Asian Academy of Management Journal of Accounting and Finance

AAMJAF Vol. 22, No. 1, 157–175, 2026

THE IMPACT OF CORPORATE SOCIAL MEDIA ENGAGEMENT ON STOCK PRICE PERFORMANCE: EVIDENCE FROM WEIBO AND CHINESE LISTED FIRMS

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Submitted: 24 July 2025; Accepted: 27 February 2026; Published: 28 June 2026

To cite this article: Hui, S., Chan, S. G., & Aktan, B. (2026). The impact of corporate social media engagement on stock price performance: Evidence from Weibo and Chinese listed firms. *Asian Academy of Management Journal of Accounting and Finance, 22*(1), 157–177. https://doi.org/10.21315/aamjaf2026.22.1.5

To link to this article: https://doi.org/10.21315/aamjaf2026.22.1.5

ABSTRACT

This study examines the impact of corporate social media on stock price behaviour by analysing firms' engagement on the Weibo platform in China. It contributes to the literature by assessing how two-way social media communication influences investor perceptions and mitigates information asymmetry. Using a panel dataset of 166 firms drawn from the China Fortune 500 that were continuously ranked between 2018 and 2023 and listed on the Shanghai and Shenzhen stock exchanges, the study combines firm-level financial data with Weibo account information collected via Python-based web scraping. A two-step System Generalised Method of Moments (GMM) approach is employed to address potential endogeneity concerns. The results reveal a negative relationship between Weibo adoption and cumulative abnormal returns. This finding suggests that corporate social media enhances the speed and efficiency of information diffusion, thereby reducing information asymmetry among investors. As a result, stock prices adjust more rapidly to publicly available information, limiting the persistence of abnormal returns around the event window. Overall, the evidence is consistent with the semi-strong form of market efficiency and supports the view that corporate social media serves as an effective disclosure channel rather than a source of excess returns.

Keywords: Cumulative average return, Social media, GMM, China, Sentiment analysis

INTRODUCTION

Social media (the fifth medium) distinguishes itself from traditional media (the fourth medium) through its paperless and virtual characteristics in information dissemination (Wang & Xu, 2010). The emergence of digital platforms making companies actively engage and invest in corporate social media as a catalyst for frequent information sharing and interaction between different internet users. This led to the growth of the usage of social media platforms such as Weibo, WeChat and others have grown dramatically by the firms to disseminate information and engage in discussions, share and stay informed of the company's latest information. Consequently, the rise of corporate social media cannot be neglected because it plays crucial roles in the current information exchange between investors, corporations, institutions and society in general.

In China, the use of social media has been growing dramatically given the rapid development of internet technology and the internet industry. The proportion of Chinese internet users relative to the total population has exceeded half. This contributes to a new set of research when the analysis of internet context is essential to predict human behaviour. While some studies found the benefits of the use of social media on stock performances (Bollen et al., 2011; Oliveira et al., 2017), there are some negative sentiments that could produce negative impact to stock price (He et al., 2016). Despite the discovery of social media sentiment's impact, the prediction of the stock prices may be affected during periods with high sentiment scores, leading to significant stock price fluctuations (Huang & Liu, 2020).

Given the significance of social media, this study aims to analyse the role of corporate social media on the cumulative abnormal return of China Fortune 500 firms listed in Shanghai and Shenzen stock exchanges. We focus on Weibo because this is one of the most frequently used social media platforms in China. Weibo's real-time sharing feature allows users to disseminate opinions to followers and other users timely. Weibo emerges as an ideal social network for analysing the impact of social media activity on the stock market. Prior studies underscore the importance of investigating Weibo within the financial domain, as it has evolved into a crucial information channel for stock market investors seeking valuable insights. It is pointed out that sentiment information on platforms in Weibo can reflect overall societal emotional tendencies and can influence and predict the stock market

(Huang et al., 2015). Furthermore, Weibo disclosures can reduce stock price crash risk by decreasing information asymmetry, with the first type of agency costs between management and shareholders partially mediating (Yang, 2022). Hence, this study seeks to examine the role of social media in mitigating the information asymmetry indicated by the cumulative abnormal return.

Finally, the study furthers probe into the effect of two-way communications among those companies with social media accounts. Unlike one-way messaging, where companies simply convey certain information without expecting or encouraging a response, two-way interaction involves active communication, such as responding to comments, participating in discussions and addressing follower queries, which is believed to significantly increase the interaction between the company and its investors.

This research aims to offer strategic recommendations for Fortune 500 companies in China by highlighting the potential value of establishing a presence on social media platforms to enhance firm performance in the stock market. The contributions of this study are threefold. First, it deepens understanding of how Weibo is influencing the stock market's dynamism. This aims to offer valuable insights into the role of corporate communication strategies in leveraging Weibo platforms to improve stock performance. Second, it has implications for investors seeking effective information channels to help reduce the information asymmetry within the stock market. On this basis, this study believes that publicly available information disclosed from listed firms' social networking sites could enhance the capital market environment. Finally, given its relatively low regulation compared to other platforms, the study could provide the regulatory body with foresight into the need to regulate digital platforms to reduce volatility in the stock market.

LITERATURE REVIEW

In financial markets, information asymmetry has been a fundamental issue between corporate insiders and outside investors, which can lead to mispricing and increased cost of capital (O'Hara, 2003; Easley & O'Hara, 2004; Hughes et al., 2007; Lambert et al., 2012). To mitigate this, high-quality firms have strong incentives to voluntarily disclose private information as credible signals to the market, thereby distinguishing

themselves from lower-quality counterparts (Spence, 1978; Connelly et al., 2011). In the digital era, official corporate social media accounts have emerged as a representative, low-cost and interactive channel for such signalling. Consequently, the influence of societal sentiment on the stock market grows from the social media platforms receiving enormous attention given the abilities of the platforms to offer real-time glimpses into investors' emotions and market expectations (Nguyen et al., 2015). According to Efficient Market Hypothesis (Fama, 1970), if such signals are perceived by the market as conveying new, material information about firm's value or governance quality, they should be rapidly incorporated into stock prices. This theoretical framework, which links the problem of information asymmetry through the firm's strategic signaling to the market's efficient reaction, provides the foundation for analysing corporate social media engagement.

Previous literatures have evolved from this premise, initially focusing on how aggregate, investor-driven sentiment on social media (e.g., from message boards or general Twitter feeds) predicts market movements, with findings on its predictive power being mixed (e.g., Antweiler & Frank, 2004; Nguyen et al., 2015). This leads to a distinct research domain that moves beyond forecasting based on public mood, investigating how firms proactively use social media for strategic disclosure and signalling. Consequently, a distinct stream of research examines how firms themselves strategically use official social media accounts as a controlled channel for voluntary disclosure and stakeholder engagement (Blankespoor et al., 2014; Chahine & Malhotra, 2018).

Studies show that firms utilising platforms like Twitter to disseminate official news can reduce information asymmetry and improve market liquidity (Blankespoor et al., 2014). In the Chinese context, evidence suggests that corporate disclosures on Weibo can enhance information transparency (Yang, 2022). This work establishes social media's utility as a one-way, push-type disclosure channel.

The strategic potential of social media lies significantly in two-way, interactive communication (e.g., responding to comments). Seminal work by Chahine and Malhotra (2018) found that firms adopting interactive strategies on Twitter elicited more positive market reactions than those using only broadcast messages, indicating that the mode of engagement

itself carries a distinct signal. However, interactivity is a double-edged sword; it can amplify negative stakeholder sentiments and expose firms to greater scrutiny, suggesting its net impact may not be uniformly positive (Gómez-Carrasco & Michelon, 2017). Supporting this nuanced view, Bank et al. (2019) found that active corporate Twitter presence yielded no significant abnormal returns but was associated with higher systematic risk (beta), indicating the market may perceive such engagement as a risk factor. The predictive power of social media can be constrained by information redundancy. Bartov et al. (2018) discovered that for well-covered firms, Twitter discourse frequently contained little new information beyond what is already circulated through established media and expert channels. This complexity may explain the mixed conclusions in the broader literature regarding social media's financial impact (Tetlock, 2007).

Despite research confirming social media's impact on stock prices, challenges persist due to the diversity of information and the prevalence of unreliable content. The inconclusive results are often attributed to differences in platforms, markets, or methods used, such as fundamental analysis, technical analysis and machine learning. Consequently, this study used Python web scraper from Sina Weibo to analyse the sentiment of corporate social media on stock performance.

DATA AND METHODOLOGY

Data and Sample

This study employed a set of China Fortune 500 public-listed firms for the period 1 January 2018 to 31 December 2023. The daily closing price of the firms are collected from Refinitiv Eikon. Firms with insufficient daily data and not listed in Shanghai and Shenzhen stock exchanges are filtered out from this sample. Hence, the final sample for this study is reduced to 166 firms. Among the firms selected, 94 had launched their Weibo platforms before 2018. This study adheres to the guidelines outlined by previous studies to use daily stock returns and long-term performance analysis (Campbell et al., 1997; Lyon et al., 1999; Brav et al., 2000).

In addition, the corresponding Weibo account data is obtained using a Python web scraper from Sina Weibo. The launching date of Weibo other firm-specific financial yearly indicators are downloaded from the China Stock Market and Accounting Research Database (CSMAR) website.

Methodology

To investigate the relationship between corporate social media on the firm's performance, the Two-step System Generalised Method of Moments (GMM) is employed. This is to address the endogeneity issues of social media implementation, which is believed to affect the firm's decision in searching for more cost-effective digital marketing methods (Chahine & Malhotra, 2018). Furthermore, well-established companies are more prone to venture into the use of social media to effectively communicate their performance to the investors in a timely manner. Hence, the use of Two-step GMM enables us to address potential endogeneity concerns regarding the decision to establish a presence on Weibo accounts. Besides that, the Two-step GMM is particularly well-suited for addressing endogeneity, heteroskedasticity and autocorrelation in dynamic panel data (Apergis & Ozturk, 2015).

We used cumulative average return as the proxy for firms' performance in order to investigate the relationship between the use of corporate social media (Weibo) for firm (i) at time t with the performance of the firm. This is shown in Equation (1).

$$CAR_{t1,t2} = \alpha_o + \beta_1 CAR_{t1-,2-1} + \beta_2 Weibo\ dummy + \beta_3 ROA_{i,t}$$
$$+ \beta_5 Size_{i,t} C + \beta_6 P/E_{i,t} + + \beta_8 i.Year + \varepsilon_{i,t} \quad (1)$$

Where $CAR_{t1,t2}$ is the yearly cumulative abnormal returns for window (T–5 to T+5 days) for a single stock. The T–5 to T+5 event window is designed to capture potential information leakage and the full market digestion period surrounding a firm's social media adoption (Chahine & Malhotra, 2018). Since launching a Weibo account is not an instantaneous event like an earnings announcement, a wider window helps ensure that we capture the entire market reaction. CAR is a widely used metric in finance for assessing events on stock prices, capturing the deviation between actual and expected returns over a specific period (Fama et al., 1969; MacKinlay, 1997). In

this study, CAR is chosen as the dependent variable because it allows for the precise measurement of how social media activities influence stock performance beyond broader market movements. By focusing on CAR, the study can isolate the effects of social media-driven events on stock returns, which aligns with the study's objective to understand these impacts in the short term. The Fama-French three-factor model as presented in Equation 2 is used to compute expected returns during the estimation window (Fama & French, 1993):

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_1 (R_{m,t}) + \beta_2 SMB_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where $(R_{i,t} - R_{f,t})$ represents the risk premium between market return and risk-free rate, $R_{m,t}$ and $R_{f,t}$ the Shanghai Shenzhen CSI 300 (CSI300) market index and Shanghai Interbank Offered Rate (Shibor), respectively. $SMB_{i,t}$ (Small-minus-Big) represents Market Value Factor (Weighted Average Value of Negotiable Shares) and $HML_{i,t}$ (High-minus-Low) represents Book-to-Market Ratio Factor (Weighted Average Value of Negotiable Shares). α_i is the intercept (assumed to be zero for the event window). β_1, β_2 and β_3 are firm-specific coefficients that measure the stock's sensitivity to the market risk premium, the size factor, and the value factor, respectively.

The estimated coefficients $\hat{\alpha}_i$ and $\hat{\beta}_t$ can be obtained based on the above model, and the actual return minus the expected return gives the abnormal return, which is:

$$AR_{i,t} = R_{i,t} - [\hat{\alpha}_i + \hat{\beta}_1 (R_{m,t} - R_{f,t}) + \hat{\beta}_2 SMB_{i,t} + \varepsilon_{i,t} \hat{\beta}_3 HML_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where $AR_{i,t}$ is the abnormal return and $R_{i,t}$ is the actual return of stock. Furthermore, cumulative abnormal returns is the sum of abnormal returns within the estimation window period from t1 to t2, which is:

$$CAR_i(t1, t2) = \sum_{t1}^{t2} AR_{i,t} \quad (4)$$

Weibo dummy is a dummy variable to indicate that the company has a Weibo platform, otherwise "0" is assigned. As Chahine and Malhotra (2018) defined, most firms initially post general news or product information rather than financial news. Therefore, this study emphasises firms' use of the Weibo platform for communication, irrespective of whether the content pertains to the firm itself or specific products. The information is obtained manually by accessing each firm's Weibo webpage.

We further control the profitability, leverage ratio, size, market valuation and volatility which are believed to affect the stock price return. The return on asset (ROA_{it})(is used as a proxy for profitability. Dechow et al. (1998) further demonstrate that ROA, as a control variable, effectively mitigates the impact of firm performance on the measurement of discretionary accruals. The following studies also confirm that ROA significantly impacts stock market reactions in a positive way (Myers, 1977; Smith & Watts, 1992).

Next, the debt-to-asset ratio ($D/A_{i,t}$) is used to control the leverage of the firm, which is believed to impact the firm's performance and its risk profile. Studies found a negative correlation between leverage and firm performance, as higher leverage can expose the firm to various risks, including aggressive actions by CFOs (Rountree et al., 2008; Kim et al., 2011). Consequently, the leverage ratio and CAR are expected to exhibit a positive relationship, particularly when leverage is managed efficiently and contributes to stable financial performance.

Firm size ($Size_{i,t}$) is measure using natural logarithm of total asset. Larger firms often benefit from economies of scale, better access to capital markets, and a more diversified revenue base, and tend to have less information asymmetry compared to smaller firms which contribute to higher stock returns (Banz, 1981; Diamond & Verrecchia, 1991; Fama & French, 1992).

The price-earnings ratio ($P/E_{i,t}$) calculated using market price per share to earnings per share is used as a proxy for market valuation of the company. This serves as an indicator of investor sentiment and growth expectations. Studies show that low P/E stocks are associated with positive abnormal returns (Basu, 1977; Jaffe et al., 1989; Chan et al., 1991; Fama & French, 1992). Campbell et al. (1997) find that higher P/E ratios are usually followed by lower stock price growth over the next decade, with P/E ratios negatively correlated with subsequent stock price growth but uncorrelated with earnings growth. However, there are exceptions to this trend, such as a report by Jensen and Jones (2019) from Standard & Poor's, which indicated that at the end of 1998, higher-priced stocks with the highest P/E ratios achieved the most prominent market gains, suggesting that the relationship between P/E ratios and stock performance can be context-dependent.

The stock price volatility ($Sigma_{i,t}$) is measures using the standard deviation of firm-specific daily return over a fiscal year. The volatility is expected to be positively related to expected return because investors demand higher premium for bearing higher risk (Merton, 1987; Barberis & Huang, 2001; Xu & Malkiel, 2004).

We then proceed with examining the role of two-way interaction usage of corporate social media on the firm's performance using Equation (5). Following their categorisation, firms are classified as engaging in one-way messaging if they only post news without interacting with other users, such as replying to comments, liking messages, or reposting others' posts. Firms are identified as having two-way communication if they engage in any of the aforementioned interactions, plus Weibo lottery activities. Some accounts also open dedicated customer service accounts, which are considered as part of their two-way communication behaviour.

$$CAR_{t1,t2} = \alpha_o + \beta_1 CAR_{t1-t,t2-1} + \beta_2 Two\text{-}way\ interaction\ dummy$$
$$+\beta_3 ROA_{i,t} + \beta_4 D/A_{i,t} + +\beta_5 Size_{i,t} + \beta_6 P/E_{i,t} +$$
$$+\beta_8 i.Year + \varepsilon_{i,t} \quad (5)$$

Where *Two-way interaction dummy* is the dummy measurement of the firm whether engages in two-way interactions.

Table 1 presents a summary of the variables, along with their expected sign and sources.

TABLE 1
Definition of variables

Variable	Definition	Expected sign	Source
Dependent variable Cumulative abnormal returns (CAR)	Cumulative abnormal returns (CAR) are a widely used metric in finance to assess the impact of events on stock prices. It captures the deviation between actual and expected returns over a specific period (Fama et al., 1969; MacKinlay, 1997).		Datastream
Return on assets (ROA)	It is a control factor to measure profitability, the ratio of net income to total assets.	Positive	CSMAR
Leverage ratio Debt to asset ratio (D/A)	It is a control factor to measure leverage, the ratio of total liabilities to total assets.	Negative	CSMAR
Size (lnTotal Assets)	Natural log of total assets in RMB.	Positive	CSMAR
Price-earnings ratio (P/E)	It is a control factor to measure the market's valuation of a company relative to its earnings, the ratio of market price per share to earnings per share.	Positive	CSMAR
Sigma	It is a control factor to measure stock price volatility.	Negative	CSMAR
Weibo dummy	A dummy variable is assigned a value of 1 if a company has a Weibo platform, and 0 if it does not.	Positive/Negative	Sina Weibo
Two-way interaction dummy	A dummy variable is assigned a value of 1 if the firm actively engages with its followers, and 0 if it does not.	Positive/Negative	Sina Weibo

Table 2 presents the distribution of the sample for 166 firms across the entire sample period from 2018 to 2023. The mean of Cumulative Abnormal Returns (CAR) is 0.0057, with a standard deviation of 0.0165, reflecting variability in abnormal returns during the event window. The ROA, with a mean of 0.0498 and a wide range from –0.2838 to 0.3736, indicates significant differences in profitability among the firms. Similarly, the D/A ratio shows an average leverage of 64.5%, with firms ranging from 17.44% to 94.6% leverage.

TABLE 2
Descriptive statistics

Variable	Mean	SD	Min	Max	Obs.
$CAR_{t1,t2}$	0.0057	0.0165	–.0534	0.0799	996
$ROA_{i,t}$	0.0498	0.0534	–.2838	0.3736	996
$D/A_{i,t}$	0.645	0.1743	0.1744	0.946	996
$P/E_{i,t}$	29.3015	131.5349	1.0631	2914.1339	996
$Size_{i,t}$	25.5719	1.7457	22.6125	31.4309	996
$Sigma_{i,t}$	0.0306	0.0175	0.0061	0.0771	996
Weibo dummy	0.5773	0.4942	0	1	996
Two-way dummy	0.2711	0.4447	0	1	996

Notes: This table presents the descriptive statistics. $CAR_{t1,\ t2}$ = yearly cumulative abnormal returns for window (T – 5 to T + 5 days), $ROA_{i,\ t}$ = Return on assets, $D/A_{i,\ t}$ = Debt-to-asset ratio, $P/E_{i,\ t}$ = Price-earnings ratio, $Size_{i,\ t}$ = natural logarithm of total assets, $Sigma_{i,\ t}$ = standard deviation of the stock return, Weibo dummy = 1 if a company has a Weibo platform and 0 if it does not, Two-way dummy = 1 if the firm actively engages with its followers, otherwise 0.

The P/E ratio, with a mean of 29.3015 and substantial variability, suggests diverse market valuations. Firm size has a mean of 25.5719, indicating generally large firms, though the range is broad. Stock price volatility (Sigma) is relatively low on average, with a mean of 0.0306, but varies significantly across the sample.

Regarding social media engagement, 57.73% of firms have a Weibo platform, but only 27.11% engage in active two-way communication, highlighting that while most firms have adopted social media, fewer actively interact with their audience. This variation in engagement strategies provides a foundation for analysing the impact of social media on stock performance in this study.

Before conducting any regression analysis, Table 3 insight into the relationships between key variables in the study. The results from the pairwise correlation matrix indicate that there is no evidence of multicollinearity between the variables. While most variables exhibit weak correlations with one another, two correlations warrant attention due to their potential to indicate multicollinearity concerns.

TABLE 3
Pairwise correlation matrix

Variable	$ROA_{i,t}$	$D/A_{i,t}$	$P/E_{i,t}$	$Size_{i,t}$	$Sigma_{i,t}$	*Weibo dummy*	*Two-way dummy*
$ROA_{i,t}$	1.0000						
$D/A_{i,t}$	–0.6136	1.0000					
$P/E_{i,t}$	–0.0715	–0.0292	1.0000				
$Size_{i,t}$	–0.3023	0.6060	–0.0760	1.0000			
Sigmai,t	–0.0304	–0.0492	0.0814	–0.1189	1.0000		
Weibo dummy	0.0475	0.0235	0.0165	0.1741	–0.0288	1.0000	
Two-way dummy	0.0318	–0.0370	0.0629	0.0365	–0.0123	0.5218	1.0000

Notes: This table presents the correlation matrix for all the independent variables. $ROA_{i,\ t}$ = Return on assets, $D/A_{i,\ t}$ = Debt-to-asset ratio, $P/E_{i,\ t}$ = Price-earnings ratio, $Size_{i,\ t}$ = natural logarithm of total assets, $Sigma_{i,\ t}$ = standard deviation of the stock return, Weibo dummy = 1 if a company has a Weibo platform and 0 if it does not, Two-way dummy = 1 if the firm actively engages with its followers, otherwise 0.

RESULTS AND DISCUSSION

Table 4 presents the estimated results on the relationship between the role of Weibo and the cumulative average return of the firms. Column (1) shows the estimation using Pooled OLS with lagged CAR variable exhibits a negative and significant relationship. This indicates a reversal effect where previous abnormal returns negatively impact current CAR. This suggests the presence of endogeneity, consistent with Chahine and Malhotra (2018), who highlight that the action to initiate social media accounts is self-determined. To address this issue, the Two-step System GMM estimation is applied, and the results are presented in column (2).

Columns (2) display the results of the Two-step System GMM model, which shows significant results for the Arellano-Bond AR(1) test at the 1% level, confirming first-order autocorrelation. The Hansen test for over-

identification restrictions has a *p*-value of 0.128, confirming the validity of the instruments used in the GMM estimation. Overall, all the diagnostic tests meet the standard GMM criteria, suggesting that the Two-step System GMM estimate is robust (Roodman, 2009).

The results found that Weibo dummy variable is negatively related to cumulative abnormal returns at 5% significance level. This implies that the launch of corporate social media reduced the cumulative abnormal return. This may be due to the reason, where the Weibo platform may present a wide variety of content, not all of which are reliable or directly relevant to stock price movements, hence reduces the information asymmetry and consequently lower abnormal return (Oliveira et al., 2017). This diversity can dilute the impact of social media presence on abnormal returns, as information shared in the social media act as the signaling mechanism between the firms and investors. Investors might believe that allocating resources to a social media platform will not generate surprising returns, leading to a negative reaction to the initiative.

TABLE 4
Estimation results on Weibo and Cumulative Average Return

Variable	(1)	(2)
	POLS	**Sys_GMM (two-step)**
$CAR_{t1-1,t2-1}$	–0.1533*** (0.0407)	–0.1820** (0.0886)
$ROA_{i,t}$	0.0535*** (0.0127)	0.0636 (0.1657)
$D/A_{i,t}$	0.0032 (0.0037)	–0.0533 (0.0791)
$P/E_{i,t}$	0.0000 (0.0000)	–0.0000 (0.0000)
$Size_{i,t}$	0.0013*** (0.0004)	0.0076* (0.0045)
$Sigma_{i,t}$	0.9355*** (0.1172)	1.2809*** (0.4447)
Weibo dummy	0.0001 (0.0009)	–0.0481** (0.0230)
Constant	–0.0424*** (0.0100)	–0.1612** (0.0670)
Year dummy	Included	Included
R^2	0.4093	
Number of stock code		166
AR1		–4.17*** (0.000)
AR2		–1.46 (0.145)

(*Continued on next page*)

TABLE 4 (*Continued*)

Variable	(1)	(2)
	POLS	**Sys_GMM (two-step)**
Hansen test (*p*-value)		0.128
No. of instruments		15
No. of groups		166
Observations	830	332

Notes: This table presents the estimation of the use of Weibo on the firms' cumulative average return. $CAR_{t1, t2}$ = yearly cumulative abnormal returns for window (T-5 to T+5 days), $ROA_{i, t}$ = Return on assets, $D/A_{i, t}$ = Debt-to-asset ratio, $P/E_{i, t}$ = Price-earnings ratio, $Size_{i, t}$ = natural logarithm of total assets, $Sigma_{i, t}$ = standard deviation of the stock return, Weibo dummy = 1 if a company has a Weibo platform and 0 if it does not. Standard errors are reported in parentheses. ** and *** indicate significance at 5% and 1%, respectively.

In terms of control variables, firm size and stock price volatility both exhibit a positive correlation with cumulative abnormal returns (CAR), consistent with the expected signs outlined in Table 1. Larger firms often benefit from economies of scale, greater information disclosure, improved access to capital markets, and a more diversified revenue base, all of which contribute to a positive relationship between firm size and cumulative returns (Banz, 1981; Diamond & Verrecchia, 1991; Fama & French, 1992). Likewise, adhering to most risk-return tradeoff theories, volatility is typically positively correlated with expected returns. When investors demand compensation for bearing undiversifiable risk, they are likely to require a premium for holding stocks with high idiosyncratic volatility (Merton, 1987; Barberis & Huang, 2001; Xu & Malkiel, 2004; Ewens et al., 2013).

Table 5 presents the results of the firms that engage in two-way interaction via Weibo to establish better communication with their customers. Interestingly, even when considering deeper insights into social media interactions, the two-way communication variable remains negatively related at 5% significance level. This is contrast with the study by Chahine and Malhotra (2018). This result suggests that neither the presence of a Weibo platform nor active engagement with users through it has a positive impact on stock price movements or the cumulative abnormal returns experienced by investors.

TABLE 5
Estimation results on Weibo's two-way interaction and Cumulative Average Return

Variable	(1)	(2)
	POLS	**Sys_GMM two-step**
$CAR_{t1-t2-1}$	–0.1539*** (0.0406)	–0.1523** (0.0752)
$ROA_{i,\,t}$	0.0536*** (0.0126)	0.0187 (0.0410)
$D/A_{i,\,t}$	0.0033 (0.0037)	0.0300 (0.0332)
$P/E_{i,\,t}$	0.0000 (0.0000)	0.0000 (0.0000)
$Size_{i,\,t}$	0.0013*** (0.0004)	–0.0031 (0.0045)
$Sigma_{i,\,t}$	0.9369*** (0.1176)	1.3919*** (0.2988)
Two-way dummy	0.0007 (0.0010)	–0.0216** (0.0102)
Constant	–0.0425*** (0.0099)	0.0464 (0.1089)
Year dummy	Included	Included
R-squared	0.4096	
Number of stock code		166
AR1		–3.77*** (0.000)
AR2		–1.68 (0.093)
Hansen test (*p*-value)		0.292
No. of instruments		40
No. of groups		166
Observations	830	830

Note(s): This table presents the estimation of the use of two-way interaction in Weibo on the firms' cumulative average return. $CAR_{t1,\,t2}$ = yearly cumulative abnormal returns for window (T-5 to T+5 days), $ROA_{i,\,t}$ = Return on assets, $D/A_{i,\,t}$ = Debt-to-asset ratio, $P/E_{i,\,t}$ = Price-earnings ratio, $Size_{i,\,t}$ = natural logarithm of total assets, $Sigma_{i,\,t}$ = standard deviation of the stock return, Two-way dummy Weibo dummy =1 if the firm actively engages with its followers, otherwise 0. Standard errors are reported in parentheses. ** and *** indicate significance at 5 and 1%, respectively.

The findings indicate that both passive social media engagement (e.g., establishing a Weibo account) and active engagement (e.g., interacting with other Weibo users) facilitate faster and more efficient incorporation of information into prices, thereby resulting in lower abnormal returns around the event window. In this context, faster and more widespread information diffusion reduces the scope for information leakage prior to the event and limits delayed price adjustments following the event. As a result, stock prices adjust more quickly toward their new equilibrium level, leading to smaller and less persistent abnormal returns within the event window. This pattern is consistent with the predictions of semi-strong form market efficiency;

whereby publicly available information is rapidly reflected in security prices. Overall, the findings are consistent with information asymmetry and investor attention theories, which posit that enhanced disclosure channels and increased investor awareness improve price efficiency and compress abnormal return opportunities surrounding corporate events.

Schweidel and Moe (2014) highlight that social media disclosures are rapidly reflected in stock prices. Consistently, on Weibo, investors respond promptly to publicly disclosed information, leading to immediate price adjustments. This can be explained through the lens of information asymmetry and market efficiency. By providing timely and accessible updates, social media reduces the information gap between informed and uninformed investors, enabling a broader set of market participants to incorporate firm-specific news into their trading decisions. Due to the speed of the information incorporated via social media, there is less opportunity for abnormal returns to persist around the event window.

The results indicate that social media serves as an important channel for firms to communicate with investors in a timely, cost-effective, and intensive manner. Effective use of social media is expected to reduce information asymmetry, allowing firm-specific information to be more accurately reflected in stock prices, thereby limiting opportunities for abnormal returns. These findings are consistent with Blankespoor et al. (2014) and Prokofieva (2015), who report that press release links disseminated via Twitter reduce information asymmetry and narrow the spread of abnormal returns. Similarly, Paul (2015) finds a negative relationship between abnormal trading volume, product recalls, and firm-issued notification tweets. Moreover, as suggested by Bank et al. (2019), information shared on Twitter does not provide investors with opportunities to earn abnormal returns without triggering overreactions in the market.

CONCLUSION

The emergence of the use of social media by the firms may significantly affect the stock price performance of the listed firms. This study aims to examine the relationship of corporate social media initiatives on stock performances.

The empirical results demonstrate a statistically significant negative relationship between the Weibo dummy variable and cumulative abnormal returns, indicating that the initiation of corporate social media presence is associated with lower abnormal returns around the event window. This finding suggests that rather than generating speculative gains, corporate social media primarily functions as an information dissemination mechanism that enhances market efficiency.

The results further reveal that both passive engagement and active engagement contribute to faster and more efficient incorporation of information into stock prices. This leads to stock prices converging more rapidly toward their equilibrium values, leaving limited scope for abnormal returns to persist. These findings are consistent with the semi-strong form of market efficiency; whereby publicly available information is promptly reflected in security prices.

From a theoretical perspective, the study lends support to information asymmetry and investor attention theories. By providing timely, accessible, and low-cost disclosure, corporate social media increases investor awareness and facilitates broader participation in price discovery. In line with prior literature (e.g., Schweidel & Moe, 2014; Blankespoor et al., 2014; Prokofieva, 2015), the evidence suggests that social media disclosures are rapidly absorbed by the market, compressing opportunities for investors to earn abnormal returns. Rather than inducing overreaction, information shared via social media appears to improve pricing efficiency, corroborating the findings of Bank et al. (2019).

Overall, this study contributes to the growing literature on digital disclosure by providing evidence from the Chinese social media context that corporate social media adoption enhances informational efficiency in capital markets. For practitioners, the findings imply that firms should view social media as a strategic communication channel aimed at transparency and investor engagement rather than as a tool for boosting short-term stock performance. Future research may extend this analysis by examining content quality,

sentiment, or platform-specific characteristics to better understand how different dimensions of social media communication influence market reactions.

REFERENCES

Antweiler, W., & Frank, M. Z. (2004). Is all that talk just noise? The information content of internet stock message boards. *The Journal of Finance, 59*(3), 1259–1294. https://doi.org/10.1111/j.1540-6261.2004.00662.x

Apergis, N., & Ozturk, I. (2015). Testing environmental Kuznets curve hypothesis in Asian countries. *Ecological Indicators, 52*, 16–22. https://doi.org/10.1016/j.ecolind.2014.11.026

Bank, S., Yazar, E. E., & Sivri, U. (2019). Can social media marketing lead to abnormal portfolio returns? *European Research on Management and Business Economics, 25*(2), 54–62. https://doi.org/10.1016/j.iedeen.2019.04.006

Banz, R. W. (1981). The relationship between return and market value of common stocks. *Journal of Financial Economics, 9*(1), 3–18. https://doi.org/10.1016/0304-405X(81)90018-0

Barberis, N., & Huang, M. (2001). Mental accounting, loss aversion, and individual stock returns. *The Journal of Finance, 56*(4), 1247–1292. https://doi.org/10.1111/0022-1082.00367

Bartov, E., Faurel, L., & Mohanram, P. S. (2018). Can Twitter help predict firm-level earnings and stock returns? *The Accounting Review, 93*(3), 25–57. https://doi.org/10.2308/accr-51865

Basu, S. (1977). Investment performance of common stocks in relation to their price-earnings ratios: A test of the efficient market hypothesis. *The Journal of Finance, 32*(3), 663–682. https://doi.org/10.1111/j.1540-6261.1977.tb01979.x

Blankespoor, E., Miller, G. S., & White, H. D. (2014). The role of dissemination in market liquidity: Evidence from firms' use of Twitter™. *The Accounting Review, 89*(1), 79–112. https://doi.org/10.2308/accr-50576

Bollen, J., Mao, H., & Zeng, X. (2011). Twitter mood predicts the stock market. *Journal of Computational Science, 2*(1), 1–8. https://doi.org/10.1016/j.jocs.2010.12.007

Brav, A., Geczy, C., & Gompers, P. A. (2000). Is the abnormal return following equity issuances anomalous? *Journal of Financial Economics, 56*(2), 209–249. https://doi.org/10.1016/S0304-405X(00)00040-4

Campbell, J. Y., Andrew, W. L., & MacKinlay (1997). *The econometrics of financial markets.* Princeton University Press. https://doi.org/10.1515/9781400830213

Chahine, S., & Malhotra, N. K. (2018). Impact of social media strategies on stock price: the case of Twitter. *European Journal of Marketing, 52*(7/8), 1526–1549. https://doi.org/10.1108/EJM-10-2017-0718

Chan, L. K. C., Hamao, Y., & Lakonishok, J. (1991). Fundamentals and stock returns in Japan. *The Journal of Finance, 46*(5), 1739–1764. https://doi.org/10.1111/j.1540-6261.1991.tb04642.x

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management, 37*(1), 39–67. https://doi.org/10.1177/0149206310388419

Dechow, P. M., Kothari, S. P., & Watts, R. (1998). The relation between earnings and cash flows. *Journal of Accounting and Economics, 25*(2), 133–168. https://doi.org/10.1016/S0165-4101(98)00020-2

Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. *The Journal of Finance, 46*(4), 1325–1359. https://doi.org/10.1111/j.1540-6261.1991.tb04620.x

Easley, D., & O'Hara, M. (2004). Information and the cost of capital. *The Journal of Finance*, 59(4), 1553–1583. https://doi.org/10.1111/j.1540-6261.2004.00672.x

Ewens, M., Jones, C. M., & Rhodes-Kropf, M. (2013). The price of diversifiable risk in venture capital and private equity. *The Review of Financial Studies, 26*(8), 1854–1889. https://doi.org/10.1093/rfs/hht035

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, 25(2), 383–417. https://doi.org/10.2307/2325486

Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *The Journal of Finance, 47*(2), 427–465. https://doi.org/10.1111/j.1540-6261.1992.tb04398.x

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics, 33*(1), 3–56. https://doi.org/10.1016/0304-405X(93)90023-5

Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The adjustment of stock prices to new information. *International Economic Review, 10*(1), 1–21. https://doi.org/10.2307/2525569

Gómez-Carrasco, P., & Michelon, G. (2017). The power of stakeholders' voice: The effects of social media activism on stock markets. *Business Strategy and the Environment*, 26(6), 855–872. https://doi.org/10.1002/bse.1973

He, W., Guo, L., & Akula, V. (2016). Social media-based forecasting: A case study of tweets and stock prices in the financial services industry. *Journal of Organizational and End User Computing, 28*(2), 74–91. https://doi.org/10.4018/JOEUC.2016040105

Huang, J., & Liu, J. (2020). Using social media mining technology to improve stock price forecast accuracy. *Journal of Forecasting, 39*(1), 104–116. https://doi.org/10.1002/for.2616

Huang, R., Zuo, W., & Bi, L. (2015). Predicting the stock market based on microblog mood. *Journal of Industrial Engineering and Engineering Management, 1*, 47–52.

Hughes, J. S., Liu, J., & Liu, J. (2007). Information asymmetry, diversification, and cost of capital. *The Accounting Review, 82*(3), 705–729. https://doi.org/10.2308/accr.2007.82.3.705

Jaffe, J., Keim, D., & Westerfield, R. (1989). Earnings yields, market values, and stock returns. *Journal of Finance, 44*(1), 135–148. https://doi.org/10.1111/j.1540-6261.1989.tb02408.x

Jensen, G. R., & Jones, C. P. (2019). *Investments: analysis and management* (14th ed.) Wiley.

Lambert, R. A., Leuz, C., & Verrecchia, R. E. (2012). Information asymmetry, information precision, and the cost of capital. *Review of Finance, 16*(1), 1–29. https://doi.org/10.1093/rof/rfr014

Kim, J. B., Li, Y., & Zhang, L. (2011). CFOs versus CEOs: Equity incentives and crashes. *Journal of Financial Economics, 101*(3), 713–730. https://doi.org/10.1016/j.jfineco.2011.03.013

Lyon, J. D., Barber, B. M., & Tsai, C. (1999). Improved methods for tests of long-run abnormal stock returns. *The Journal of Finance, 54*(1), 165–201. https://doi.org/10.1111/0022-1082.00101

MacKinlay, A. C. (1997). Event Studies in economics and finance. *Journal of Economic Literature, 35*(1), 13–39.

Merton, R. C. (1987). A simple model of capital market equilibrium with incomplete information. *The Journal of Finance, 42*(3), 483–510. https://doi.org/10.1111/j.1540-6261.1987.tb04565.x

Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics, 5*(2), 147–175. https://doi.org/10.1016/0304-405X(77)90015-0

Nguyen, T. H., Shirai, K., & Velcin, J. (2015). Sentiment analysis on social media for stock movement prediction. *Expert Systems with Applications, 42*(24), 9603–9611. https://doi.org/10.1016/j.eswa.2015.07.052

O'Hara, M. (2003). Presidential address: Liquidity and price discovery. *The Journal of Finance, 58*(3), 1335–1354. https://doi.org/10.1111/1540-6261.00569

Oliveira, N., Cortez, P., & Areal, N. (2017). The impact of microblogging data for stock market prediction: Using Twitter to predict returns, volatility, trading volume and survey sentiment indices. *Expert Systems with Applications, 73*, 125–144. https://doi.org/10.1016/j.eswa.2016.12.036

Paul, T. (2015). *The effect of social media on trading behaviour: Evidence from twitter.* Wharton Research Scholars.

Prokofieva, M. (2015). Twitter-based dissemination of corporate disclosure and the intervening effects of firms' visibility: Evidence from Australian-listed companies. *Journal of Information Systems, 29*(2), 107–136. https://doi.org/10.2308/isys-50994

Roodman, D. (2009). How to do Xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal: Promoting communications on statistics and Stata, 9*(1), 86–136. https://doi.org/10.1177/1536867X0900900106

Rountree, B., Weston, J., & Allayannis, G. (2008). Do investors value smooth performance? *Journal of Financial Economics, 90*(3), 237–251. https://doi.org/10.1016/j.jfineco.2008.02.002

Schweidel, D. A. & Moe, W. W. (2014). Listening in on social media: A joint model of sentiment and venue format choice. *Journal of Marketing Research, 51*, 387–402. https://doi.org/10.1509/jmr.12.0424

Smith, C. W., & Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics, 32*(3), 263–292. https://doi.org/10.1016/0304-405X(92)90029-W

Spence, M. (1978). Job market signaling. In P. Diamond, & M. Rothschild (Eds.), *Uncertainty in economics: Readings and exercises* (pp. 281–306). Academic Press.

Tetlock, P. C. (2007). Giving content to investor sentiment: the role of media in the stock market. *The Journal of Finance, 62*(3), 1139–1168. https://doi.org/10.1111/j.1540-6261.2007.01232.x

Wang, Y., & Xu, Y. (2010). The challenges of the major technological change of the fifth media. *Forum on Science and Technology in China, 6*, 5–8.

Xu, Y., & Malkiel, B. G. (2004). Idiosyncratic risk and security returns. *SSRN Journal.* https://doi.org/10.2139/ssrn.255303

Yang, C. (2022). *The impact of social media on the stock price crash risk: An empirical study based on microblog disclosure of listed companies* [Master's thesis, Guangxi Normal University]. China National Knowledge Infrastructure (CNKI). https://doi.org/10.27412/d.cnki.gxncu.2021.000379