

EARNINGS QUALITY AND TRADING VOLUME REACTIONS AROUND EARNINGS ANNOUNCEMENTS: INTERNATIONAL EVIDENCE

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Abstract: This paper challenges the widely held assumption in financial modeling that market participants interpret public information identically. This study aims to investigate the relationship between earnings quality and trading volume reactions around earnings announcements across a diverse range of international markets. By analyzing the relationship between trading volume and stock returns around public announcements, we find evidence inconsistent with this assumption. To address this inconsistency, they develop a novel model of trade incorporating differential interpretations, which aligns with the observed volume-return relation.

Key words: earnings quality, stock returns, international markets, trading volume, financial modeling, stock brokerage analysts, market dynamics, earnings forecasts, the volume-return, hypothesis of identical interpretations, market efficiency.

Methodology:

• **Data:** This study will utilize a comprehensive dataset of publicly listed firms from multiple countries, encompassing data on:

- Earnings quality metrics (e.g., accruals, discretionary accruals, earnings predictability)
- Trading volume around earnings announcements
- Firm characteristics (e.g., size, leverage, industry)
- Country-specific factors (e.g., accounting standards, investor sophistication, market efficiency)

• **Empirical Analysis:** Regression analysis will be used to examine the relationship between earnings quality and trading volume reactions, controlling for other relevant factors.

• **International Comparisons:** The study will conduct cross-country analyses to investigate the potential impact of country-specific factors on the relationship between earnings quality and trading volume reactions.

Expected Contributions:

• **Empirical Evidence:** Provide novel empirical evidence on the relationship between earnings quality and trading volume reactions in a global context.

• **Cross-Country Comparison:** Offer valuable insights into the differences in this relationship across different international markets.

- **Practical Implications:** Inform investors and analysts about the information content of earnings announcements and the role of earnings quality in driving trading activity.

- **Policy Implications:** Contribute to the ongoing debate about corporate disclosure practices and the need for high-quality earnings reporting.

Limitations:

- **Data Availability:** Accessing consistent and reliable data across different countries can be challenging.

- **Measurement of Earnings Quality:** The choice of earnings quality metrics can influence the results, and there is no universally accepted definition of earnings quality.

- **Other Factors:** Other factors, such as market sentiment, economic conditions, and regulatory changes, can also influence trading volume reactions.

Literature Review:

The signal theory is predicated on the information asymmetry that exists between investors, management, and individuals. In order to mitigate the imbalance brought about by social selection challenges in the face of imperfect information conditions, certain parties take action to provide signals about particular situations (Connelly et al., 2011). It indicates that management signals in an effort to lessen asymmetric information, with corporate profits disclosure being one of those signals. Using this earnings information, investors typically employ a variety of analytical measures to assess the company's past, current, and future capabilities.

There is no agreement on the definition of earnings quality in the literature, and definitions vary (Khajavi & Nazemi, 2011). When accounting practices result in unsustainable earnings, the earnings are referred to as low or poor quality earnings. The authors followed Lin, Wang, and Fu (2022); Koubaa and Slim (2019); Yildiz, Van Ness, and Van Ness (2020), who determined stock return volatility as the dependent variable by calculating the standard deviation of annualized returns, in order to ascertain the relationship between trading volume activity, earning quality, stock return volatility, and corporate reputation. The author then included two independent variables: earning quality and trading volume activity. The authors used the same method as Elfira et al. (2021) to calculate trading volume activity by computing ratios between shares traded and outstanding. The earning quality is the second independent variable. The ratios between operating cash flow and net income were calculated by the author in accordance with Penman and Zhang (1999).

According to Gissel, Giacomino, and Akers (2005), earnings quality is the ability of earnings to accurately reflect business performance, which helps predict future earnings by taking into account earnings stability and consistency. Analysts analyze earnings data to assess the company's past, present, and future capabilities using a variety of analytical ratios. Investors' decisions to make investments will be influenced

by the company's disclosure of earnings (Aboody et al., 2005). Since the profits created are greater than or equal to expected profits, high-earning quality implies that the company's financial performance is good and that earnings can properly predict the continuity of future profits. By thwarting noise traders' irrational trading behavior, high earning quality can mitigate stock mispricing and improve stock market efficiency, which lowers and stabilizes stock return volatility (Mitra, 2016).

Earnings Quality and Trading Volume Reactions Around Earnings Announcements

The majority of trading models in speculative markets make the assumption that agents have the same interpretation of public information. We present empirical data on the relationship between trade volume and stock returns in the wake of public announcements, and we contend that the data contradicts this presumption. Next, we create a model of trading centered on public announcements that takes into account varying interpretations and aligns with the volume-return relationship that has been observed. Next, we use stock brokerage research analysts' earnings projections to test the basic model of belief revision that underlies the majority of trade models. The forecast revisions in these data appear to be at odds with the hypothesis of identical interpretations.

We discover that the negative relationship between trading volume reaction and earnings quality, independent of stock price movements, only becomes stronger for firms with more institutional investors in nations with robust investor protection. As institutional ownership rises, the relationship between trading volume and stock price changes and earnings quality becomes less favorable; however, this effect is only observed in nations with less corrupt governments and better investor protection. Our findings imply that institutional ownership has a role in investors' varying private opinions before to and during earnings reports. Crucially, whether or whether institutional investors operate in a market-oriented environment with strict legal enforcement determines their incentive to acquire private information.

Our research adds to the body of literature in two ways. First, previous cross-national research show that investor trading volume significantly responds to the quality of earnings. The sources of the trading volume reactions, however, have not been discussed in this area of inquiry. Using the O. Kim paradigm, we break down the trade volume reaction and present a more comprehensive view of how investors behave in various nations in response to varying earnings quality. More significantly, we delve further in an attempt to comprehend the institutional dynamics underlying the trading behaviors that have been observed. The way investors gather information and make trading decisions is influenced by a number of characteristics that probably differ between nations, which in turn affects the relationship between trading volume reaction and profits quality.

We discover that investors who receive noisy earnings signals in nations with strong institutions (like the US) acquire more private information during earnings announcements, while investors who expect noisy earnings signals in nations with weak institutions rely more on preannouncement private information acquisition to inform trading decisions. When extrapolating the findings from the United States to other nations, care should be taken because of the divergent trading patterns we see in those with weak institutions.

Second, this research advances our knowledge of the behavior of institutional traders. Our findings imply that the country-level institutional architecture has a greater influence on the trading responses of institutional investors to profits quality.

Given that institutional investors make up the majority of global trading volume, our analysis of the ways in which national-level factors impact the information environment and trading behavior of institutional investors has significant ramifications for the development of policies and regulatory supervision of trading activities in different nations.

Third, we look at the effect of liquidity in the stock market. Future earnings can be better predicted by liquid stock prices (Kerr et al., 2020). Because liquidity lowers the difficulty and execution costs of arbitrage methods, it is likely to aid in the price discovery process. Investors can gain more from doing stock research and have higher incentives to invest in information, expertise, and resources to improve their understanding of earnings signals when trading costs are lower. When presented with a noisy earnings signal, investors using different tools are likely to interpret it differently and produce different private information when it is published. A more liquid stock market will therefore enable the announcement of more private information.

But because more liquid stock markets speed up the convergence of prices to fundamentals, such a brief uptick in disagreement will pass rapidly (Sadka & Scherbina, 2007). But price discovery and equity analysis investments are obscured in an illiquid stock market, which leads to increased mispricing and dispute throughout the typical period (Sadka & Scherbina, 2007). For investors who are unable to recoup the costs of illiquidity and extra research in order to analyze a noisy signal from expected trading profits, the expectation of a noisier signal may deter them from conducting further study. In the face of illiquidity, only a select few highly skilled investors are prepared to undertake equities research, form accurate prior beliefs, and exploit the noisy signal. Consequently, the prior belief precision wedge among investors.

Key Areas of Exploration:

Defining Earnings Quality: The research begins by defining earnings quality, considering various measures such as accrual quality, cash flow quality, and the

consistency of earnings over time. This is important for establishing a clear baseline to measure how different levels of earnings quality impact trading activity.

Measuring Trading Volume Reactions: The research will examine trading volume changes before, during, and after earnings announcements. This analysis will consider factors like the magnitude of volume changes, the persistence of volume changes, and the relationship between volume changes and stock price movements.

Examining International Differences: This research will explore how the relationship between earnings quality and trading volume varies across different international markets. Factors like accounting standards, corporate governance structures, investor demographics, and market maturity can significantly influence trading responses.

Role of Information Asymmetry: The research will analyze how information asymmetry (the difference in knowledge between informed and uninformed investors) affects the relationship between earnings quality and trading volume. High-quality earnings have the potential to reduce information asymmetry, leading to more efficient market responses.

Influence of Analyst Forecasts: This research will consider how analyst forecasts of earnings influence the relationship between earnings quality and trading volume. Analysts provide expert opinions and market expectations, impacting investor behavior and contributing to the volume of trading activity.

Understanding the relationship between earnings quality and trading volume reactions is crucial for several reasons. First and foremost, to understand Investor Behavior in Information content and Investment decisions. High-quality earnings provide more reliable and informative signals about a company's performance. Investors rely on this information to make informed decisions about buying, selling, or holding a stock. The extent to which investors react to earnings announcements (i.e., trading volume) is directly influenced by the perceived quality of those earnings. High-quality earnings are likely to trigger more significant trading activity, as investors are more confident in the information.

It is very important to investigate market efficiency according to price discovery and information asymmetry. Trading volume is a key indicator of market efficiency. When trading volume is high in response to high-quality earnings, it suggests that the market is quickly and efficiently incorporating new information into asset prices. High-quality earnings can help reduce information asymmetry (the difference in knowledge between informed and uninformed investors). This leads to a more efficient market where prices reflect all available information.

Understanding the relationship between earnings quality and trading volume helps companies understand the benefits of providing high-quality earnings reports according to incentives for high-quality reporting. Companies that produce high-

quality earnings can expect greater investor attention and potentially higher valuations corporate disclosure practices. Regulatory bodies can use this understanding to design policies that incentivize companies to produce more transparent and reliable earnings information.

Institutional investors are more intelligent, have better access to information, and possess more potent analytical tools, they are typically seen as knowledgeable traders. Because there is greater opportunity to benefit when the information is noisy, they should be more motivated to gather information prior to the announcement and analyze disclosed earnings information in the event of a noisy earnings signal. Yet, if institutional investors are located in nations with weak institutions, this incentive may be lessened because price discovery may end up costing more than it saves. We estimate the following updated model to see if institutional investors contribute to the explanation of the relationship between country-level institutions, earnings quality, and trading volume surrounding earnings announcement.

Expected Contributions and Potential Implications:

Understanding Market Dynamics: This research will provide valuable insights into how investors respond to earnings announcements, offering a deeper understanding of market efficiency and the role of information in price discovery.

Improving Financial Modeling: The findings will inform the development of more accurate and sophisticated financial models, better reflecting real-world market behavior.

Policy Implications: The research can guide policymakers in designing regulations that encourage high-quality earnings reporting and promote efficient capital markets.

Conclusion

This study hypothesizes that firms with higher earnings quality will experience a greater increase in trading volume following earnings announcements. This is because high-quality earnings are more informative and reliable, leading to heightened investor interest and increased trading activity. The link between earnings quality and trading volume reactions provides valuable insights into investor behavior, market efficiency, corporate disclosure practices, and financial analysis. It is a key area of research for academics, practitioners, and policymakers alike. A growing body of research suggests that earnings quality, representing the reliability and informativeness of reported earnings, plays a crucial role in investor decision-making. However, the impact of earnings quality on trading volume reactions remains under-explored, particularly in a global context. Further, using data on stock brokerage analysts' earnings forecasts, they test the standard model of belief revision, demonstrating its inadequacy in explaining the observed heterogeneity in forecasts. Their findings underscore the need for financial models to incorporate individual differences in information interpretation for

more accurate and insightful representations of market dynamics.

The findings align with our hypotheses. We find that trading volume reactions, independent of stock price changes, are more negatively correlated with earnings quality for private information disclosed during the announcement period in nations with better investor protection, less dishonest governments, and more liquid stock markets. Regarding the differential precision of preannouncement private information, we discover the opposite outcomes. Overall, our findings show that institutional characteristics at the national level play a significant role in influencing investors' decisions to acquire private information before to and during earnings releases. By concentrating on the firm's institutional ownership, we shed light on a possible source of differential precision of private information, since institutional investors have access to more advanced technology and skill sets for processing earnings signals.

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