portfolio 1	

Figure 2. Portfolio formation based on SUE rankings for the full sample and subsample

3.4. Corporate governance quality

To test for the study’s second hypothesis, corporate governance must be defined. A widely adopted approach in prior research is to adopt governance indices, translating firm-level attributes into measurable indicators. Gompers et al. (2003) introduced the G-Index, a 24-variable measure based on shareholder rights and managerial control, where higher scores reflect greater managerial entrenchment. Building on the G-Index, Bebchuk et al. (2009) developed the more concise E-Index, which focuses on six key provisions such as staggered boards and poison pills, as these are most predictive of firm outcomes. Brown and Caylor (2006) constructed the Gov-Score, a broader measure using 51 ISS-based variables across areas including board structure, executive compensation, and audit quality, with an emphasis on internal governance mechanisms and firm-level best practices. Furthermore, studies such as Lau et al. (2016) have employed externally sourced composite indices that capture dimensions such as board independence, transparency, and shareholder rights across international firms.

Similar to Lau et al. (2016), this study employs an externally constructed index to measure firm-level corporate governance quality, specifically the Governance Pillar Score, sourced from Refinitiv Datastream. (Refinitiv, 2025). The Governance Pillar Score is based on publicly disclosed information manually collected by analysts. It provides a standardized, sector-neutral assessment of governance practices, where each firm receives a score between 0 and 100, with higher values indicating stronger overall governance quality (LSEG, 2024). This allows for meaningful comparisons across firms. As presented in Appendix 3, the Governance Pillar Score is composed of three categories: Management, Shareholders, and CSR Strategy, each capturing distinct governance dimensions. The Management category (1) evaluates structural elements of corporate leadership, including board composition, executive compensation policies, and internal governance systems. These attributes align with Brown and Caylor (2006), who emphasized the importance of board structure and incentive alignment in assessing governance quality. The Shareholders category (2) includes measures of shareholder rights, voting structures, and takeover defenses, capturing the extent to which firms enable shareholder influence and protect ownership interests. This aligns with the frameworks developed by Gompers et al. (2003) and Bebchuk et al. (2009), who found such mechanisms to be central in predicting firm valuation and long-term performance. Finally, the CSR Strategy category (3) assesses how governance structures support broader sustainability efforts, including corporate responsibility policies, ESG reporting practices, and the integration of governance principles into the firm's strategic vision (LSEG, 2024). While analysing CSR Strategy as a separate aspect of corporate governance quality is not the primary aim of this study, the inclusion of it reflects the broader evolution of governance standards beyond traditional shareholder-centric models.

The reason for applying Refinitiv's pre-constructed governance index rather than developing a custom measure is twofold. First, consistent firm-level governance data for Swedish firms are largely missing prior to 2014, which limits the feasibility of constructing a reliable index over the full sample period. The use of Refinitiv's Governance Pillar Score enables us to include the entire 2010–2022 period, albeit with reduced firm-level coverage in the earlier years. As the number of firms with available governance scores increases over time, the quality of cross-sectional comparisons improves in the latter part of the sample. Second, given its transparent methodology and broad coverage of relevant governance dimensions investigated in previous literature (Bebchuk et al., 2009; Brown & Caylor, 2006; Gompers et al., 2003; Lau et al., 2016), the Governance Pillar Score is considered an accurate and suitable proxy for the purpose of this study. Additionally, studies such as Lau et al. (2016) have demonstrated the applicability of externally provided governance index scores in similar contexts. While this approach provides valuable standardization and comparability, it also entails certain limitations. Since the Governance Pillar Score is pre-constructed, we are unable to control the selection and weighting of the included dimensions and underlying variables, such as

the inclusion of CSR Strategy as a separate dimension. This may affect the extent to which the index accurately captures the specific governance dimensions that could mitigate PEAD. However, given the lack of comprehensive and consistent raw governance data for Swedish firms, this approach represents the most feasible methodological approach for our study. Moreover, the Governance Pillar Score is updated on an annual basis, whereas earnings and return data are measured quarterly. This temporal mismatch may reduce the accuracy of governance-related analyses at the quarterly level. Finally, since the Governance Pillar Score is only available for a smaller subset of Swedish firms, the analysis may be subject to selection bias. Firms included in the subsample may share characteristics such as larger size, potentially skewing the observed PEAD effect in a similar direction.

3.5. Event-window and holding periods

To measure returns following earnings announcements, this study employs an event-time portfolio formation approach, where holding positions are taken after each firm's specific earnings announcement date, following the methodology of Bernard and Thomas (1989). In contrast, several other studies, including Chan et al. (1996), Liu et al. (2003), and Francis et al. (2007), apply a calendar-time framework, assigning firms to portfolios at the beginning of the calendar quarter following the earnings release. Setterberg (2011) advocates for the calendar-time approach, as it mitigates hindsight bias and better reflects a trading strategy possible to implement in real life. However, the drawback of this approach is that firms report earnings at different times, leading to an uneven influence of individual firms on portfolio returns, particularly over short holding periods (Setterberg, 2011). While potentially less reflective of real-world constraints, the event-time approach adopted in this study is theoretically more precise, as it begins measuring abnormal returns immediately after each earnings announcement, avoiding delays associated with aggregating announcements across firms (Bernard & Thomas, 1989).

The event window in this study is defined as ±1 day around the earnings announcement date (t_0), encompassing the day before (t_{-1}) and the day after (t_{+1}) the announcement. If the reported announcement date falls on a non-trading day, it is adjusted to the next available trading day. The inclusion of t_{-1} is motivated by prior research indicating that market reactions often begin the day prior to the announcement (Zhang & Gregoriou, 2020). Similarly, t_{+1} is included because announcements may occur after market hours, with price reaction often reflected on the following trading day. Since the focus is on measuring the post-announcement drift rather than the immediate market response, the trading position is initiated at the close of t_{+1}, in line with Bernard and Thomas (1989), Booth et al. (2011), and Zhang and Gregoriou (2020). The positions are then held for 1, 3, 6, and 12 months, where one month is defined as 20 trading days. Consequently, the holding periods correspond to 20, 60, 120, and 240 trading days, respectively. Earlier studies on PEAD frequently used holding periods of up to 12 months, whereas more

recent research tends to focus on shorter windows, typically ranging from 2 to 3 months, as presented in Table 1. In contrast, the only study examining the Swedish market (Setterberg, 2011) analyzed 6 and 12-month holding periods, finding significant drift only over the 12-month period. To capture a more comprehensive picture of the anomaly, this study employs several holding periods of different lengths, including both short-term and medium- to long-term horizons, as illustrated by Figure 3.

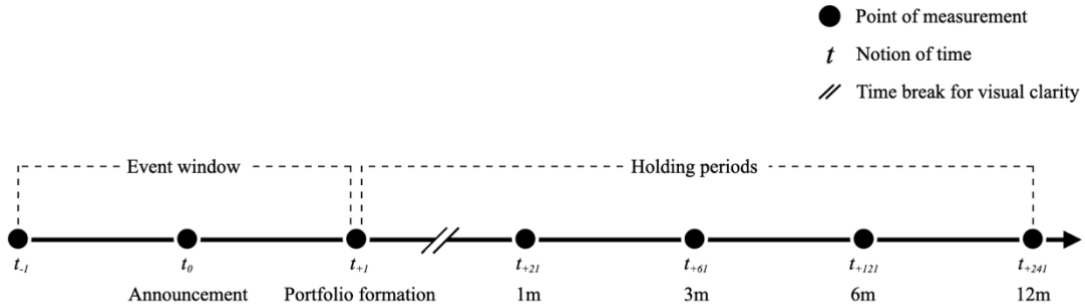

Figure 3. Event study timeline showing earnings announcement, portfolio formation, and holding periods

3.6. Buy-and-hold abnormal returns (BHAR)

Once positions are established for each firm on the day following its earnings announcement (t_{+1}), returns are estimated through buy-and-hold abnormal returns (BHAR), consistent with Bernard and Thomas (1989), Liu et al. (2003), and Wang et al. (2018). Abnormal returns are calculated by comparing firm-specific daily returns to a value-weighted index of all firms listed on OMX Nasdaq Stockholm (OMXSPI). The abnormal returns are then compounded over the holding periods of 1, 3, 6, and 12 months using the following equation:

$$BHAR_{i,q,T} = \prod_{t=2}^{T}\left(1 + R_{i,t}\right) - \prod_{t=2}^{T}\left(1 + R_{m,t}\right) \quad (4)$$

where:
$BHAR_{i,q,T}$ = buy-and-hold abnormal return for firm i from announcement of quarter q over holding period T
t = number of days after quarterly earnings announcement
T = holding period in days after earnings announcement. T = 21, 41, 61, 121, 241
$R_{i,t}$ = one day return for firm i at day t
$R_{m,t}$ = one day return for the market at day t

When calculating the portfolios' BHARs, firms are equally weighted, meaning the portfolio return is the arithmetic mean of the individual firm returns within each portfolio, calculated as follows:

$$BHAR_{p,q,T} = \frac{1}{N}\sum_{i=1}^{N} BHAR_{i,q,T} \tag{5}$$

where:
$BHAR_{p,q,T}$ = buy-and-hold abnormal return for portfolio p for quarter q over holding period
$BHAR_{i,q,T}$ = buy-and-hold abnormal return for firm i from announcement of quarter q over holding period T
N = number of firms in portfolio p

Each quarter, ten (four) portfolios are formed for the full sample (subsample). Among these, two portfolios are central to the analysis: the SHORT and LONG portfolios. The SHORT portfolio consists of decile 1 (quartile 1) and represents firms with the most negative SUE. The LONG portfolio comprises decile 10 (quartile 4) and includes firms with the most positive SUE. Furthermore, a hedge portfolio (PEAD) is constructed as a zero-investment strategy, where the LONG position is financed by the SHORT position. The return of the SHORT position is subtracted from the return of the LONG position, as shown below:

$$BHAR_{PEAD,T} = BHAR_{LONG,T} - BHAR_{SHORT,T} \tag{6}$$

where:
$BHAR_{PEAD,T}$ = the BHAR of a PEAD portfolio over holding period T
$BHAR_{LONG,T}$ = the BHAR of a LONG portfolio over holding period T
$BHAR_{SHORT,T}$ = the BHAR of a SHORT portfolio over holding period T
T = the holding period measured in months. T = 1, 3, 6, 12

During the sample period from 2010 to 2022, spanning 13 years with quarterly observations, the trading strategy is implemented 52 times for both the full sample and the subsample, resulting in a series of BHARs for the LONG, SHORT, and PEAD positions. To assess performance across the entire period, the overall mean BHAR is calculated for each of the three positions and for each of the samples:

$$BHAR_{pos,T} = \frac{1}{52}\sum_{q=1}^{52} BHAR_{pos,T,f} \tag{7}$$

where:
$BHAR_{pos,T}$ = the mean BHAR of all portfolios of the same position.
pos = the type of position of the portfolio, pos LONG, SHORT, PEAD
T = the holding period measured in months. T = 1, 2, …, 12

q = the formation quarter. f = 1, 2, …52, where q = 1 is Q1-2010 and q = 52 is Q4-2022

While some studies, including Livnat and Mendenhall (2006) and Ayers et al. (2011), employ cumulative abnormal returns (CAR) to estimate PEAD, Barber and Lyon (1997) argue that the BHAR methodology more accurately reflects actual investor behavior, where positions are initiated and held over a period without being continuously rebalanced. Using market returns as the benchmark, BHAR provides a direct measure of whether a firm or portfolio outperforms the market over the holding period. If earnings surprises are assumed to be randomly distributed across firms so that no systematic risk factor is systematically associated with the surprise, the BHAR can be interpreted as a clean measure of abnormal performance. Under this condition, excess returns reflect mispricing rather than compensation for risk, making BHAR a suitable metric for identifying the presence and magnitude of drifts occurring in the wake of earnings announcements (Barber & Lyon, 1997). However, as highlighted by Fama (1998), BHAR can overstate abnormal performance by compounding returns even when the relative performance between the event and benchmark firm remains constant. This can in turn lead to a misleading impression of persistent abnormal returns, according to Setterberg (2011). Nevertheless, this study applies BHAR to capture a more realistic representation of the trading strategy's performance in practice.

3.7. Regression models

To analyze the effect of earnings surprises on post-earnings announcement drift, this study employs a cross-sectional regression framework, consistent with prior research (e.g., Dargenidou et al., 2018; Livnat & Mendenhall, 2006). A total of six regressions are estimated: two using the full sample and four based on the subsample. In each regression, the dependent variable is the BHAR, calculated over 1, 3, 6, and 12-month holding periods, as described in Section 3.5. All regressions include SUE as a key explanatory variable, with certain models also incorporating firm-level control variables to address potential omitted variable bias and assess the robustness of the relationship. For the regressions used to test the second hypothesis, the Governance Pillar Score is additionally included.

This cross-sectional design enables a direct examination of whether firms with larger earnings surprises earn systematically higher or lower abnormal returns following earnings announcements. While earlier studies, such as Bernard and Thomas (1989) and Setterberg (2011), rely on time-series return models like CAPM or the Fama-French three-factor model to estimate abnormal returns, these models are not applied here for several reasons. First, given that the aim of our study is to explain post-announcement returns across firms, a cross-sectional regression approach is more aligned with the research objective (Fama & MacBeth, 1973). Second, time-series models assume that the relationships between stock returns and risk factors remain constant over time, but this

may not be the case for shorter periods such as one to three months (Barber & Lyon, 1997). Additionally, incorporating these models would increase complexity without necessarily providing additional insights relevant for the aim of this study, particularly since firm-specific factors are already addressed in the cross-sectional design.

3.7.1. Regression models to test PEAD

The regression analysis begins by regressing BHAR on standardized unexpected earnings for each of the four holding periods. The model is estimated separately for the full sample and the subsample of firms with governance data. The regression is specified as follows:

$$BHAR_{i,T} = \alpha + \beta * \mathrm{SUE}_{i,t} + \varepsilon_{i,t} \tag{8}$$

where:
$BHAR_{i,T}$ = buy-and-hold abnormal return for firm *i* over holding period *T*
$\mathrm{SUE}_{i,t}$ = standardized unexpected earnings for firm *i* in quarter *t*
$\varepsilon_{i,t}$ = the error term for firm *i* in quarter *t*

An extended regression model is applied to both the full sample and the subsample, incorporating firm-level control variables. The regression controls for firm size (market capitalization) and valuation (market-to-book ratio), as these factors have been shown to explain variation in stock returns (Fama & French, 1992) and influence investor responses to earnings announcements (Booth et al., 2011; Foster et al., 1984). In line with Fama and French (1992), firm size is included in logarithmic form to account for its inverse relationship with returns and to correct for the skewed distribution of firm sizes. Sales are also log-transformed to reduce the impact of extreme values (Foster et al., 1984). Unlike firm size, sales capture operational scale and revenue generating capacity, offering an alternative perspective on firm size that may be relevant in assessing firm performance and investor response (Dang et al., 2018). In addition, the debt-to-assets ratio is included to capture differences in capital structure and financial leverage, which are determinants of firm risk and return, as demonstrated by Frank and Goyal (2009). Full definitions of these variables are presented in Appendix 4. By controlling for these firm-specific characteristics, the model aims to better isolate the effect of earnings surprises on post-announcement abnormal returns and to reduce the risk of omitted variable bias. The resulting model is expressed as:

$$\begin{aligned} BHAR_{i,T} = \alpha + \ & \beta_1 * SUE_{i,t} + \beta_2 * log(MCAP_{i,t}) + \beta_3 * M/B_{i,t} \\ & + \beta_4 * log(Sales_{i,t}) + \beta_5 * D/A_{i,t} + \varepsilon_{i,t} \end{aligned} \tag{9}$$

where:
$BHAR_{i,T}$ = buy-and-hold abnormal return for firm *i* over holding period *T*
$\mathrm{SUE}_{i,t}$ = standardized unexpected earnings for firm *i* in quarter *t*

log(…) = logarithmic transformation of variable (…)
$MCAP_{i,t}$= market capitalization for firm *i* in quarter *t*
$M/B_{i,t}$ = book-to-market ratio for firm *i* in quarter *t*
$Sales_{i,t}$ = sales for firm *i* in quarter *t*
$D/A_{i,t}$ = debt-to-asset ratio for firm *i* in quarter *t*
$\varepsilon_{i,t}$ = the error term for firm *i* in quarter *t*

3.7.2. Regression models to test corporate governance quality's influence on PEAD

In line with the second hypothesis, this study extends the regression framework to examine whether variations in corporate governance quality moderate the magnitude of post-earnings announcement drift. Therefore, the following regressions are only conducted on the corporate governance subsample. First, BHAR is regressed on SUE, following the approach in Equation (8), with the addition of the Governance Pillar Score along with an interaction term between SUE and the firm-specific governance score. This not only allows for a test of corporate governance quality's explanatory power on PEAD, but also provides a direct test of whether governance quality moderates the relationship between earnings surprises and subsequent abnormal returns. To enhance interpretability, the Governance Pillar Score has been rescaled from a 0-100 scale to a 0-1 range. The model is specified as:

$$BHAR_{i,T}^{CG} = \alpha + \beta_1 * SUE_{i,t} + \beta_2 * CG_{i,t} + \beta_3 * (SUE_{i,t} * CG_{i,t}) + \varepsilon_{i,t} \quad (10)$$

where:
$BHAR_{i,T}^{CG}$ = buy-and-hold abnormal return for firm *i* over holding period *T*
$SUE_{i,t}$ = standardized unexpected earnings for firm *i* in quarter *t*
$CG_{i,t}$ = Corporate governance quality score for firm *i* in year
$SUE_{i,t} * CG_{i,t}$ = Interaction term between SUE for firm *i* in quarter *t* and corporate governance quality score for firm *i* in year *t*

Similarly, Equation (11) extends the specification in Equation (10) for the subsample by adding the same set of firm-level control variables as presented in Section 3.7.1. The formula is specified below:

$$BHAR_{i,T}^{CG} = \alpha + \beta_1 * SUE_{i,t} + \beta_2 * CG_{i,t} + \beta_3 * (SUE_{i,t} * CG_{i,t}) + \beta_4 * log(MCAP_{i,t}) + \beta_5 * M/B_{i,t} + \beta_6 * log(Sales_{i,t}) + \beta_7 * D/A_{i,t} + \varepsilon_{i,t} \quad (11)$$

where:
$BHAR_{i,T}^{CG}$ = buy-and-hold abnormal return for firm *i* over holding period *T*
$SUE_{i,t}$ = standardized unexpected earnings for firm *i* in quarter *t*
$CG_{i,t}$ = Corporate governance quality score for firm *i* in year

$SUE_{i,t} * CG_{i,t}$ = Interaction term between SUE for firm *i* in quarter *t* and corporate governance quality score for firm *i* in year *t*
log (…) = logarithmic transformation of variable (…)
$MCAP_{i,t}$= market capitalization for firm *i* in quarter *t*
$M/B_{i,t}$ = book-to-market ratio for firm *i* in quarter *t*
$Sales_{i,t}$ = sales for firm *i* in quarter *t*
$D/A_{i,t}$ = debt-to-asset ratio for firm *i* in quarter *t*
$\varepsilon_{i,t}$ = the error term for firm *i* in quarter *t*

3.8. Sample and descriptive statistics

The full sample in this study consists of firms listed on the Nasdaq Stockholm Stock Exchange between January 2010 and December 2022. The empirical data is sourced from two databases. Earnings announcement dates, earnings per share (EPS), accounting variables, daily stock returns, and market returns (measured by the OMXSPI index) are obtained from S&P Capital IQ, while corporate governance data is retrieved from Refinitiv Datastream, accessed via the Eikon platform.

The initial sample was processed to ensure greater reliability and comparability, consistent with prior research (Bernard & Thomas, 1989; Setterberg, 2011). Several adjustments were made to address data limitations, reduce bias, and maintain consistency across observations. First, to mitigate survivorship bias and ensure a representative sample, the dataset includes both firms that remained listed throughout the period and those that were delisted between January 2010 and December 2022. Firms that were listed during the sample period are also included. Following the approach of Setterberg (2011), financial firms are excluded due to their distinct regulatory frameworks and accounting practices, which limit comparability. Additionally, firms whose fiscal year does not match the calendar year are also excluded to maintain consistency in the timing of financial data. Firms with incomplete or unreliable data on earnings or returns have been removed to preserve data quality. Since the study adopts a time-series approach to estimate expected earnings (see Section 3.1), the number of usable observations is further reduced, as the method requires historical data for nine quarters of earnings. These steps result in the full sample used to test the first hypothesis, comprising 410 unique firms and 10,587 firm-quarter observations, with an average of 214 firms per year. For the second hypothesis, the sample is further reduced by excluding firms without available Governance Pillar Score data (see Section 3.4), resulting in a subsample of 266 unique firms and 4,063 firm-quarter observations, with an average of 80 firms per year. Table 3 presents an overview of the number of firms and quarterly observations per year for the full sample and subsample, respectively.

Table 3. Overview of number of firms and quarterly observations per year

Year	Number of firms	Quarterly observation
2010	130 *(30)*	484 *(115)*
2011	133 *(31)*	499 *(119)*
2012	148 *(31)*	571 *(123)*
2013	156 *(32)*	606 *(125)*
2014	161 *(33)*	612 *(130)*
2015	160 *(36)*	620 *(141)*
2016	176 *(47)*	679 *(182)*
2017	210 *(49)*	781 *(192)*
2018	241 *(53)*	897 *(204)*
2019	264 *(95)*	1,003 *(373)*
2020	300 *(132)*	1,124 *(507)*
2021	341 *(226)*	1,307 *(881)*
2022	363 *(250)*	1,404 *(971)*
Total	410 *(266)*	10,587 *(4,063)*
Mean	214 *(80)*	814 *(313)*

Note: the left-hand columns of "Number of firms" and "Quarterly observations" represent the annual observations for the full sample, whereas figures within parentheses represent the corresponding number of firms and quarterly observations from the corporate governance subsample.

Table 4 presents descriptive statistics of firm characteristics for the full sample (panel A) and the corporate governance subsample (panel B). The firms in the full sample vary widely in size and capital structure. On average, firms have total assets of SEK 17.9 billion and a market capitalization of SEK 17.6 billion. However, the median values are considerably lower, indicating a skewed distribution driven by a few large firms. A similar pattern is observed in debt and equity figures. The average market-to-book ratio, calculated as market capitalization divided by book value of equity, is 6.46. The mean debt-to-equity and debt-to-asset ratios are 1.34 and 0.47, respectively. In the corporate governance subsample, firms are notably larger, with average total assets of SEK 29.3 billion and a market capitalization of SEK 30.0 billion. As with the full sample, the size distribution remains skewed. This pattern is also observed in the debt and equity figures, as well as in the debt-to-equity and debt-to-asset ratios. The firm characteristics of the subsample align more closely with those identified by Setterberg (2011) than those of the full sample, likely because Setterberg focused exclusively on large-cap firms.

Table 4. Descriptive statistics of firm characteristics

Panel A: Descriptive statistics of firm characteristics for the full sample

Variables	N	Mean	Median	Std. Dev.	Skewness	Kurtosis
Assets	10,587	17,880	954	52,350	5.42	36.88
Debt	10,587	10,687	396	34,569	6.54	54.98
Equity	10,587	7,199	502	19,735	4.36	21.58
Market Cap	10,587	17,594	1,418	50,995	5.34	36.69
M/B	10,587	6.46	2.70	35.37	19.07	562.80
Debt/Equity	10,587	1.34	0.96	2.80	13.50	109.34
Debt/Assets	10,587	0.47	0.50	0.23	0.52	6.14

Panel B: Descriptive statistics of firm characteristics for the corporate governance subsample

Variables	N	Mean	Median	Std. Dev.	Skewness	Kurtosis
Assets	4,063	29,342	1,930	70,590	4.30	23.01
Debt	4,063	17,489	936	47,328	5.23	33.78
Equity	4,063	11,860	1,037	25,685	3.24	11.49
Market Cap	4,063	30,035	3,406	71,350	4.22	23.24
M/B	4,063	6.02	2.45	39.20	19.45	569.62
Debt/Equity	4,063	1.21	1.02	4.43	(0.43)	113.66
Debt/Assets	4,063	0.49	0.51	0.25	2.13	23.53
Governance Pillar Score	1,045	43.53	43.45	24.67	0.02	(1.06)

Note: Panel A presents the descriptive statistics of firm characteristics for the full sample, whereas Panel B focuses on the corporate governance subsample. Accounting-related variables are sourced from firms' quarterly financial reports, except for market capitalization, which is manually computed at the final trading day of each quarter. The market-to-book ratio (M/B) is calculated as market capitalization divided by the book value of shareholders' equity. All absolute figures are expressed as MSEK, and ratios (M/B, Debt/Equity, Debt/Assets) as multiples.

4. Results

The results section is structured into two main parts, corresponding to the study's two hypotheses. First, we test the first hypothesis by examining the presence and characteristics of PEAD in the Swedish equity market. This is done by analysing BHAR across different holding periods, both graphically and through cross-sectional regressions. Second, we turn to the second hypothesis to examine whether corporate governance quality moderates the magnitude of PEAD. This part is restricted to the corporate governance subsample and builds on the previous cross-sectional regression framework by incorporating the Governance Pillar Score, along with an interaction term between SUE and the Governance Pillar Score.

4.1. Post-earnings announcement drift on the Swedish stock market

The empirical findings related to the first hypothesis are presented in the following sections. First, a visual presentation of the BHAR for the LONG, SHORT, and PEAD portfolios is provided. This is followed by regression analyses to examine the statistical relationship between earnings surprises and abnormal returns across all four holding periods of earnings announcements for both the full sample and the subsample.

4.1.1. Mean BHAR for the full sample and the subsample

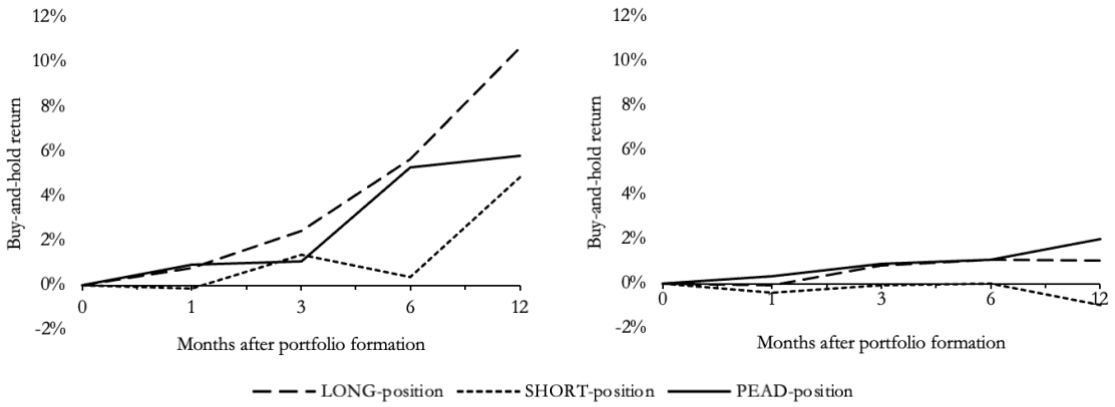

Figure 5. Mean buy-and-hold abnormal returns (BHAR) over the 12-month holding period for the full sample and the subsample.

To investigate whether a drift effect is observable at the aggregate level, Figure 5 displays the market-adjusted mean BHARs for the LONG, SHORT, and PEAD-positions over 1, 3, 6, and 12-month holding periods. The left-hand graph illustrates the returns for the full sample based on SUE deciles, while the right-hand graph presents results for the corporate governance subsample based on SUE quartiles. In the full sample, firms in decile 1 (SHORT), representing the most negative earnings surprises, exhibit slightly negative

returns at the 1-month horizon (-0.15%) that become positive over longer holding periods, reaching 4.83% at 12 months. On the other hand, firms in decile 10 (LONG), representing the most positive earnings surprises, display consistently positive and increasing abnormal returns, rising from 0.80% at 1 month to 10.65% after 12 months. As a result, the hedge-portfolio (LONG-SHORT), representing the PEAD-position, exhibits steadily increasing returns, from 0.95% at 1 month to 5.82% at 12 months, mainly driven by the LONG portfolio.

Turning to the governance subsample, Figure 5 shows a similar but economically weaker pattern. Firms in quartile 4 (LONG) experience a gradual increase in abnormal returns, reaching 1.04% at the 12-month holding period, while those in quartile 1 (SHORT) exhibit persistently low or slightly negative returns, ending at -0.95%, after 12 months. The resulting PEAD-position displays a modest but steady upward drift, suggesting that a trading strategy involving a long position in the highest SUE quartile and a short position in the lowest could generate a market-adjusted abnormal return of approximately 2% over a 12-month holding period.

4.1.2. Cross-sectional regression of BHAR on SUE

To assess whether the observed BHARs are statistically associated with the magnitude of earnings surprises, cross-sectional regressions are conducted in which BHAR is regressed on SUE for each holding period (1, 3, 6, and 12 months), as specified in Equation 8. The regression results are presented for both the full sample (Panel A) and the governance subsample (Panel B) in Table 5.

In the full sample, the coefficient estimates on SUE are positive across all holding periods and statistically significant at the 1% level for the 3, 6, and 12-month holding periods. This suggests that firms with larger positive earnings surprises tend to earn systematically higher abnormal returns following earnings announcements, consistent with the PEAD effect. Moreover, the magnitude of the coefficients increases with the length of the holding period, suggesting a gradual and incomplete incorporation of earnings information into stock prices. Similarly, the SUE coefficient in the subsample (Panel B) remains positive across all holding periods, although statistical significance is only observed for the 6-month holding period, at the 10% level, suggesting that the magnitude of the earnings surprise influences the medium-term abnormal returns in the period following the announcement.

Table 5. Regression results with SUE as the only independent variable

Panel A: Full sample				
Variables	1M	3M	6M	12M
Intercept	0.011	0.005	0.014	0.029
	(0.004)	(0.002)	(0.003)	(0.005)
SUE	0.001	0.004***	0.009***	0.012***
	(0.002)	(0.001)	(0.002)	(0.003)
N	10,313	10,313	10,313	10,313
R2	0.000	0.001	0.003	0.002
Panel B: Subsample				
Variables	1M	3M	6M	12M
Intercept	-0.005***	-0.004	-0.009*	-0.031***
	(0.002)	(0.003)	(0.04)	(0.006)
SUE	0.001	0.000	0.004*	0.003
	(0.001)	(0.002)	(0.002)	(0.003)
N	3,177	3,177	3,177	3,177
R2	0.000	0.000	0.001	0.000

*Note: Regression results for the holding periods of 1 month, 3 months, 6 months, and 12 months for the full sample and the subsample are presented in the table. The dependent variable is the buy-and hold abnormal return (BHAR) for each holding period, while the explanatory variable is the standardized unexpected earnings (SUE) measured at the start of the holding period. Standard errors are reported in the parentheses. The symbols ***, **, and * show statistical significance at the 1%-, 5%-, and 10%-level.*

4.1.3. Cross-sectional regression of BHAR on SUE and firm-level control variables

To enhance the robustness and account for additional firm-specific characteristics that may influence PEAD, the regression model is extended by including a set of firm-level control variables as described in section 3.7.1. The results are presented for both the full sample (Panel A) and the corporate governance subsample (Panel B) in Table 6.

For the full sample, the inclusion of control variables does not substantially impact the economic magnitude between SUE and BHAR observed in the initial regression (Panel A) of Table 5. However, the estimated SUE coefficients become statistically significant across all holding periods, rather than only for the 3, 6, and 12-month periods. Similar to the initial regression (Table 5), the magnitude of the SUE coefficients in this extended regression (Table 6) increases with longer holding periods.

Table 6. Regression results with SUE as the main explanatory variable and a set of firm-level control variables

Panel A: Full sample				
Variables	1M	3M	6M	12M
Intercept	-0.005	0.005	0.025	0.094***
	(0.007)	(0.012)	(0.018)	(0.027)
SUE	0.002***	0.003**	0.010***	0.013***
	(0.001)	(0.001)	(0.002)	(0.003)
Log Market Cap.	0.000	-0.001	-0.006*	-0.018***
	(0.001)	(0.002)	(0.003)	(0.005)
M/B	0.000	0.000	0.000	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Log Sales	0.000	0.000	0.003	0.010**
	(0.001)	(0.002)	(0.003)	(0.004)
D/A	0.000	0.014	0.020	-0.001
	(0.008)	(0.014)	(0.020)	(0.032)
N	10,313	10,313	10,313	10,313
R2	0.001	0.001	0.004	0.005
Panel B: Subsample				
Variables	1M	3M	6M	12M
Intercept	-0.002	-0.017	-0.007	-0.011
	(0.009)	(0.016)	(0.023)	(0.031)
SUE	0.001	-0.001	0.005**	0.004
	(0.001)	(0.002)	(0.003)	(0.003)
Log Market Cap.	0.000	0.000	-0.005	-0.13**
	(0.002)	(0.003)	(0.004)	(0.005)
M/B	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Log Sales	-0.001	0.001	0.006*	0.015***
	(0.001)	(0.002)	(0.004)	(0.005)
D/A	-0.001	0.012	0.010	-0.014
	(0.010)	(0.019)	(0.027)	(0.036)
N	3,177	3,177	3,177	3,177
R2	0.001	0.003	0.003	0.006

*Note: Regression results for the holding periods of 1 month, 3 months, 6 months, and 12 months are presented in the table. The dependent variable is the buy-and hold abnormal return (BHAR) for each holding period. The main explanatory variable is the standardized unexpected earnings (SUE) measured at the start of the holding period. In addition, a set of control variables are included.. Standard errors are reported in the parentheses. The symbols ***, **, and * show statistical significance at the 1%-, 5%-, and 10%-level.*

Among the control variables, the firm size coefficient is negative and statistically significant at the 10% and 1% levels for the 6 and 12-month holding periods, respectively. This negative relationship suggests that firms with larger market capitalization exhibit less pronounced PEAD in the medium- to long-term. Additionally, firm sales and the market-to-book ratio show a low positive, yet statistically significant relationship with abnormal returns for the 12-month holding period. This indicates that over the long term, firms with higher sales and larger disparity between the market and book value of equity tend to experience more drift. While the R^2 value shows a slight improvement relative to Panel A in Table 5, the explanatory power of the model remains low.

Turning to the corporate governance subsample displayed in Panel B, the coefficient on SUE is again positive across all holding periods, but still only statistically significant for the 6-month holding period, implying that the magnitude of SUE has an impact on the medium-term BHAR. Similar to the full sample, the sales coefficient is positive and statistically significant for the 6 and 12-month holding period, indicating a more pronounced PEAD in the medium- to long-term for firms with higher sales. Consistently, firm size exhibits a negative relationship at the 1% significance level for the 12-month holding period, indicating that smaller firms in the subsample earn higher abnormal returns in the long run compared to larger firms.

4.2. The effect of corporate governance quality on PEAD

The empirical findings related to the second hypothesis are presented in the following section, examining the moderating effect of corporate governance quality on BHAR through regression analyses conducted on the subsample across all four holding periods.

4.2.1. Cross-sectional regression of BHAR on SUE, corporate governance quality, and firm-level control variables

Table 7 presents the regression results with the Governance Pillar Score included. In Panel A, BHAR is regressed on SUE, the Governance Pillar Score (CG), and an interaction term between SUE and CG. Panel B displays the extended regression in which the additional firm-level control variables are included.

In Panel A, the estimated SUE coefficient is positive across all holding periods but statistically significant only for the 6-month holding period, at the 1% level. This is consistent with the subsample results presented in Tables 5 and 6, albeit with stronger significance. Importantly, the interaction term between SUE and CG is negative and statistically significant at the 5% level for the 6-month holding period, suggesting that higher governance quality is associated with a reduced PEAD effect. In other words, higher corporate governance scores moderate SUE's impact on BHAR. The CG coefficient itself remains statistically insignificant across all horizons, indicating that

governance quality alone does not directly predict abnormal returns in the absence of an earnings surprise. When the firm-level control variables are included (Panel B), the findings remain broadly consistent. SUE again exhibits a positive relationship across all four holding periods, yet still only statistically significant at the 1% level for the 6-month holding period. The interaction term between SUE and CG also retains its negative sign and statistical significance. Among the control variables, firm size is statistically significant at the 5% level and displays a negative relationship with BHAR, suggesting that larger firms experience less drift following earnings announcement. Moreover, the firm sales coefficient exhibits a positive and statistically significant relationship with BHAR at the 10% level for the 6-month holding period, and at the 1% level for the 12-month holding period. These findings align with the patterns observed in the regression results presented in 4.1.2 for both the full sample and the subsample.

Table 7. Regression results for the subsample, including SUE, the Governance Pillar Score, their interaction term, and a set of firm-level control variables

Panel A: SUE, Governance Pillar Score and interaction term				
Variables	1M	3M	6M	12M
Intercept	-0.011**	-0.008	-0.005	-0.030*
	(0.005)	(0.009)	(0.012)	(0.016)
SUE	0.002	0.000	0.019***	0.013
	(0.002)	(0.005)	(0.006)	(0.008)
CG	0.011	0.006	-0.012	-0.010
	(0.008)	(0.016)	(0.022)	(0.029)
SUE x CG	-0.001	-0.001	-0.028**	-0.018
	(0.004)	(0.008)	(0.012)	(0.016)
N	3,177	3,177	3,177	3,177
R2	0.001	0.000	0.003	0.001
Panel B: SUE, Governance Pillar Score, interaction term and firm-level control variables				
Variables	1M	3M	6M	12M
Intercept	-0.007	-0.018	-0.001	-0.002
	(0.009)	(0.017)	(0.025)	(0.032)
SUE	0.020	0.000	0.019***	0.012
	(0.002)	(0.005)	(0.006)	(0.008)
CG	0.013	0.003	-0.018	-0.025
	(0.009)	(-0.001)	(0.023)	(0.030)
SUE x CG	-0.001	-0.001	-0.027**	-0.016
	(0.004)	(0.008)	(0.012)	(0.015)
Log Market cap.	0.000	0.000	-0.005	-0.013**
	(0.002)	(0.003)	(0.004)	(0.005)
M/B	0.000	0.000	0.000	0.000
	0.000	(0.000)	(0.000)	(0.000)
Log Sales	-0.001	0.001	0.006*	0.015***
	(0.001)	(0.003)	(0.004)	(0.005)
D/A	-0.001	0.012	0.009	-0.015
	(0.010)	(0.019)	(0.027)	(0.036)
N	3,177	3,177	3,177	3,177
R2	0.002	0.001	0.005	0.006

*Note: Regression results for the holding periods of 1 month, 3 months, 6 months, and 12 months for the subsample are presented in the table. The dependent variable is the buy-and hold abnormal return (BHAR) for each holding period. The main explanatory variable is the standardized unexpected earnings (SUE), the Governance Pillar Score (CG) and their interaction term. In addition, a set of control variables is included, as described in Section 4.6.1. Standard errors are reported in the parentheses. The symbols ***, **, and * show statistical significance at the 1%-, 5%-, and 10%-level.*

5. Analysis

This section interprets the empirical findings in relation to the study's hypotheses and relevant literature. The analysis is structured in two parts, each addressing one hypothesis and jointly contributing to the overarching research question, which is revisited in Section 6.

5.1. Post-earnings announcement drift in the Swedish stock market

To interpret the empirical results related to post-earnings announcement drift in the Swedish stock market, we distinguish between short-term and medium to long-term periods. First, section 5.1.1 interprets the short-term results, based on 1 and 3-month holding periods. Second, section 5.1.2 focuses on the medium to long-term periods, defined as 6 and 12-month holding periods. Finally, section 5.1.3 summarizes the analysis for all periods and discusses their implications for the study's first hypothesis.

5.1.1. Post-earnings announcement drift in the short-term

In the short term, PEAD results are mixed. Panel A in Figure 5 shows that the LONG portfolio for the full sample delivers a slightly positive BHAR over the 1-month holding period, while the SHORT portfolio records a small negative return. Although modest, these trends suggest that firms with the most positive (negative) earnings surprises tend to experience upward (downward) drift following the earnings announcement. When extending the holding period to 3 months, the LONG portfolio continues its positive drift, reinforcing the notion of a delayed market adjustment to earnings surprises. The SHORT portfolio, while initially exhibiting a negative mean BHAR over 1 month, turns positive over 3 months, though to a lesser extent than the LONG portfolio. This deviates from the traditional PEAD pattern but is consistent with the findings of Liu et al. (2003), who also observed positive mean BHARs over 3 months for both the LONG and SHORT portfolio. This outcome may reflect temporary return reversals or market corrections in initially oversold stocks, as suggested by Milian (2015), who observed deviations from the typical long-short asymmetry over short horizons. Another possible explanation is that investors gradually reassess the quality of information or its forward-looking implications, leading to positive corrections even among firms with initially negative surprises, consistent with the behavioral model proposed by Barberis et al. (1998). For both the 1 and 3-month holding period, the PEAD-position shows a positive drift, implying that the trading strategy would generate a positive mean BHAR. Consistent with Setterberg (2011), the upward drift of the hedge portfolio is predominantly driven by the long portfolio, supporting the notion that investors tend to underreact more to positive earnings surprises (Basu, 1997; Hirshleifer et al., 2009).

When comparing the visual trends to the regression results in Panel A of Table 5, the SUE coefficient exhibits a positive relationship with BHAR for both holding periods, however, it is statistically significant only for the 3-month holding period. This relationship is further supported by the extended regression in which the firm-level control variables are included, as presented in Panel A of Table 6. In this model, SUE has a statistically significant and positive association with BHAR over both 1 and 3 months, suggesting that higher (positive) earnings surprises lead to greater (positive) abnormal returns after earnings announcements. The SUE coefficients also increase in magnitude over the 3-month period compared to the shorter horizon. While still modest, these findings indicate that the market does not fully incorporate earnings surprises into stock prices immediately, resulting in a drift that strengthens over time. This further corroborates Liu et al.'s (2003) findings of a significant drift over 3 months in the U.K. market. The difference in the significance of SUE between the two regressions, which is more prominent over the 1-month holding period, arises from the inclusion of the four firm-level control variables. These controls address the omitted variable bias present in the initial regression (see Table 5) by allowing the model to better isolate the independent effect of SUE on returns. As a result, the regression reveals a statistically significant relationship between SUE and short-term BHAR that was not apparent without controls.

Revisiting the visual trends in Figure 5 for the corporate governance subsample (Panel B), the post-announcement drift initially deviates from the traditional PEAD pattern before eventually displaying the expected effect. Over the 1-month holding period, both the LONG and SHORT portfolios show negative mean BHARs, indicating a downward drift from the day after the earnings announcement through the following 20 days, regardless of the direction or magnitude of the earnings surprise. This may reflect investor hesitation to respond to earnings news that is reliable but lacks urgency, as discussed by Liang (2003), suggesting that highly reliable information may not prompt immediate behavioural reactions if it lacks salience. The focus on large firms in this subsample could also contribute, as such firms tend to exhibit more efficient pre-announcement pricing, leaving less room for post-earnings announcement drift. Pre-announcement expectations may also be overly optimistic, causing investors to react negatively to earnings surprises that the model classifies as positive (Wang et al., 2018). The PEAD-position remains positive, as the negative mean BHAR of the SHORT portfolio is larger in magnitude than the positive mean BHAR of the LONG portfolio. This is consistent with findings from the Finnish market by Kallunki (1996) and Booth et al. (2011), who reported larger negative BHARs in the SHORT portfolio compared to positive BHARs in the LONG portfolio, possibly reflecting the influence of foreign investors who are more efficient at processing earnings information and shaping market reactions. Over the 3-month horizon, the SHORT portfolio exhibits a negative abnormal return throughout, however, as illustrated by Figure 5, the abnormal return becomes less negative over the 3-month holding period. At the same time, the LONG position continues its positive trend, thereby displaying the traditional PEAD effect described by Bernard and Thomas (1989). The

performance of the LONG and SHORT portfolios results in a positive mean BHAR for the PEAD-position, growing in magnitude from the abnormal return recorded over the 1-month holding period. This pattern matches Setterberg (2011), who observed low positive (negative) drifts for firms with the most positive (negative) earnings surprises over 3 months, ultimately resulting in a positive BHAR for the hedge-portfolio. The similarity likely stems from the fact that firms with available corporate governance data are generally larger (see descriptive statistics in Table 4), thus better resembling the large-cap firms examined in Setterberg's study. Consistently, the mean BHAR is overall larger in magnitude for the full sample over both short-term holding periods. Given that the subsample mainly consists of larger firms, this difference can possibly be explained by the inverse relationship between firm size and PEAD, as documented by Foster et al. (1984). The regression results for the subsample are mixed and less conclusive, as SUE shows a weak and statistically insignificant relationship with BHAR across both short-term holding periods (see Panel B in Tables 5 and 6). Consequently, we cannot make a decisive judgement of the impact of earnings surprises on BHAR over the short-term horizon.

5.1.2. Post-earnings announcement drift in the medium- to long-term

In the medium- and long-term holding periods (6 and 12 months), the evidence supporting PEAD becomes more pronounced, particularly in the full sample. This is observed in both the graphical and regression-based results. The mean BHAR chart (Figure 5) reveals a persistent and clearly upward-sloping trend for the LONG portfolio, suggesting a delayed market reaction to positive earnings surprises. The SHORT position for the full sample does not resemble the expected pattern, as it remains positive over both the 6 and 12-month holding periods and displays a clear upward trend over the two horizons. However, the growth of the LONG position exceeds that of the SHORT position during this period, resulting in a slight increase in the hedge portfolio. Overall, for the 12-month holding period, the PEAD-position generates a positive return, although lower than the return of Setterberg's (2011) trading strategy. These visual trends are reinforced by the regression outputs, where SUE exhibits a statistically significant and positive relationship with abnormal returns for both the longer holding periods. Notably, the magnitude of the SUE coefficients increases with the length of the holding period, indicating a gradual and incomplete incorporation of earnings information into stock prices. This could possibly be explained by investors' tendency to underestimate the link between current and future earnings performance, resulting in slow adjustments in stock prices, as proposed by Bernard and Thomas (1989). The increasing magnitude was similarly reported by Livnat and Mendenhall (2006) and Dargenidou et al. (2018), in the U.S. and U.K. markets, supporting the idea that the market processes earnings information with a lag. The strength of the drift for the 12-month holding period further corroborates Setterberg (2011), who found significant PEAD in Swedish large-cap firms over the same horizon. However, the presence of a noticeable drift already for the 6-month holding period in the

full sample indicates that PEAD is not restricted to long-term holding periods. This could reflect the inclusion of small- and mid-cap firms, which are typically less covered by analysts and may exhibit more pronounced underreaction due to information asymmetry (Francis et al., 2007; Zhang, 2006).

In contrast, the governance subsample displays a weaker and less consistent PEAD pattern. While the regression model for the 6-month holding period shows a statistically significant relationship between SUE and BHAR, the effect is smaller in magnitude and not statistically significant for the 12-month holding period. The mean BHAR figure illustrates this muted pattern, with the LONG portfolio peaking at just over 1% for the 12-month holding period, while the SHORT portfolio exhibits a clear downward trend from the 6 to 12-month holding period, resulting in a PEAD-position with a market-adjusted return of 2% for the long-term horizon. A likely explanation for the difference between the full sample and the subsample lies in the structural characteristics of the governance subsample, which is composed mainly of larger firms (see Table 4). These firms typically benefit from enhanced institutional monitoring, broader analyst coverage, and greater transparency which are factors that may facilitate more efficient information processing and reduce the likelihood of persistent underreaction (Francis et al., 2007). This interpretation aligns with prior literature on the role of firm size and information environments in PEAD. Specifically, larger firms are generally priced more efficiently, whereas smaller firms, due to higher trading frictions and limited visibility, tend to exhibit more pronounced and persistent abnormal returns (Foster et al., 1984; Ng et al., 2008)

The extended regression model incorporating control variables (Table 6) provides further nuance to the analysis. Firm size is negatively and significantly related to BHAR at the 12-month holding period in both samples, once again reinforcing the inverse relationship, suggesting that larger firms experience less pronounced abnormal returns over the longer horizon, aligning with the findings of Foster et al. (1984). This finding is particularly relevant in the governance subsample (Panel B), where larger firms are more common and likely more efficiently priced. Moreover, firms in the subsample have other financial characteristics compared to the full sample, such as higher sales, which may be associated with greater operational transparency and broader investor attention, accelerating the market's response to earnings surprises. In line with this, the regression results show that sales are positively and significantly associated with BHAR in the governance subsample, suggesting that larger operational scale may help maintain a positive return trajectory even in more efficiently priced environments (Dang et al., 2018). While this may initially seem counterintuitive given the negative coefficient on firm size, it likely reflects that sales capture a different dimension of firm-level characteristics, namely operational performance, whereas firm size may proxy for market visibility or investor attention. Thus, while larger firms are generally more efficiently priced, those with stronger sales performance may still generate positive abnormal returns.

5.1.3. Summary of the analysis and its implications

In summary, these findings confirm the presence of PEAD in the Swedish market and provide support for the study's first hypothesis, suggesting that the market does not fully incorporate earnings surprises into stock prices immediately, but rather adjusts gradually over time as investors process and react to new information (Bernard & Thomas, 1989; Dargenidou et al., 2018; Livnat & Mendenhall, 2006). The effect is more distinct in the full sample, particularly over longer holding periods, whereas the subsample of firms with available corporate governance data shows a weaker and less consistent pattern. This disparity is likely attributable to differences in firm size, as the subsample predominantly consists of larger firms, which have been shown to exhibit less pronounced drift due to more efficient pricing and faster incorporation of new, value-relevant information (Bhushan, 1994; Foster et al., 1984). In contrast, the full sample includes a wider range of firms, including smaller ones, which are more prone to PEAD due to higher information asymmetry, lower analyst coverage, and less investor attention (Francis et al., 2007; Ng et al., 2008). Nevertheless, the overall results confirm the presence of a systematic drift following earnings announcements in Sweden, consistent with the findings of Setterberg (2011), and support the notion that earnings information is not instantly and fully reflected in market prices.

5.2. The effect of corporate governance quality on PEAD

In accordance with our second hypothesis, we expected that firms with stronger governance quality, as measured by the Governance Pillar Score, to exhibit a less pronounced drift, reflected in negative coefficients for both corporate governance quality and its interaction with SUE. These expectations are grounded in prior literature that identifies information asymmetry as a central explanation for PEAD, suggesting that well-governed firms, characterized by improved transparency, greater disclosure credibility, and more consistent communication, effectively reduce information uncertainty (Cai et al., 2006; Francis et al., 2007). From a PEAD perspective, such improvements in the information environment are expected to facilitate quicker market responses to earnings news, thereby limiting the potential for delayed price adjustments and reducing the persistence of abnormal returns.

The coefficients on corporate governance quality (CG) are not statistically significant in either Panel A or Panel B of Table 7, across any of the examined holding periods. Thus, the directional patterns should be interpreted with caution and cannot be treated as conclusive evidence. Nevertheless, the negative signs of these coefficients for the 6 and 12-month holding periods are consistent with the expectation that stronger governance structures may be associated with reduced PEAD, potentially due to more efficient price incorporation. In contrast, the interaction term between SUE and governance quality is negative across all periods and statistically significant for the 6-month holding period.

This suggests that firms with stronger governance, as captured by the Governance Pillar Score, experience a less pronounced PEAD, consistent with our second hypothesis. The significance of the interaction term for the 6-month holding period may be attributed to the statistically significant SUE coefficients observed for the subsample in Table 5 and 6, indicating that governance quality more effectively moderates the relationship between earnings surprises and abnormal returns when SUE itself is statistically significant.

The significant interaction term for the 6-month holding period implies that corporate governance quality moderates the relationship between earnings surprises and abnormal returns. This moderating effect may be explained by strong corporate governance quality enhancing the firm's information environment, as governance mechanisms such as board independence and director equity ownership have been shown to contribute to more credible and transparent reporting (Brickley et al., 1997; Cai et al., 2006). By reducing information uncertainty, stronger governance may enable investors to interpret earnings announcements more effectively, thereby mitigating the persistence of PEAD over time. However, the interaction term is only statistically significant for the 6-month holding period, indicating that the effect of governance quality may unfold gradually rather than immediately. This interpretation diverges from the findings of Lau et al. (2016) and Cheng et al. (2019), who report immediate and pronounced market reactions among firms with higher governance quality. A possible explanation to this discrepancy is that their studies focus solely on the immediate market reactions, rather than studying post-earnings announcement drift. While strong governance may lead to a quick market response to earnings news in the short term, the observed delayed effect suggests that governance may instead moderate the longer-term correction of mispricing. These findings align more closely with earlier research on PEAD and investor behavior (Barberis et al., 1998; Bernard & Thomas, 1989), which links the drift of stocks to gradual investor learning.

The absence of a moderating effect for the 1, 3, and 12-month holding periods may stem from several methodological and structural factors. One possible explanation is the temporal mismatch between annual governance data and quarterly return data, potentially introducing noise in periods where governance attributes remain unchanged over the year while abnormal return dynamics vary more frequently. Additionally, since governance data is only available for a subsample of larger firms, these firms may already exhibit more efficient pricing, as firms with stronger governance structures are generally associated with higher firm valuations (Bebchuk et al., 2009; Core et al., 2006). This could limit the potential for governance quality to further mitigate PEAD, particularly given Foster et al.'s (1984) finding that larger firms tend to exhibit weaker PEAD due to greater market efficiency. This is reflected in the weaker magnitude observed in the SUE-coefficient of Panel B (subsample) relative to Panel A (full sample) in Table 6. Although including firm-level control variables helps reduce the risk of omitted variable bias, it is important to acknowledge that corporate governance quality is not randomly distributed across firms. Companies with higher governance scores could differ in other ways that

are not directly captured by the governance data. These firms might attract more sophisticated investors, maintain a stronger culture of transparency, or follow more proactive disclosure practices (Cai et al., 2006; Francis et al., 2007). These underlying differences, while not directly measured, could influence how the market responds to earnings announcements. The low R^2 values across the holding periods indicate that a large portion of the variation in BHAR remains unexplained, suggesting that other unobserved firm characteristics may be influencing the relationship. Consequently, it becomes more difficult to isolate the specific effect of governance quality on PEAD, since part of the observed relationship may be driven by variables not measured in our models.

Moreover, the insignificant results for the 1, 3, and 12-month holding periods may reflect more complex dynamics in how investors process highly reliable information. Contrary to our expectations, Liang et al. (2003) suggest that stronger governance can lead to investor underreaction, by the same means that we expect it to mitigate PEAD, by enhancing the credibility and clarity of disclosures. From this perspective, investors may be uncertain when faced with high-quality disclosures, overlooking the information because it appears too clear or straightforward. As a result, it can take time before the information is fully reflected in stock prices.

To summarize, we find limited support for the second hypothesis. The significant interaction term between SUE and governance quality for the 6-month holding period implies that governance may play a moderating role in PEAD, potentially by enhancing the firm's information environment and facilitating more effective information processing. The absence of significant effects for the other holding periods may be a consequence of data limitations, such as the temporal mismatch between annual governance data and quarterly returns, as well as differences in firm characteristics like firm size.

6. Conclusion and suggestion for future research

This paper investigates the existence of post-earnings announcement drift, and how corporate governance quality influences the drift, for non-financial firms listed on the Nasdaq Stockholm Stock Exchange between 2010-2022. First, we examine the existence of PEAD focusing on both the full sample and the subsample for which corporate governance data is available in line with the study's first hypothesis. Then, we investigate whether corporate governance quality acts as a mitigator of post-earnings announcement drift for the subsample, in accordance with the second hypothesis. In doing so, this paper not only contributes to the limited research on PEAD in the Swedish stock market, but also adds to it by investigating an area of research that, to the best of our knowledge, has not been previously examined.

Our results confirm the first hypothesis. In the full sample, we find that earnings surprises are a significant predictor of future abnormal returns up to 12-months following the earnings announcement, with the effect strengthening over time. These findings are consistent with prior evidence from international markets (e.g., Bernard & Thomas, 1989; Livnat & Mendenhall, 2006), and the Swedish context (Setterberg, 2011), confirming the existence of PEAD over holding periods of up to 12 months. Consequently, our results provide evidence of market inefficiencies in the Swedish stock market, not only for the 12-month holding period, as reported by Setterberg (2011), but also for shorter and medium-term holding periods. However, the results for the replicated subsample exhibit a weaker and less consistent PEAD pattern, with higher SUE being associated with higher abnormal returns only for the 6-month holding period at a 5% significance level. This divergence from the full sample results may be attributed to structural characteristics of the subsample, which mainly comprises large firms. Such firms typically benefit from more efficient information processing, which may mitigate the persistence of PEAD through enhanced institutional monitoring, broader analyst coverage, and greater transparency (Francis et al., 2007). Moreover, building on prior literature identifying information uncertainty as an important driver of PEAD and corporate governance as a mitigating factor of information uncertainty, we expected firms with higher corporate governance quality, as measured by the Governance Pillar Score, to exhibit less PEAD in the Swedish setting. The results related to the second hypothesis provide limited support for this relationship. Our findings show that the interaction term between SUE and corporate governance quality is negative and statistically significant at a 5% level only for the 6-month holding period, suggesting that firms with higher governance scores experience less pronounced market reactions to earnings surprises in the medium-term following announcements. While this finding is consistent with the idea that stronger governance enhances information efficiency and reduces investor underreaction (Cai et al., 2006), it is possible that the observed reduction in PEAD for the 6-month holding period is also influenced by the composition of the subsample. Since the governance data

is mainly available for larger firms, these firms may already exhibit more efficient pricing due to broader analyst coverage and greater transparency, making it more difficult to attribute the less persistent PEAD solely to governance quality.

To conclude, this study complements the existing literature on PEAD in the Swedish stock market (Setterberg, 2011) and contributes to a previously unexplored area by linking corporate governance quality to the persistence of PEAD. While the results support the existence of PEAD in the Swedish setting and provide some evidence that stronger corporate governance is associated with a less persistent drift, the study also opens several opportunities for future research. Firstly, the test of the second hypothesis is based on a pre-constructed governance index that aggregates various governance variables into a single score. While this approach offers broad coverage, it may include components that are less relevant when examining the relationship with PEAD. Future research could benefit from the construction of a tailored governance index, isolating the effects of specific governance attributes such as board structure, ownership concentration, and executive compensation. Moreover, the governance subsample consists mainly of large-cap firms, who typically operate under more institutional oversight. As a result, our findings may not fully capture dynamics present across the wider market, where governance structures and investor behavior may be different. While this study provides preliminary insights, further extending our analysis as outlined could offer deeper understanding for academia, practitioners, and standard setters in identifying firm characteristics linked to predictable return patterns.

7. References

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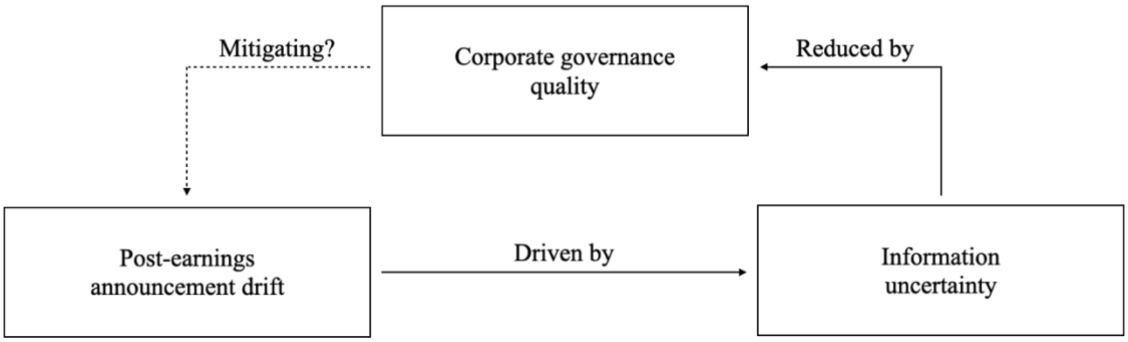
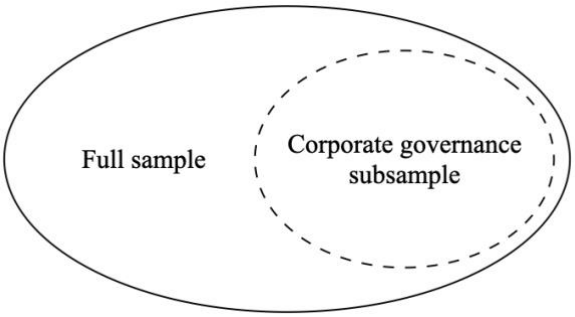
8. Appendix

Appendix 1. Illustration of the investigated interplay between post-earnings announcement drift, information uncertainty and corporate governance quality



Appendix 2. Illustration of sample structure



Appendix 3. Overview of Refinitiv Eikon's Governance Pillar Score

Index	Categories	Dimensions
Governance Pillar Score	Management	Structure (independence, diversity, committees)
		Compensation
	Shareholders	Shareholder rights
		Takeover defenses
	CSR strategy	CSR strategy
		ESG reporting and transparency

Appendix 4. Overview of control variables applied in cross-sectional regressions

Variable	Frequency	Data source	Note
Market capitalization	Manually computed quarterly*	S&P Capital IQ	(Outstanding shares x Stock price at end of each fiscal quarter). Logarithmically scaled
Sales	Quarterly report	S&P Capital IQ	Logarithmically scaled
Book-to-market ratio	Quarterly report	S&P Capital IQ	
Debt-to-assets ratio	Quarterly report	S&P Capital IQ	
Return on Equity	Quarterly report	S&P Capital IQ	
Governance pillar score	Annual report	Refinitiv Eikon Datastreams	

Market capitalization is manually collected and computed on the last day of each fiscal quarter, e.g., 2010-03-30 for Q1-2010 observations.

Appendix 5. Usage of generative AI in thesis writing

Generative AI has been used cautiously and diligently throughout the development of this thesis. To ensure a more efficient literature review process and broad coverage, we have employed Perplexity AI to complement our manual search of identifying and listing relevant prior articles. In this sense, AI has been valuable in allowing us to reduce the time required for manual searches through various search engines and academic databases, enabling a broader mapping and analysis process of existing literature. Relying exclusively on AI to find relevant articles poses the risk of overlooking relevant literature, particularly studies not well indexed or with consistent keywords. Aware of this limitation, we have only employed Perplexity AI for complementary support in the screening process. It is important to note that, while Perplexity AI was used to assist in the initial identification and listing of relevant literature, all reading, assessments, and extraction of information from the selected sources were carried out by us, manually.

Furthermore, ChatGPT has been used for two main purposes throughout the thesis work. First, it has been used for troubleshooting purposes when writing Stata code for merging and clearing datasets, extracting descriptive statistics, and running regressions. Although both of us have fundamental knowledge in Stata, our previous experience is somewhat limited. Thus, ChatGPT's support has been helpful in enabling us to implement our methodological framework more efficiently when challenges have occurred. Second, it has been used to assist with spelling, grammar, and proofreading. It is important to note that all reading of previous literature, interpretation of empirical findings, and writing has been conducted by us. ChatGPT has merely been used at a later stage to suggest improvements related to grammar, structure, redundancy, and language, without rewriting or altering the core content. Relying on AI for writing purposes poses a number of risks. For instance, ChatGPT might interpret content differently and thus miss the

intended meaning of a discussion or a reference, which in turn could lead to misleading recommendations. To mitigate such risk, we have made sure to write the text ourselves and only ask ChatGPT for recommendations, which we have reviewed critically thereafter. This approach has helped us enhance the overall clarity and consistency of the thesis.

To summarize, generative AI has been used in a cautious and controlled manner to support the progress of the thesis. Perplexity AI has been employed to complement our manual search of prior literature, which has contributed to a more comprehensive review. ChatGPT has assisted with troubleshooting Stata code and proofreading to provide recommendations related to spelling, grammar, and redundancy. Thus, no content has been generated by AI. All analysis, interpretation, and writing has been carried out by us, manually. However, we acknowledge that, although only supplementary, the use of AI has contributed to improved efficiency in the development of essential steps in the thesis work, allowing more time to focus on reviewing literature, interpreting empirical results, and writing. In this way, we believe AI contributed to the overall quality of the thesis.