Frontiers in Economics and Management Volume 7 Issue 11, 2026
ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

Market Reactions under Accounting Standards Lag: A Case and Event Study of NIO's BaaS Short-Selling Incident

Wanqing Sun*

School of Business, Huai'an University, Huai'an, Jiangsu, China

*Corresponding author: 2188755107@qq.com

Abstract

Business model innovation often outpaces the issuance of detailed accounting guidance, and the resulting accounting standard lag expands managerial judgement space whilst reducing information comparability. Taking the short-selling report issued by Grizzly Research on NIO's BaaS (Battery as a Service) model as a case, this paper adopts a case study approach supplemented by an event study to examine how the market prices accounting uncertainty. The findings indicate that, although relevant accounting risk information had already been publicly disclosed, the market failed to identify it effectively under normal conditions; by integrating and reframing existing information, the short-selling report acted as an 'information activator' and triggered a distinctly negative pricing reaction; in contrast, the point-by-point rebuttals issued by professional institutions did not bring about consistent price recovery within the short event window, with the abnormal return on the event day approaching zero. This suggests that what the market prices is not the accounting violation per se, but the accounting uncertainty arising from the lag in accounting standards. This paper uncovers the transmission mechanism of 'accounting standard lag → information gap → market pricing reaction' and offers implications for the development of accounting standards for innovative businesses and the improvement of information disclosure.

Keywords

Accounting Standard Lag; Event Study Methodology; Short-Selling Incident; Accounting Uncertainty; NIO BaaS; Market Pricing Reaction.

1. Introduction

1.1. Research Background

The rapid development of the new energy vehicle industry has given rise to diverse business model innovations. In August 2020, NIO officially launched its BaaS (Battery as a Service) model, which separates the vehicle from the battery, marking a pioneering business model innovation within the industry. Under this model, when purchasing a NIO vehicle, consumers may choose not to purchase the power battery outright but instead pay a monthly service fee via a leasing arrangement. The battery assets are held by Wuhan Weineng Battery Asset Co., Ltd., a joint venture established by NIO and industry partners such as CATL. This model aims to lower the initial barrier to car ownership for consumers whilst addressing range anxiety and battery degradation issues through a battery-swapping network.

However, the pace of innovation in business models often outstrips the pace of revisions to accounting standards. NIO's BaaS model separates the vehicle from the battery assets and adopts a subscription-based payment model for the battery, thereby breaking the mould of the traditional accounting recognition framework for complete vehicle sales. Existing accounting standards provide only a principled framework for revenue and asset recognition, lacking detailed practical guidance for innovative models such as BaaS, leaving corporate management

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

with considerable scope for accounting judgement. Existing research supports this assessment: the formulation of accounting standards inherently lags behind the development of markets and business activities [1]; when standards fail to provide timely and clear guidance for new business models, information may still be 'distorted' due to a lack of comparability, even if the accounting treatment is compliant [2]; furthermore, the decision-usefulness of earnings information generated under current standards has been significantly weakened in emerging business models [3].

On 28 June 2022, the short-selling firm Grizzly Research LLC published a short-selling report targeting NIO, alleging that the company had recognised revenue prematurely and inflated profits through its related party, Wuhan Weineng. Following the report's publication, NIO's share price experienced significant volatility. Subsequently, several international institutions, including Morgan Stanley, JPMorgan and Daiwa Capital Markets, issued research reports refuting Grizzly's allegations point by point, arguing that the concerns raised constituted "a misinterpretation of the BaaS model, as well as a confusion of relevant concepts and data". However, the market did not exhibit a consistent price recovery in response to the rebuttals from these professional institutions.

This series of events provides a typical case study for examining market pricing mechanisms against the backdrop of lagging accounting standards: when innovative businesses encounter such lags, how does the market price accounting uncertainty? Can the interpretation of information by professional institutions effectively bridge the information gap?

1.2. Research Questions and Significance

This paper focuses on the following core question: against the institutional backdrop of standard lag, how does the capital market's pricing mechanism for accounting uncertainty in innovative businesses operate? Specifically, this paper explores two dimensions: first, whether and how short-selling reports, as 'information activators', trigger the market to price publicly disclosed but overlooked accounting risk information; second, why the rebuttals by professional bodies failed to effectively correct market pricing, and what are the underlying institutional causes.

The theoretical significance of this study lies in linking the institutional phenomenon of 'standard lag' with capital market pricing responses, proposing and elucidating the transmission mechanism of 'standard lag → information gap → market pricing response', and thereby defining the role of short-selling reports as 'information activators' in information transmission, thus enriching the application of research on the value and relevance of accounting information in innovative business contexts. The practical significance lies in providing guidance for standard-setting bodies to expedite the issuance of detailed guidelines on innovative business practices, and for enterprises to improve their disclosure practices in such contexts.

1.3. Research Methods and Structure of the Thesis

This paper employs the case study method as its primary approach, supplemented by the event study method to provide quantitative evidence. The former is used to provide a detailed account of the institutional context, corporate behaviour and the entire process of market reactions, thereby facilitating theoretical development; the latter is used to characterise the direction and magnitude of market reactions, providing a quantifiable reference for the case analysis. This paper selects the date of the release of the Grizzly short-selling report (28 June 2022) as the main event, and the date of JPMorgan's rebuttal of the report (30 June 2022) as the auxiliary event. It calculates the abnormal return (AR) and cumulative abnormal return (CAR) within the event window, respectively, to observe the direction and extent of the

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

market's pricing reaction. The literature background of this method and the specific parameters of this study will be detailed in Chapters 2 and 3.

The thesis is divided into five chapters. Chapter 1 serves as the introduction, presenting the research background and research questions; Chapter 2 covers the theoretical framework and literature review, defining the theoretical implications of standard lag and summarising relevant literature; Chapter 3 outlines the case background and research design, introducing NIO's BaaS model, the sequence of events surrounding the short-selling incident, and the research methodology; Chapter 4 analyses the empirical results, reporting market reaction data for the two event windows; Chapter 5 presents the conclusions and implications, summarising the main findings, theoretical contributions and practical implications.

2. Theoretical Framework and Literature Review

2.1. The Theoretical Implications of Standard Lag

In studies examining the relationship between accounting standards and business model innovation, a recurring phenomenon has attracted the attention of scholars: the emergence of new business models and new lines of business often outpaces the pace at which standards are formulated and revised. The NIO BaaS case presented in Section 1.1 is a classic illustration of this phenomenon. Although existing literature adopts varying perspectives, it essentially describes the same institutional characteristic: a temporal lag in the supply of regulations. Drawing on existing research, this paper defines this phenomenon as 'standard lag': the pace of business model innovation outstrips the speed at which accounting standards are revised and updated, thereby creating a time gap in the supply of regulations.

Before proceeding with the discussion, it is necessary to clarify two points. Firstly, 'standard lag' describes an objective phenomenon of institutional update lag; it does not imply that the provisions of the standards themselves contain institutional flaws. Correspondingly, the term 'distortion of legitimate accounting information' cited below does not refer to errors in the financial statements themselves or violations of accounting procedures, but rather to two implicit aspects: a decline in the comparability of information and difficulties in investor understanding. Secondly, this paper consistently uses the term 'standard lag' to refer exclusively to the time lag arising when business model innovations precede the issuance of detailed accounting guidance; concepts such as 'scope for accounting judgement' and 'accounting uncertainty' mentioned in the text are specific manifestations of this time lag in the areas of accounting practice and market pricing, and are not used separately as parallel concepts.

From the perspective of its underlying mechanism, the formation of standard lag can be summarised as follows: the emergence of new business models → enterprises facing an accounting dilemma of 'no direct basis' → reliance on management's professional judgement → a decline in the comparability and transparency of accounting information. Zhang Xinmin (2019) [1], in discussing the development of China's accounting standards, pointed out that there is a certain degree of lag in the formulation of standards; this lag is an inherent characteristic of standards as a 'reactive' rather than a 'proactive' system. Li Sihai et al. (2020) [2] linked this lag in standards to 'legitimate accounting information distortion' under new business models, arguing that when standards fail to provide timely and clear guidance for new business activities, the information may be distorted due to a lack of comparability, even if the enterprise's accounting treatment formally complies with the standards. Specifically, the term 'distortion' here encompasses two dimensions: firstly, different enterprises may adopt varying accounting treatments for similar business activities, leading to a decline in the comparability of accounting information; secondly, investors lack a reliable benchmark for judgement, making it difficult to accurately translate this information into a basis for pricing, thereby giving rise to

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

difficulties in interpretation. This distinction is crucial to this paper: it implies that even if an enterprise is compliant, the information may still prove ineffective at the market level.

Wang Xia et al. (2025) [3] further corroborate this point through an empirical examination of the functions of CAS earnings and non-CAS earnings: Against the backdrop of the accelerated development of new-quality productive forces, the explanatory power of earnings information generated under current accounting standards (CAS earnings) for investor decision-making is waning, whilst non-standardised earnings, conversely, possess incremental informational value. This reflects how the gap between the supply of accounting standards and the accounting needs of new business models has substantially diminished the decision-usefulness of accounting information.

A similar gap in the provision of accounting standards also exists in digital economy issues such as the recognition of data assets on balance sheets; due to space constraints, this paper will not elaborate further.

2.2. Research on the Relevance of Accounting Information

Research on the value and relevance of accounting information examines whether and how accounting information influences investor decision-making and share prices. The core proposition in this field is that the more relevant and reliable the accounting information, the stronger its correlation with share prices. The level of detail in accounting standards, as a key factor influencing the quality of accounting information, directly affects investors' ability to effectively utilise such information as a basis for pricing. When standard guidance is ambiguous, company management faces greater scope for professional judgement; the comparability of accounting information across different companies declines; and investors' trust in and effective use of accounting information are correspondingly reduced.

From the theoretical perspective of 'information asymmetry and pricing', public signals alter investors' beliefs and trigger price revaluation. The seminal study by Ball and Brown (1968) [5] provided the first systematic empirical support for this mechanism; they found that the direction of unexpected changes in accounting earnings was significantly correlated with the sign of abnormal stock returns, indicating that accounting information is indeed used by investors to revise their expectations. Beaver (1968) [6] further found that stock price volatility and trading volume during earnings announcements were significantly higher than in other periods, indicating that publicly disclosed accounting information does indeed alter the distribution of investors' beliefs. However, the realisation of this process is contingent upon the comprehensibility and comparability of the information. The above theory suggests that accounting information is effectively priced by the market only if it is comprehensible and comparable; when standard-setting lags make it difficult to recognise the information, the market may not be able to incorporate it into pricing in a timely and adequate manner, even if the information has been publicly disclosed-this is precisely the core proposition of this paper.

2.3. The Short-Selling Mechanism and Market Information Efficiency

Short-selling firms play the role of information miners and external monitors in capital markets. Through in-depth analysis of publicly available information from listed companies, short-selling firms may uncover risk signals overlooked by the market and bring such information to public attention by publishing short-selling reports. In this sense, short-selling reports can act as 'information activators'-consolidating dispersed and concealed information into concentrated signals of scepticism, thereby triggering market repricing.

Yuan Min (2022) [7] examined Grizzly Research's short report on NIO from an accounting perspective, scrutinising the various controversies raised in the report. The study concluded that NIO had not committed any significant irregularities in its accounting practices or disclosure, whilst Grizzly's allegations contained computational errors and weaknesses in the

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

chain of reasoning. This study provides an accounting-based perspective for assessing the credibility of short-selling reports; however, its scope of discussion is largely confined to compliance assessments, and it does not delve further into how the market actually reacts to short-selling information or the reasons behind such reactions.

In broader empirical research, incidents of accounting manipulation or financial restatements typically trigger significant negative market reactions. Feroz et al. (1991) [8] systematically examined market reactions before and after the publication of the US Securities and Exchange Commission's Accounting and Auditing Enforcement Bulletins and found that target companies exhibited significant negative abnormal returns within the announcement window. Palmrose et al. (2004) [9], using a sample of 403 financial restatement announcements between 1995 and 1999, found that the average abnormal return within the two-day window following a restatement announcement was approximately −9.2 per cent, with restatements involving management fraud or affecting core earnings items eliciting an even more negative reaction. Karpoff et al. (2008) [10] further found that the market's punishment for financial irregularities far exceeds legal sanctions: for every dollar of market capitalisation artificially inflated through misrepresentation, a firm ultimately loses an average of approximately 4.08 dollars, the vast majority of which stems from reputational damage rather than legal penalties. The aforementioned studies collectively indicate that capital markets price in significant negative consequences in response to risks to the reliability of accounting information. Methodologically, this paper draws on this line of research but shifts the analytical focus from 'accounting non-compliance' to 'accounting uncertainty in a context of standard-setting lag'-the latter of which does not presuppose the existence of non-compliance.

2.4. Literature on Event Study Methodology

The event study method was systematically developed by Brown & Warner (1985) [4] to test whether specific events cause abnormal movements in share prices. The basic logic of this method is that, under the efficient market hypothesis, the impact of an event is rapidly reflected in share prices; by comparing the actual returns following the event with the expected returns had the event not occurred (i.e. abnormal returns), it is possible to determine whether the event is informative.

Regarding the selection of event windows, existing research provides a wealth of practical references. The advantage of short windows (such as [−1,+1]) lies in their focus on the most direct market impacts immediately before and after the event, thereby minimising interference from other information entering the window (Brown & Warner (1985) [4]; Fama (1991) [11]). After decades of development, event study methodology has become one of the most widely used tools in empirical accounting and finance research, with its applications covering various events at both the firm-level and macro-level, such as mergers and acquisitions, earnings announcements, refinancing, and changes in regulatory policy (MacKinlay (1997) [12]).

This paper adheres to the classical methodology of event studies, employing the Market Model to estimate expected returns, with an estimation window of [−120, −21] selected for parameter estimation; the event window is designed specifically according to the particularities of the research context.

2.5. Definition of Key Concepts: Information Activators

The literature review in Section 2.3 indicates that short-selling institutions play a role in information discovery and external oversight within capital markets, whilst existing empirical research has also confirmed that the market prices in negative expectations regarding accounting reliability risks. Building on this, this paper conceptualises the role of short-selling reports in information transmission as an 'information activator', the essence of which comprises three progressive levels: firstly, the premise is that information has been disclosed

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

but not priced in-relevant accounting risk information has been disclosed in a dispersed manner through channels such as annual reports, but is difficult to identify due to a lack of standard-setting guidance, and the market does not incorporate it into valuations under normal circumstances; secondly, the mechanism involves activation through consolidation and reformulation-short-selling institutions consolidate scattered information points into a concentrated signal of scepticism, thereby reducing investors' costs of obtaining and understanding information; thirdly, the object of activation is accounting uncertainty rather than accounting non-compliance-even if a firm has not actually breached regulations, judgement-heavy accounting treatments themselves constitute a source of risk. It should be noted that this section serves solely to define concepts; the specific explanatory power of this three-tier framework regarding the empirical findings of this paper will be elaborated in Section 4.3.

3. Case Background and Research Design

3.1. NIO's BaaS 'Vehicle-Battery Separation' Model

NIO's BaaS (Battery as a Service) model was officially launched in August 2020 and represents the first 'vehicle-battery separation' business model in the new energy vehicle industry. Under this model, when purchasing a NIO vehicle, consumers may choose not to purchase the power battery outright, but instead to lease it by paying a monthly service fee. The battery assets are held and operated by Wuhan Weineng Battery Asset Co., Ltd., a company jointly established by NIO and industry partners such as CATL. As an independent holder of 'battery assets', Weineng leases the batteries to end users who opt for the BaaS scheme and charges them a monthly service fee.

The commercial innovation of this model lies in breaking down traditional vehicle sales into two separate components-'vehicle body sales' and 'battery services'-thereby lowering the initial purchase threshold for consumers, whilst addressing range anxiety and battery degradation through a battery-swapping network. However, from an accounting recognition perspective, this model breaks with the traditional revenue recognition framework for whole-vehicle sales: Has there been a substantive transfer of ownership of the battery assets? Should battery leasing revenue be recognised in a lump sum or on an instalment basis? Does NIO exercise substantive control over Weineng, thereby requiring consolidation in the financial statements? Existing accounting standards lack specific, detailed guidance on these issues, leaving considerable scope for professional judgement on the part of company management.

3.2. Review of the Grizzly Short-Selling Incident

This section outlines the sequence of events in chronological order, with the key milestones being: 28 June 2022, when Grizzly Research published its short-selling report; 30 June, when JPMorgan published a rebuttal report; August, when NIO announced the findings of its independent investigation; and October 2023, when the Government of Singapore Investment Corporation (GIC) filed a lawsuit.

On 28 June 2022, the short-selling firm Grizzly Research published a short-selling report targeting NIO, alleging that NIO had inflated its revenue and profits through its related party, Wuhan Weineng. The core allegations in the Grizzly Research report included: (1) NIO sold batteries to Weineng on a one-off basis, thereby recognising battery leasing revenue for future years in advance, and inflated revenue and net profit in the 2021 financial year through battery sales to Weineng; (2) Weineng is in fact an off-balance-sheet entity 'substantially controlled' by NIO, and NIO's failure to include it in its consolidated financial statements concealed its true liabilities.

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

Following the publication of the Grizzly report, NIO's share price experienced significant volatility. NIO responded swiftly, issuing a statement asserting that the report lacked factual basis and contained a substantial amount of false information, unsubstantiated speculation and misleading conclusions. In August 2022, NIO announced that an independent committee of its board had engaged an international law firm and a forensic accounting firm to conduct an independent internal investigation, the findings of which confirmed that "the relevant allegations in the Grizzly report were without factual basis".

It is worth noting that following the release of the Grizzly report, international institutions such as Morgan Stanley, JPMorgan Chase and Daiwa Capital Markets successively published research reports stating that they did not support Grizzly's conclusions. They argued that Grizzly's allegations regarding the BaaS business constituted a misinterpretation of the business model and confused relevant concepts and data. Among these, Daiwa Capital Markets offered the most targeted rebuttal to the core allegation of 'battery overselling', pointing out that the 19,000 BaaS orders disclosed by Weineng were a subset of underlying assets selected for the issuance of asset-backed notes and did not represent its total order volume; Grizzly's conclusion of 'overselling', derived from this data, was based on a misapplication of the definition; JPMorgan, meanwhile, argued that every battery held by NIO Energy has a corresponding underlying subscriber, and that asset-backed securities could continue to be issued using the remaining batteries. The rebuttal research report published by JPMorgan on 30 June was one of the most systematic and influential responses to Grizzly's allegations; consequently, this article uses its publication date as an auxiliary event date.

In October 2023, the Government of Singapore Investment Corporation (GIC) filed a lawsuit against NIO on similar grounds, triggering brief market volatility. NIO responded by stating that the lawsuit "stemmed from Grizzly's false allegations the previous year" and that an independent investigation had confirmed the allegations to be baseless. As the relevant class action lawsuit had not yet been concluded, a US judge ordered a stay of proceedings in the GIC case in early October 2023.

3.3. Research Design

Before delving into the specifics of the research design, it is necessary to clarify the methodological stance of this paper. This paper follows the case study paradigm, whose evidential logic is based on analytical generalisation rather than statistical generalisation; that is, it utilises a single case to test and expand upon existing theories, rather than inferring general patterns from sample characteristics [14–15]. Based on this stance, the role of event study methodology in this paper is not to serve statistical inference, but rather to provide a quantitative reference for the case narrative, enabling the magnitude and direction of market reactions to be observed and described. As the sample size is only one, this paper does not regard statistical inference as a source of evidence for the validity of its conclusions; the abnormal returns and cumulative abnormal returns reported herein are interpreted solely in a descriptive manner.

3.3.1. Event Study Model Specification

This paper adopts the event study approach and utilises the Market Model to estimate expected returns. The Market Model assumes a linear relationship between individual stock returns and market returns:

$$Rit = \alpha i + \beta i\, Rmt + \varepsilon it$$

where Rit denotes the actual return of individual stock i on trading day t, Rmt denotes the return of the market portfolio on trading day t (measured by the NASDAQ Composite Index in this paper), αi and βi are the parameters to be estimated, and εit is the random disturbance term.

$$ARit = Rit - E(Rit)$$

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

The cumulative abnormal return (CAR) is the sum of the ARs for each day within the event window, reflecting the cumulative impact of the event over the window period.

The estimation window is selected as the [−120, −21] trading days preceding the event date, and is used to estimate the market model parameters αi and βi.

3.3.2. Selection of the Event Window

This study faces a particular challenge: the date of the Grizzly short-selling report was 28 June 2022, whilst the rebuttal report by JPMorgan-which carries significant market influence-was published on 30 June; the two events were separated by only two trading days. If a longer event window of [−3, +3] were adopted, there would be a risk of cross-contamination between the information from the two events, making it difficult to attribute the market reaction clearly to a single event.

Consequently, drawing on the recommendations of Brown & Warner (1985) [4] and recent event study literature, this paper sets the event window for both events as [−1,+1], i.e. one trading day before and one trading day after the event date, totalling three trading days. The advantages of a short window are: (1) it focuses on the most direct market shocks immediately before and after the event; (2) it minimises the inclusion of other irrelevant information within the window; and (3) it effectively avoids cross-contamination of information between two adjacent events. In the case at hand, if a longer window such as [−2,+2] were adopted, T-2 of the main event (24 June 2022) would still fall within the period when public sentiment regarding the test vehicle's fall from a building was escalating, whilst T+1 of the secondary event (1 July 2022) would coincide with the release date of NIO's monthly delivery figures; both constitute significant confounding factors. Consequently, this paper does not adopt a longer window such as [−2,+2].

At the same time, it must be acknowledged that the short window design also entails a cost: it may overlook the time required for the market to digest information and struggles to fully capture the process by which information is gradually absorbed; this point will be addressed in the section on research limitations. It should also be noted that, as the two events were separated by only two trading days, 29 June 2022 fell within both the T+1 of the main event and the T-1 of the auxiliary event, meaning there was an overlap in trading days between the two windows. In this regard, this paper does not attribute strict causal relationships to the abnormal returns on that day; instead, it reports the CARs for the two independent event windows separately as descriptive observations. Furthermore, as the market model parameters were estimated independently for each event, there are slight discrepancies in the abnormal returns for that day (29 June 2022) across the two estimations (−1.20 per cent and −1.26 per cent); this paper retains and discloses these findings. The overlap in trading days between the two events constitutes an endogeneity limitation inherent in the design of this study. For the counter-event in the research report, this paper also adopts a [−1, +1] window, providing only a qualitative description of the phenomenon without conducting statistical inference.

3.3.3. Data Sources

The daily share trading data for NIO used in this study was sourced from the publicly available Investing.com website and downloaded by the researcher on 15 March 2025. The downloaded variables included the daily opening price (Open), high (High), low (Low), closing price (Close), adjusted closing price (Adjusted Close) and trading volume (Volume), with the stock symbol NIO.N, corresponding to the New York Stock Exchange (NYSE). The market portfolio return was calculated using the price index of the NASDAQ Composite Index (ticker: IXIC), and a logarithmic return was similarly applied to ensure consistency with the calculation method for individual stock returns; data for the same period was also sourced from Investing.com. The reason for selecting the NASDAQ Composite Index rather than the S&P 500 Index is that NIO is

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

a high-growth new energy vehicle company, and its systemic risk exposure is more closely aligned with the NASDAQ market, which is dominated by technology growth stocks; using this index helps to reduce bias in the market model's parameters. The trading days within the estimation window [−120, −21] and the event window [−1, +1] are determined based on the New York Stock Exchange trading calendar; the estimation window comprises 100 valid observations after excluding trading halts and non-trading days (from T-120 to T-21, totalling 120 − 21 + 1 = 100 trading days).

Daily returns are calculated as the logarithm of adjusted closing prices: $R_{it} = \ln(P_{it} / P_{i,t-1})$, to accurately reflect the combined return comprising capital gains and dividend reinvestment. It should be noted that the Nasdaq Composite Index is a price index that excludes dividend reinvestment and is therefore not entirely comparable to the adjusted closing price methodology used for individual stocks; however, as NIO did not distribute profits during the aforementioned study period, this methodological difference has no material impact on the results of this paper. All data were manually verified after download, and observations for trading dates that were not US trading days were excluded to ensure the data were complete and free of missing values.

4. Analysis of Empirical Results

4.1. Market Reaction to the Grizzly Short Report Event

Table 1 reports the daily abnormal returns (AR) and cumulative abnormal returns (CAR) of NIO shares within the Grizzly short-selling report event window [−1, +1].

Table 1. Abnormal Returns within the Grizzly Short-Selling Report Event Window [−1,+1]

Trading Day	Date	AR	CAR
T-1	27 June 2022	−3.94%	−3.94%
T (Event Date)	28 June 2022	−0.68%	−4.62%
T+1	29 June 2022	−1.20%	−5.82%

Note: AR and CAR are estimated using a market model, with an estimation window of [−120, −21]; this paper provides only descriptive statistics for CAR within this window and does not conduct statistical significance tests.

As can be seen from Table 1, NIO's abnormal returns remained consistently negative over the three trading days surrounding the release of the short-selling report, with a cumulative CAR of −5.82 per cent, indicating a clear negative market reaction. However, the abnormal return of −3.94 per cent observed on T-1 (27 June 2022) should not be simplistically interpreted as evidence that the short-selling information was obtained in advance. There are two reasons for this: firstly, the Grizzly Research report was not released until the evening of 28 June (Beijing Time), by which time trading on the US stock market on T-1 had long since closed; secondly, the sector of Chinese new energy vehicle stocks was generally weak on that day, whilst NIO was still under the ongoing influence of public sentiment surrounding the test vehicle fall incident on 22 June. The aforementioned confounding factors will be controlled for in the robustness tests in Section 4.1.1.

This finding is consistent with the core hypothesis of this paper: against a backdrop of regulatory lag, although accounting risk information relating to NIO's BaaS business has been disclosed in a fragmented manner through public channels such as annual reports, the market has failed to effectively identify and price this information under normal circumstances. Short-selling reports have acted as 'information activators'-by systematically consolidating and

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

highlighting the issues raised, they have transformed what were originally scattered and concealed accounting uncertainties into publicly visible signals perceptible to the market, thereby triggering a price revaluation.

4.1.1. Robustness Tests

To test the robustness of the above conclusions, this paper recalculates the cumulative abnormal returns by adjusting the event window parameters. Firstly, after excluding T-1 (27 June 2022), which was affected by public sentiment surrounding the 22 June fall incident, the CAR for the [0,+1] window was −1.88 per cent, and the direction remained negative; secondly, retaining only the event day itself, the AR for the [0,0] window was −0.68 per cent, which was also negative. The results under both methodologies support the assessment that 'the short-selling report triggered a negative market reaction', indicating that the conclusions of this paper do not rely on the single-day abnormal returns on T-1, nor on the setting of a specific window length. It should be noted, however, that due to the limitations of the short-window design, this paper was unable to capture the information digestion process over a longer time span; this point will be addressed in the section on research limitations.

4.2. Market Reaction to the JPMorgan Report Refutation Event

Table 2 reports the AR and CAR of NIO shares within the [−1,+1] window of the JPMorgan refutation of the research report event.

Table 2. Abnormal Returns within the [−1,+1] Window of the JPMorgan Report Refutation Event

Trading Day	Date	AR	CAR
T-1	29 June 2022	−1.26%	−1.26%
T (Event Date)	30 June 2022	−0.01%	−1.27%
T+1	1 July 2022	−2.72%	−3.99%

Note: AR and CAR are estimated using a market model, with an estimation window of [−120, −21]; this event relates solely to a single research report from a single institution and is presented for descriptive statistical purposes only, without statistical inference; as 29 June 2022 fell within both event windows, no strict causal attribution is made for the abnormal returns on that date.

Judging by the empirical results, the clarifying statements issued by professional institutions did not produce any observable immediate pricing effect in the market. Following the publication of JPMorgan's rebuttal report, NIO's share price did not exhibit a consistent upward recovery: the AR on the event day was −0.01 per cent, close to zero; on T+1, a negative abnormal return of −2.72 per cent was recorded, and the three-day cumulative CAR stood at −3.99 per cent. As the single-day AR on the event day contributed less than 1 per cent to the cumulative CAR over the window, it would be inappropriate to interpret the window CAR as indicating that 'the rebuttal report itself caused the −3.99 per cent decline'. To eliminate two types of confounding factors-the overlap between T-1 (29 June) and the short-selling event window, and the release of delivery data on T+1 (1 July)-this paper further reports the results for two shorter windows: the CAR for the [0,+1] window was −2.73 per cent, whilst the AR for the [0,0] window was −0.01 per cent. The [0,0] window completely excludes the effects of overlapping trading days and confounding events, and constitutes the most direct evidence supporting the aforementioned conclusion.

It should be noted that this event involved only a single research report from a single institution, and given the short duration of the event window, this study provides only descriptive statistics

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

for CAR and does not undertake statistical inference. Furthermore, T+1 (1 July 2022) was the date on which NIO released its June delivery figures; whilst deliveries for that month reached a record high-a significant positive for the business-a negative abnormal return of −2.72 per cent was still observed on that day, further illustrating that the market's focus had shifted from operational fundamentals to the reliability of accounting treatment. In terms of market sentiment, the point-by-point rebuttals by professional institutions failed to effectively reverse the market's negative sentiment, and deep-seated disagreements regarding NIO's BaaS accounting treatment persist.

4.3. Discussion of Results

Combining the findings from Sections 4.1 and 4.2, one phenomenon worthy of further examination is that whilst the short-selling report triggered negative market pricing, the rebuttals from professional institutions failed to bring about a commensurate price recovery. This asymmetry points to a deeper issue: against the backdrop of a regulatory framework where standard lags behind practice, it is easy to raise doubts (due to the scope for interpretation), but difficult to provide clarification (due to the lack of authoritative, actionable detailed guidance to resolve the dispute).

The market faces not merely the specific question of 'whether NIO's accounting treatment complies with regulations', but rather the broader institutional dilemma of 'how to assess the quality of accounting information that relies heavily on management judgement when standards provide only a principled framework'. This interpretation complements the accounting analysis by Yuan Min (2022) [7]: whilst Yuan Min concluded from the perspective of accounting standards that NIO's treatment 'contained no obvious improprieties', this paper reveals from the perspective of market pricing that 'compliance' alone is insufficient to dispel market concerns.

The finding that the AR on the event date was close to zero, in turn, provides more direct evidence for the core proposition: what the market is pricing is not 'whether NIO has breached regulations', but 'the extent of discretion and uncertainty inherent in the accounting treatment when the standards provide only a principled framework'. This clarifies that whilst 'formal compliance' may dispel suspicions of non-compliance, it cannot eliminate the uncertainty itself; consequently, the market remains unresponsive. This finding also corroborates, from a pricing perspective, the role of short-selling reports as 'information activators': they activate accounting uncertainties that the market had previously failed to recognise, rather than actual instances of accounting non-compliance.

Finally, it should be noted that, regarding the causes of the aforementioned asymmetry, in addition to institutional-level explanations, it may also stem from the market's information-processing mechanisms. As one possible explanatory pathway, research by Bastianello and Fontanier (2025) [13] indicates that when investors infer information from price movements themselves, a two-way feedback loop forms between price and beliefs, thereby amplifying the initial shock; moreover, the lower the information content, the more pronounced such overreactions become. In the case under consideration, following the initial price decline triggered by the short-selling report, other market participants may have inferred further risk from the price movement, creating a self-reinforcing downward pressure; conversely, clarifying information, acting as an exogenous signal, did not trigger a similar feedback mechanism, and thus had a limited corrective effect. It must be emphasised that the above constitutes speculative discussion rather than an empirical conclusion of this paper: the empirical design of this paper does not allow for the identification of this learning mechanism; this explanation represents merely one possible pathway, which remains to be tested by future research.

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

More importantly, the aforementioned asymmetric findings can be uniformly explained using the three-tier framework of 'information activators' defined in Section 2.5. At the first tier, information is publicly available but has not been priced in-accounting risk information relating to BaaS is scattered throughout annual reports and, due to a lack of detailed guidance, goes unrecognised by the market. This not only serves as a prerequisite for activation to occur but also explains why the market typically 'fails to react' to disclosed information under normal circumstances. At the second level, short-selling reports reduce investors' information acquisition and comprehension costs through consolidation and reformulation, condensing dispersed uncertainty into a concentrated signal of doubt. Consequently, they are able to trigger an immediate price revaluation at a low cognitive cost, which corresponds to the negative reaction of −5.82 per cent within the [−1, +1] window surrounding the main event. At the third level, the object of activation is accounting uncertainty rather than accounting non-compliance-precisely because short-selling reports activate 'room for judgement' rather than 'facts of non-compliance', clarifying 'formal compliance' cannot dispel market doubts and can only result in a 'zero reaction' with an AR close to zero on the event date. These three levels are interlinked and collectively explain why it is easy to raise doubts but difficult to provide clarification.

5. Research Conclusion and Implications

5.1. Main Conclusion

Taking the short-selling incident involving NIO's BaaS 'separation of vehicle and battery' model as a case study, this research employs event study methodology to analyse the market's pricing response to accounting controversy events, arriving at the following main conclusions:

Firstly, lags in accounting standards create a gap in the identification of publicly available information. Against the backdrop of a lack of detailed accounting guidance for BaaS operations, although relevant accounting risk information had been publicly disclosed, it was scattered throughout the annual report, and the market was unable to effectively identify and price it under normal circumstances. This was a prerequisite for the short-selling report to 'trigger' a market reaction.

Secondly, short-selling reports act as 'information activators'. Following the release of the Grizzly short-selling report, NIO's share price fell by a cumulative 5.82 per cent within the [−1, +1] window, indicating that the report, through systematic questioning, transformed dispersed accounting uncertainties into concentrated, perceptible risk signals, thereby triggering a negative pricing reaction in the market.

Thirdly, no consistent price recovery effect was observed within a short time window following rebuttals by professional institutions. Following the publication of JPMorgan's rebuttal research report, the AR on the event day was close to zero, whilst the CAR within the [−1,+1] window stood at −3.99 per cent, with no positive recovery observed. It should be noted that this paper only examined the short-term market reaction following the publication of the report; it is therefore not yet possible to draw an absolute conclusion that 'the information gap has not been bridged'. Longer-term price recovery and the effects of information digestion fall outside the scope of this study.

5.2. Theoretical Contributions and Practical Implications

5.2.1. Theoretical Contributions

In terms of theoretical contributions, this paper links the institutional phenomenon of 'standard lag' with capital market pricing reactions, revealing the transmission mechanism of 'standard lag → information gap → market pricing reaction', and on this basis proposes the role of short-selling reports as 'information activators'. This mechanism extends the application of research on the value-relevance of accounting information to innovative business scenarios, whilst also

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

providing empirical support from a capital market pricing perspective for the theory of 'legitimate accounting information distortion' (Li Sihai et al., 2020).

5.2.2. The Paradox of Corporate Compliance and Negative Market Reactions

The findings of this paper raise a question worthy of further investigation: whilst the accounting treatment related to NIO's BaaS formally complies with existing accounting standards-and the company itself has not breached any standard provisions-the short-selling report nevertheless triggered a marked negative market reaction. This paper argues that the capital market's pricing logic regarding accounting information is not a simple binary judgement of 'compliance equating to trust'. In a context of standard lag, accounting standards provide only a principled framework, leaving corporate management with considerable scope for professional judgement. This scope for judgement inherently entails uncertainty-investors have good reason to worry that management might exploit this discretion to make overly optimistic estimates, and that there is a risk of overvaluation of assets and profits. Consequently, capital markets not only price in negative consequences for accounting irregularities but also apply a risk discount to companies where accounting treatments are highly uncertain and information transparency is insufficient. The role of short-selling reports is to consolidate the 'latent uncertainties'-which are otherwise scattered throughout annual reports-into 'explicit risk signals', thereby triggering price adjustments.

5.2.3. Practical Implications

This study provides guidance for three categories of stakeholders. For standard-setting bodies, it is advisable to expedite the issuance of detailed guidance on innovative business models to reduce grey areas in accounting judgements; in addition to routine revision procedures, consideration could be given to establishing a rapid-response mechanism for new business models, such as clarifying accounting treatment in advance through 'Q&As on the Accounting Treatment of Innovative Businesses' or application guidelines, thereby shortening the time lag between practical innovation and the provision of rules. For enterprises, when dealing with innovative business activities where standard lags behind, they should proactively enhance specific disclosures: a separate section titled 'Explanation of Accounting Policies for Innovative Businesses' may be established in annual reports to provide specific explanations regarding the transaction structure of the business model, the timing of revenue recognition, key accounting estimates and their sensitivity; for arrangements involving related parties or special-purpose entities, the basis for determining control and the economic substance should be proactively disclosed. Investors, for their part, should be mindful of the limitations on the comparability of accounting information in situations where standard lags behind, and avoid over-reliance on a single compliance-based assessment. When reviewing the financial information relating to innovative business activities, they should make a comprehensive judgement by combining supplementary disclosures that go beyond the scope of the standards with the substance of the business.

5.3. Limitations of the Study

The limitations of this paper can be outlined in five aspects. Firstly, as a single-case study design was adopted, further testing with similar cases is required to determine whether the research conclusions can be generalised to other enterprises or contexts. Secondly, the event study method itself finds it difficult to completely isolate the interference of other market factors within the event window; this is an inherent technical limitation of the method. Thirdly, the interval between the two events was only two trading days, meaning that 29 June 2022 fell within the overlap of the two event windows. Although this paper does not attribute strict causal attribution to that date, this overlap still constitutes an endogeneity limitation at the level of research design. Fourthly, due to the constraints of the short time window, this paper is only able to capture the immediate market reaction to the events; the longer-term price

ISSN: 2692-7608 DOI: 10.6981/FEM.202611_7(11).0016

recovery and information digestion processes are not included in the scope of the analysis. Fifthly, the results of the event study are used in this paper solely as supporting evidence; the validity of the core conclusions still relies on mutual corroboration from the qualitative analysis of the case studies.

References

[1] Zhang, X. M. (2019). Some reflections on the reform of enterprise accounting standards. Journal of Beijing Technology and Business University (Social Sciences Edition), 34(1), 1–8.

[2] Li, S. H., & Fu, Y. J. (2020). A study on the distortion of legitimate accounting information in off-balance-sheet incubation projects: The case of Aier Eye Hospital. Management Case Studies and Reviews, 13(1), 86–101.

[3] Wang, X., Li, T. M., & Wu, J. Q. (2025). A study on the improvement of accounting earnings disclosure from the perspective of the development of new-quality productive forces: An empirical test of the functions of CAS earnings and non-CAS earnings. Journal of Shanghai University of Finance and Economics (Philosophy and Social Sciences Edition), 27(2), 50–63.

[4] Brown, S. J., & Warner, J. B. (1985). Using daily stock returns: The case of event studies. Journal of Financial Economics, 14(1), 3–31.

[5] Ball, R., & Brown, P. (1968). An empirical evaluation of accounting income figures. Journal of Accounting Research, 6(2), 159–178.

[6] Beaver, W. H. (1968). The information content of annual earnings announcements. Journal of Accounting Research, 6(Supplement), 67–92.

[7] Yuan, M. (2022). An accounting analysis of Grizzly Research's short report on NIO. Monthly Journal of Finance and Accounting, (22), 75–80.

[8] Feroz, E. H., Park, K. J., & Pastena, V. S. (1991). The financial and market effects of the SEC's accounting and auditing enforcement releases. Journal of Accounting Research, 29(Supplement), 107–142.

[9] Palmrose, Z.-V., Richardson, V. J., & Scholz, S. (2004). Determinants of market reactions to restatement announcements. Journal of Accounting and Economics, 37(1), 59–89.

[10] Karpoff, J. M., Lee, D. S., & Martin, G. S. (2008). The cost to firms of cooking the books. Journal of Financial and Quantitative Analysis, 43(3), 581–612.

[11] Fama, E. F. (1991). Efficient capital markets: II. Journal of Finance, 46(5), 1575–1617.

[12] MacKinlay, A. C. (1997). Event studies in economics and finance. Journal of Economic Literature, 35(1), 13–39.

[13] Bastianello, F., & Fontanier, P. (2025). Expectations and learning from prices. Review of Economic Studies, 92(3), 1341–1374.

[14] Eisenhardt, K. M. (1989). Building theories from case study research. Academy of Management Review, 14(4), 532–550.

[15] Yin, R. K. (2014). Case study research: Design and methods (5th ed.). Sage.