

The Impact of Profit Level on Abnormal Returns During the Annual Report Announcement Period — Evidence from CSI 300 Constituent Stocks

Jiayi Wang

*International College Beijing, China Agricultural University, Beijing, China
jiayi.4.wang@ucdenver.edu*

Abstract. Earnings announcements are the key way for listed companies to release financial information to capital markets. However, the high proportion of retail investors and the high degree of information asymmetry in China's A-share market give earnings announcements unique regional characteristics. China's A-share market features dominant retail investors and severe information asymmetry, making the earnings announcement effect unique. Taking CSI 300 constituent stocks from 2019 to 2023 as samples. This study applies the event study approach to estimate cumulative abnormal returns (CAR) over the $[-1, +1]$ event window. It explores how profitability affects CAR and further examines the moderating roles of earnings quality (accrual ratio) and information environment (institutional ownership). The results show that both return on equity (ROE) and earnings per share (EPS) significantly and positively promote CAR in the announcement window. A higher accrual ratio weakens this positive relationship, while higher institutional shareholding optimizes information environment and strengthens the earnings announcement effect. This paper provides empirical evidence for asset pricing and practical reference for investor decision-making and information disclosure regulation.

Keywords: Abnormal returns, annual report announcement period, profit level

1. Introduction

Earnings announcements are a core channel for listed companies to disclose financial performance. According to the efficient market hypothesis, stock prices should promptly incorporate public financial information. However, China's A-share market is retail-dominated with high information asymmetry, leading to distinctive short-term price reactions during annual report announcement windows. It is therefore important to explore how profitability indicators drive announcement-period excess returns, and how earnings quality and information environment moderate such relationships.

Existing studies confirm that profitability is a core factor explaining cross-sectional stock returns, and earnings disclosure triggers market expectation revision and changes cumulative abnormal returns. Nevertheless, most literature rarely integrates earnings level, earnings quality and institutional information environment into one framework.

To fill this gap, this paper selects CSI 300 constituent stocks from 2019 to 2023, calculates cumulative excess returns (CAR) via the event study method, and tests the main effect of return on equity (ROE) and earnings per share (EPS) on CAR. It further constructs moderating effect models with accrual ratio and institutional ownership. The contributions lie in first, unifying earnings level and earnings quality into one analytical framework; second, verifying the information intermediary role of institutional investors; third, providing targeted conclusions for large-cap stocks.

2. Literature review

2.1. Earnings announcement effect and profitability level

Modern asset pricing and empirical accounting research have long focused on the transmission efficiency and pricing mechanism of fundamental financial information in the capital market. Sun and Wen constructed a high-dimensional cross-asset pricing model and pointed out that corporate profitability-oriented fundamental financial indicators are core risk premium factors explaining the heterogeneity of stock cross-sectional returns; the release of financial information revises market expectations and is reflected in CAR within the announcement window [1].

Ritter and Ugras further explored the quantitative linkage between earnings persistence and market price reaction, confirming that the market's pricing sensitivity to core profitability indicators including ROE and EPS relies heavily on the robustness of fundamental information [2]. From the perspective of macroeconomic uncertainty, Lin Hua found that when external economic and policy uncertainty rises, investors rely more on immediate profitability information disclosed in annual reports, triggering stronger short-term price adjustment during the announcement window [3]. Given these evidences, this paper proposes the following hypotheses within the annual report announcement window:

H1a: ROE is positively correlated with the CAR

H1b: EPS is positively correlated with the CAR

2.2. Earnings quality: the moderating effect based on accrual items

Although absolute earnings level can drive positive stock price reaction, accrual accounting makes corporate profit indicators vulnerable to earnings manipulation, which brings forth the research perspective of earnings quality.

Nguyen et al. indicated that excessive accruals are usually accompanied by declining earnings persistence; without effective external constraints, low-quality earnings signals will lead investors to misjudge intrinsic corporate value [4]. Goh et al. found that when firms disclose profits with high accrual proportion, mixed forecast components and manipulation noise will lower market expectations on future cash flow [5]. Rational institutional investors and short-selling institutions can identify the valuation bubble implied by high accruals, which in turn weakens the positive impact of profitability level on announcement-period excess returns [6-8]. Accordingly, this paper puts forward:

H2a: Accruals proportion negatively moderates the relationship between ROE and CAR

H2b: Accruals proportion negatively moderates the relationship between EPS and CAR.

2.3. Moderating role of institutional investors

The external information environment and investor structure determine the digestion speed and pricing efficiency of financial information. Boone and White proved that rising institutional shareholding can optimize corporate information environment and improve information production quality by attracting more analyst attention [9].

Berger et al. argued that institutional investors act as professional information catalysts, accelerating the incorporation of fundamental profit information into asset prices and reducing information friction during earnings announcements [10]. From the perspective of disclosure regulation, Breuer et al. further noted that a sound information environment can restrain managerial opportunistic behavior and help retail investors better interpret financial statements [11]. As a proxy for high-quality information environment, higher institutional shareholding can strengthen the earnings announcement effect. The hypotheses are proposed as follows:

H3a: Institutional investor shareholding proportion positively regulates the relationship between ROE and CAR

H3b: Institutional investor shareholding proportion positively regulates the relationship between EPS and CAR

2.4. Relevant literature support for control variables

To eliminate the interference of omitted variables in regression analysis, this paper introduces classic firm characteristic control variables. Eisdorfer et al. pointed out that firm size, leverage and book-to-market ratio contain long-term risk premium implications and also affect investor expectations and short-window cumulative excess returns by changing corporate financial flexibility and bankruptcy risk [12].

3. Methodology

3.1. Data resources and sampling

All samples are selected from constituent stocks of the CSI 300 Index, using data from five consecutive fiscal years (2019-2023). Financial data, equity structure data, daily return data, and actual disclosure dates of annual reports for listed companies were all sourced from the Wind Financial Database. The sample selection followed these principles: (1) Excluding financial companies (banking, insurance, and securities); (2) Excluding companies whose annual report disclosure date was in ST, *ST, or PT status; (3) Excluding companies listed for less than one year; and (4) Excluding observations with missing values for any regression variable. A total of 23,659 valid company-annual observations were ultimately obtained.

3.2. Variable definition and measurement

The explained variable in this paper is the cumulative excess return (CAR). Taking the actual disclosure date of each company's annual report as day 0, the cumulative excess return within the window period [-1, +1] is calculated using a market-adjusted model.

$$CAR_{i,t} = \sum_{d=-1}^1 (R_{i,d} - R_{m,d}) \quad (1)$$

Where $R_{i,d}$ represents the stock return of company i on day d (adjusted for stock splits and dividends), and $R_{m,d}$ represents the return of the CSI 300 Index during the same period.

The explanatory variables in this paper are ROE, using the average ROE (%) after deducting non-recurring gains and losses, taken from the annual report; and Earnings Per Share (EPS), using diluted EPS (RMB/share), taken from the annual report.

The moderating variables are the proportion of accruals (Accrual) and the proportion of institutional investor holdings (Inst), which is the total shareholding of institutional investors as a percentage of circulating shares, taken from the latest quarter-end data before the annual report disclosure.

The control variables are the shareholding ratio of the largest shareholder (Top1, %), the book-to-market ratio BM, and the company size (Size), which is the natural logarithm of total assets at the end of the year. This study uses industry fixed effect (η_i) and year fixed effect (τ_t), and $\varepsilon_{i,t}$ is the random error term.

3.3. Models

To test hypotheses H1a and H1b (main effects), the following two models were constructed:

Model 1a as follows:

$$CAR_{i,t} = \alpha + \beta_1 ROE_{i,t} + \beta_2 Inst_{i,t} + \beta_3 Top1_{i,t} + \beta_4 BM_{i,t} + \beta_5 Size_{i,t} + \beta_6 Accrual_{i,t} + \eta_i + \tau_t + \varepsilon_{i,t} \quad (2)$$

Model 1b as follows:

$$CAR_{i,t} = \alpha + \beta_1 EPS_{i,t} + \beta_2 Inst_{i,t} + \beta_3 Top1_{i,t} + \beta_4 BM_{i,t} + \beta_5 Size_{i,t} + \beta_6 Accrual_{i,t} + \eta_i + \tau_t + \varepsilon_{i,t} \quad (3)$$

To test the moderating effect of accruals (hypotheses H2a, H2b), this study introduces the interaction term between ROE with Accrual and EPS with Accrual:

Model 2a as follows:

$$CAR_{i,t} = \alpha + \gamma_1 ROE_{i,t} + \gamma_2 Accrual_{i,t} + \gamma_3 (ROE_{i,t} \times Accrual_{i,t}) + \gamma_4 Inst_{i,t} + \gamma_5 Top1_{i,t} + \gamma_6 BM_{i,t} + \gamma_7 Size_{i,t} + \eta_i + \tau_t + \varepsilon_{i,t} \quad (4)$$

Model 2b as follows:

$$CAR_{i,t} = \alpha + \gamma_1 EPS_{i,t} + \gamma_2 Accrual_{i,t} + \gamma_3 (EPS_{i,t} \times Accrual_{i,t}) + \gamma_4 Inst_{i,t} + \gamma_5 Top1_{i,t} + \gamma_6 BM_{i,t} + \gamma_7 Size_{i,t} + \eta_i + \tau_t + \varepsilon_{i,t} \quad (5)$$

To test the moderating effect of institutional shareholding (hypotheses H3a, H3b), this study introduces the interaction term between ROE with Inst and EPS with Inst:

Model 3a as follows:

$$CAR_{i,t} = \alpha + \delta_1 ROE_{i,t} + \delta_2 Inst_{i,t} + \delta_3 (ROE_{i,t} \times Inst_{i,t}) + \delta_4 Top1_{i,t} \quad (6)$$

$$+\delta_5 BM_{i,t} + \delta_6 Size_{i,t} + \delta_7 Accrual_{i,t} + \eta_i + \tau_t + \varepsilon_{i,t}$$

Model 3b as follows:

$$CAR_{i,t} = \alpha + \delta_1 EPS_{i,t} + \delta_2 Inst_{i,t} + \delta_3 (EPS_{i,t} \times Inst_{i,t}) + \delta_4 Top1_{i,t} + \delta_5 BM_{i,t} + \delta_6 Size_{i,t} + \delta_7 Accrual_{i,t} + \eta_i + \tau_t + \varepsilon_{i,t} \quad (7)$$

4. Empirical results analysis and discussion

4.1. Analysis of the main effect: corporate profitability and annual report announcement effect (H1 test)

This paper analyzes the impact of profitability signals disclosed in annual reports on CAR. Column (1) of Table 1 shows that ROE is positively associated with CAR at the 1% significance level. The coefficient indicates that a one-unit increase in ROE increases CAR by 13.40%. Similarly, column (1) of Table 2 shows that EPS is also positively related to CAR at the 1% level, one-unit increase in EPS increases CAR by 1.04%. These results support H1, suggesting that the market responds positively to stronger profitability signals disclosed in annual reports.

4.2. Analysis of the moderating effect of accruals (H2 test)

To further examine the role of earnings quality, this study introduces accruals as a moderate variable. Column (2) of Table 1 and Table 2 shows that $ROE \times Accrual$ and $EPS \times Accrual$ is negatively associated with CAR and significant at the 5% level, while the main effect of ROE and EPS remains positive and significant. This means that higher accuracy weakens the positive relationship between profitability and CAR. In other words, when reported earnings contain a larger proportion of non-cash components, the market response to profitability signals becomes less pronounced. Therefore, hypothesis H2 is supported.

4.3. Analysis of the moderating effect of institutional shareholding (H3 Test)

This study further examines the moderating role of institutional investors (Inst) in the earnings announcement effect. Column (3) of Table 1 and Table 2 shows that $ROE \times Inst$ and $EPS \times Inst$ are positively associated with CAR and statistically significant at the 5% level, meaning that institutional ownership strengthens the positive relationship between profitability and CAR. These findings support that institutional investors improve the market's interpretation of earnings information by reducing information asymmetry and enhancing information efficiency. As a result, firms with higher institutional ownership experience a stronger market reaction to positive profitability signals. These results support hypothesis H3.

The control variables are generally consistent across all models. Firm size is negative and statistically significant, supporting the small-firm effect in the A-share market, while the book-to-market ratio is positive and statistically significant, reflecting that the value stock market is more stable. Overall, the regression results indicate that financial fundamentals have significant explanatory power for stock price reactions during annual report announcement periods.

Table 1. Regression results for ROE models

Variables	(1)CAR	(2)CAR	(3)CAR
ROE	0.1340*** (2.61)	0.1381*** (2.69)	0.0827** (2.45)
Inst	-0.0031 (-0.95)	-0.0029 (-0.88)	-0.0054* (-1.72)
ROE×Accrual		-0.3157** (-2.14)	
ROE×Inst			0.1042** (2.45)
Top1	-0.0001 (-0.52)	-0.0001 (-0.48)	-0.0001 (-0.47)
BM	0.0051** (2.11)	0.0051** (2.12)	0.0051** (2.10)
Size	-0.0118*** (-3.94)	-0.0118*** (-3.93)	-0.0118*** (-3.96)
Accrual	-0.0152 (-1.08)	-0.0028 (-0.16)	-0.0148 (-1.05)
_cons	0.2644*** (3.86)	0.2635*** (3.84)	0.2646*** (3.87)
Observations	15,085	15,085	15,085
R-squared	0.0857	0.0860	0.0861

Note: t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Variables standard errors are adjusted for clustering at firm level.

Table 2. Regression results for EPS models

Variables	(1)CAR	(2)CAR	(3)CAR
EPS	0.0104*** (2.84)	0.0101*** (2.75)	0.0071** (2.11)
Inst	-0.0033 (-1.01)	-0.0032 (-0.99)	-0.0054* (-1.70)

Table 2. (continued)

EPS×Accrual		-0.0154**	
		(-2.01)	
EPS×Inst			0.0063**
			(2.11)
Top1	-0.0001	-0.0001	-0.0001
	(-0.52)	(-0.49)	(-0.50)
BM	0.0051**	0.0051**	0.0051**
	(2.12)	(2.13)	(2.11)
Size	-0.0118***	-0.0118***	-0.0118***
	(-3.94)	(-3.93)	(-3.95)
Accrual	-0.0142	-0.0116	-0.0140
	(-1.01)	(-0.81)	(-1.00)
_cons	0.2644***	0.2638***	0.2648***
	(3.86)	(3.85)	(3.87)
Observations	15,085	15,085	15,085
R-squared	0.0858	0.0861	0.0862

Note: t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Variables standard errors are adjusted for clustering at firm level.

5. Conclusion

This paper, building on the backdrop of information asymmetry and retail investor-dominated structure in China's capital market, focuses on the constituent stocks of the CSI 300 Index and systematically examines the short-term driving effect of fundamental signals on the market during the annual report window. Empirical results show that: First, profitability levels, measured by ROE and EPS, have a significant positive driving effect on the cumulative excess return (CAR) during the annual report announcement period, verifying the asset pricing effectiveness of earnings signals. Second, the low profitability quality represented by a high proportion of accruals significantly weakens the positive impact of profitability levels on CAR, indicating that the market has, to some extent, the ability to identify the "quality" of earnings components. Third, a higher proportion of institutional investor shareholding can effectively optimize the external information environment, accelerate the transmission and digestion of financial information, and thus significantly positively moderate the earnings announcement effect.

Based on these conclusions, regulatory authorities should continue to deepen the reform of the listed company information disclosure system, strengthen the mandatory disclosure of cash flow statements and accruals, which reflect the "profit quality" dimension, and reduce the cost of identifying financial information at the micro level. Meanwhile, market participants should construct a fundamental investment framework that emphasizes both quantity and quality when making

trading decisions during the earnings announcement period. While evaluating high profitability indicators, they should be highly vigilant about the valuation bubbles and financial risks implied by high accrual ratios.

This paper's sample focuses only on large-cap stocks in the CSI 300 Index, and their earnings announcement effects may structurally differ from those of small-cap or ChiNext stocks. Furthermore, this paper primarily examines the short-window price reaction before and after annual report disclosure, without in-depth tracking of long-window performance such as post-earnings announcement drift (PEAD). Future research could expand the sample to the entire A-share market and attempt to verify the result in longer earnings announcements event window.

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