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Can Peer MD&A Tone Reduce Stock Price Synchronicity?

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Abstract

This paper takes China's Shanghai and Shenzhen A-share listed companies in 2017--2021 as a sample, and explores the relationship between the tone of peer management discussions and analyses and the synchronicity of target firms' share prices from the perspective of private information trading theory. The study finds that the more positive the tone of peer management discussion and analysis, the lower the target firm's stock price synchronicity, indicating that the positive tone of peer non-financial information disclosure contributes to more investors' participation in private information trading, and more firm-level information enters into the stock price; the channel of its effect is mainly realised through the positive tone of peers' inducing a lower quality of the target firm's accounting information, and in the case of when the accounting information between the peer firms and the target firms is When accounting information between peer firms and target firms is more comparable and analysts' forecasts are more accurate, the information environment of target firms is optimised, significantly weakening the negative relationship between peer tone and stock price synchronicity. This relationship is more pronounced for firms with low investment value and low profitability, and the richer the information about hidden private attributes, the greater the decline in stock price synchronicity.

Keywords

Management Discussion and Analysis; Tone of Voice; Stock Price Synchronicity; Peer Firms; Accounting Information Quality; Private Information Trading.

1. Introduction

Capital market pricing efficiency plays a decisive role in the allocation of market resources, and the quality of information drives the formation of share prices, mainly information that reflects the idiosyncrasies of the company level.Whether a stock has investment value can be judged by how much idiosyncratic information exists in the stock exchange, and how much idiosyncratic information is contained in the stock price means the strength of stock price synchronicity. It is generally believed that a high level of price synchronicity makes it difficult for stock market transactions to efficiently convey real and valuable information, which leads to a loss of efficiency in the allocation of capital market resources, and in turn affects high-quality listed companies that have real potential but are unable to incorporate real idiosyncratic information into their share prices. Enhancing the reflection of company-level information in the stock price will enable enterprises to accurately and efficiently convert all kinds of investment and financing decisions into capital, promote the high-quality development of the real economy and improve the efficiency of resource allocation in the financial market.

Regarding the study of "peer effect" in the field of accounting, peer financial information disclosure is conducive to reducing the uncertainty of investment returns of industry competitors, which in turn improves the efficiency of investment (Durnev et al., 2009). However, peer financial information misreporting can lead to blind optimism of target firms, distort their business and investment decisions, and reduce investment and financing efficiency (Li,2016). It has been established that peer non-financial information disclosure significantly

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enhances investment efficiency and the level of innovation investment (Durnev et al., 2020; Li Shu et al., 2021).

This paper focuses on the textual characteristics of non-financial information-management sentiment and tone, and will take the disclosure tone of the management analysis and discussion (MD&A) section of the annual report as an example to study the impact of peer disclosure tone on stock price synchronicity. Theoretically, the more positive the tone of peer MD&A, the more intense the industry competition signals, making the target enterprise unconsciously disturbed by the industry's over-optimistic signals, ignoring the disclosure of potential risk information; at the same time, the role of inter-industry information cascade effect, the industry's positive signals will make the target enterprise's operating uncertainty decline, and the enterprise's business risk increases subsequently. The positive tone of peers will most likely reduce the quality of accounting information and aggravate the degree of information asymmetry within and outside the target enterprise. And the degree of information asymmetry is the key factor affecting private information trading. Is there any relationship between peer MD&A tone and stock price synchronicity? What is its intrinsic mechanism? What factors affect this relationship?

To answer the above question, this paper takes the sample of China's Shanghai and Shenzhen A-share listed companies in 2017--2021 as a sample, and explores the relationship between the tone of peer management discussions and analyses and the target firms' share price synchronicity from the perspective of private information trading theory. It is found that the more positive the tone of peer management discussion and analysis, the lower the share price synchronicity of target firms. The path of action is mainly achieved through the positive tone of peers inducing a decrease in the quality of target firms' accounting information, and when the accounting information between peer firms and target firms is more comparable and the analysts' forecasts are more accurate, the information environment of target firms is optimised, which significantly weakened the negative relationship between the tone of peers and the synchronicity of share prices. Although peer MD&A tone significantly reduces share price synchronicity, it is not more effective disclosure for target firms, but lower quality accounting information and poorer accounting robustness.

The contributions of the article are reflected in (1) the first empirical test of the relationship between peer MD&A tone and stock price synchronicity, which both enriches the literature on the economic consequences of peer non-financial disclosure and expands the research on the factors influencing stock price synchronicity. (2) This paper is the first to describe the intrinsic mechanism of peer MD&A tone and stock price synchronicity (undermining the target firm's information environment and lowering the quality of accounting disclosure) and to provide empirical evidence. (3) More previous studies discuss the influencing factors of capital market pricing efficiency based on the information efficiency view, i.e., the view that share price synchronicity negatively reflects the information efficiency of the market, as a theoretical basis; this article verifies that share price synchronicity positively reflects the information efficiency of the market from the perspective of the private information transaction theory, which helps us to understand the economic meanings behind the peer-to-peer non-financial disclosure affecting share price synchronicity.

The rest of the paper is organized as follows.Section 2 surveys related studies. Section 3 details the main tests and Section 4 contains additional analyses.Section 5 concludes.

2. Literature Review

Enterprise-led accounting information disclosure decision-making plays a pivotal role in the capital market, the core of which lies in the fact that enterprises' accounting information disclosure behaviour has a certain degree of discretion, and the accounting information

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obtained by stakeholders is integrated into the share price through transactions, which ultimately has an impact on the pricing efficiency of the capital market. Scholars at home and abroad have conducted a large number of studies from the perspective of stock price synchronicity, with the following three main points of view.

The noise-based view implies that in markets where noise dominates stock prices, stock price synchronicity positively reflects the informational efficiency of the market (Lee and Liu, 2007).West (1986) first suggested that stock price volatility is positively affected by irrational behaviour induced by investor sentiment, market noise, etc., which breaks the stock price dependence on the fundamental trait information "stereotype". It has been found that changes in stock price synchronicity are significantly and negatively correlated with the frequency of market anomalies (Teoh et al., 2008; Skaife et al.); echoed by the fact that large amounts of noise in the stock market inhibit stock price synchronicity (Kumar and Lee, 2006). In emerging capital markets represented by China, the inversion effect is significantly negatively correlated with R2 , especially in bear markets where the higher R2 is, the less pronounced the inertia effect is (Xu Nianxing et al., 2011). The level of stock price synchronicity implies the amount of stock price noise content, and increased accounting disclosure by the company can effectively reduce future uncertainty and alleviate the noise in stock price information, making stock price synchronicity positively reflect information efficiency (Dasgupta et al., 2008).

Private information trading, i.e. investors' private information arbitrage behaviour, will reduce stock price synchronicity as information asymmetry deepens (Jinzhi, 2010). There are two ways for firm-level information to enter the stock price, including public disclosure and private information trading (Romer, 1993). And firm-specific information enters the stock price mainly through private information trading (Feng Yufu et al., 2009), and the change of R2 also depends on private information arbitrage behaviour (Durnev et al., 2003). The higher the quality of accounting information, the lower the information asymmetry between internal and external firms as well as investors, the easier it is for investors to obtain equal information on cash flows and firm value, and the marginal returns to private arbitrage behaviour decline as the cost of information gathering decreases. A poorer accounting information environment implies that the richer the information on private attributes to be tapped, the more potential marginal returns, the stronger the incentives for investors to collect private information, the more firm-level information is brought by private arbitrage, and the share price synchronicity thus decreases. The worse the information environment, the lower the stock price synchronicity, from which stock price synchronicity positively reflects the information efficiency of the market (Kelly, 2005).

In addition, there is a behavioural contagion mechanism in the capital market (Chiu et al., 2013). Peer disclosure has a similar background and strong comparability and reference value, and non-head firms in the industry have the motivation to absorb high-quality firms' information and converge their decisions with the leading firms in order to reduce risk uncertainty and decision-making costs (Marvin and Shigeru, 2006). Therefore, peer MD&A tone can stimulate target firms to unconsciously show similar emotions and behaviours. The more positive the tone of peer MD&A, the more promising the industry development, the higher the level of blind optimism and overconfidence of the target firm's management, which increases the likelihood of intentionally or unintentionally ignoring the disclosure of risk information (cautionary statements). Management's irrational investment decisions lead to more risky information concealment and less private information disclosure, the worse the firm's accounting information environment, and the lower the share price synchronicity.

The effect of information cascading among peers can cause target firms to make overly optimistic (or overly pessimistic) judgements about information disclosed by peer firms. Information cascading refers to the fact that people in the same group usually assume that others cannot make mistakes and ignore their own unique information. When the tone of peer

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MD&A becomes more and more positive, the target firm ignores the actual development situation, is convinced by the positive signals disclosed by other competing firms, and the subjective uncertainty of earnings decreases, resulting in the target firm being highly prone to form a strategic miscalculation in the midst of fierce competition. On the one hand, the target enterprise adopts blind expansion and over-investment, which will make the degree of strategic differentiation rise, leading to increased information asymmetry and serious surplus management (Ye Kangtao et al., 2015), and it is difficult for investors to interpret corporate strategy and assess corporate performance based on public information in the industry (Wang Huancheng et al., 2017), which enhances the incentive for investors to dig into the private information and carry out carry trade to obtain the expected return. On the other hand, firms implement differentiated strategies with steeply increasing business risks (Li Ni et al., 2021), management's short-term performance rises and faces higher financing constraints (Zhang Jing and Zhang Yanzhao, 2021), and based on the theory of executive reputation, management selectively discloses negative news, and the target firms have poorer information quality. Therefore, the more positive the tone of peer MD&A, the more it will reduce the quality of accounting information and intensify the degree of information asymmetry inside and outside the target firm; at this time, the marginal benefit of investors' private information arbitrage behaviour is greater than the marginal cost, and the increase of private information available for collection leads to the stock price containing more information about the firm's idiosyncrasies, and the synchronicity of the stock price is reduced.

Hypothesis: holding other factors constant, the more positive the tone of peer MD&A, the lower the share price synchronicity of the target firm.

3. Data and Methodology

3.1. Sample Selection and Data Sources

The research object of this paper is the A-share listed companies in Shanghai and Shenzhen from 2017 to 2021. The sample data comes from CSMAR database as well as manual collection of two parts. The sample excludes listed companies in the financial and insurance industries, and also removes companies with ST, ST*, listed and delisted companies as well as companies with missing values in the current year, and finally obtains 17,840 sample observations of panel data dimensions. This paper is based on the latest industry classification guidelines issued by the China Securities Regulatory Commission in the secondary industry classification standards for industry classification, the sample involves a total of 72 secondary industry categories, of which 26 secondary industry categories in the manufacturing industry, accounting for 66.54% of the total number of samples. Considering the deviation of statistical results caused by extreme values in the data, all continuous variables were shrink-tailed by 1% before data processing.

3.2. Definition of Variables

(1) Explained variable: definition of stock price synchronicity

Referring to the research model of Durnev et al. (2003), this paper will use the goodness of fit of the model below, R2 , as a measure of stock price synchronicity at the individual stock level.

$$r_{i,t} = \alpha_i + \beta_{i,1} r_{m,t} + \beta_{i,2} r_{I,t} + \varepsilon_{i,t} \quad (1)$$

Among them, $r_{i,t}$ is the return of individual stocks in the t th week of i ; $r_{m,t}$ is the return of the market index in the t th week; $r_{I,t}$ is the return of the industry in the t th week of I . The industry

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classification is calculated with reference to the latest classification standard of the China Securities Regulatory Commission (CSRC):

$$r_{I,t} = \frac{\sum_{j \in I} w_{j,t} r_{j,t}}{\sum_{j \in I} w_{j,t}} \quad (2)$$

Where $w_{j,t}$ is the weight of the stock j in the industry I , measured by the market capitalisation of A-shares outstanding. Returns are all calculated using the return rate considering reinvestment of cash dividends, and markets and industries are calculated using different weighted average methods. While in this paper, sub-market equal weighted average method is used to measure the stock price synchronicity indicator, SYN_Mdeq. In the robustness test, five other stock price synchronicity indicators, such as sub-market average of market capitalisation outstanding, sub-market average of total market capitalisation, consolidated equal weighted average of market capitalisation outstanding, consolidated average of market capitalisation outstanding, consolidated average of market capitalisation outstanding, consolidated average of market capitalisation outstanding, etc., are considered to serve as a proxy test for the explanatory variables.

(2) Explanatory variables: peer MD&A tone of voice

Peer MD&A tone with a one-period lag is the lexical tone used by peer firms in the management discussion and analysis section of annual report disclosures in the previous fiscal year. In this paper, we refer to Deren Xie and Le Lin (2015) for the measurement of management tone, and construct a net MD&A tone database using the number of positive words and the number of negative words appearing in listed firms' annual reports on MD&A. The collection and establishment of the intonation thesaurus draws on the list of English words on financial sentiment provided by Loughran and McDonald (2011) as a basis, and the English words are translated using the Youdao Dictionary and Jinshan Wordsmith, and ultimately refined and supplemented with the Chinese idiomatic context. Individual MD&A net tone was calculated as (number of positive words - number of negative words)/total vocabulary; the larger the value, the more positive the affective tendency is. The higher the number of positive words, the more positive the management sentiment; the higher the number of negative words, the more negative the management sentiment. The net tone takes the value between [-1, +1]; the higher the value, the more positive the tone of the part of the company's management discussion and analysis, and the more optimistic the company's operation and investment status, growth expectations, as well as the industry outlook and future performance. Based on this, peer MD&A tone with one period lag is defined as the explanatory variable, and the specific algorithm of peer tone (mean_tone1) is as follows, which calculates the mean value of net MD&A tone of peer firms other than the target firms in a certain year.

(3) Control variables

Drawing on existing research on share price synchronicity, as well as considering the impact of annual report financial disclosure on share price synchronicity, the nature of firm ownership (PRN), shareholding checks and balances (SHAB), shareholding concentration (SHR1), institutional investor's shareholding ratio (IIP), firm book-to-market ratio (BM), return on total assets (ROA), whether it is a Big 4 audit (BIG4), firm size (AS), asset-liability ratio (ALR), and firm growth (ORG) variables are controlled. In order to exclude the influence of the characteristics of MD&A non-financial disclosure of target firms in the previous year and the average operating status of the same industry on the synchronicity of target firms' stock prices, the lag of MD&A tone of target firms by one period (EmotionTone11), the lag of MD&A textual similarity of target firms by one period (TextualSimilarity1), peer firms' average book-to-

ISSN: 2688-9323

market ratio (mean_BM), peer firms' average return on total assets (mean_ROA), peer firms' average asset size (mean_AssetSize), peer firms' average gearing ratio (mean_ALR), peer firms' average level of growth (mean_ ORG), peer firms' average number of years on the market (mean_ListingAge), and other factors. The specific descriptions of the core variables are detailed in Table 1.

To test the above hypotheses, the following model was constructed for empirical regression:

$$SYN\_Mdeq_{i,t} = \delta_0 + \delta_1 mean\_tone1_{i,t-1} + \delta_2 CV_{i,t} + \sum INDUSTRY + \sum YEAR + \varepsilon_{i,t} \quad (3)$$

Where $SYN\_Mdeq_{i,t}$ is the stock price synchronicity indicator of the target firms in the current period, $mean\_tone1_{i,t-1}$ is the MD&A tone of the peers in the previous period, $CV_{i,t}$ is the control variable, $\sum INDUSTRY$ and $\sum YEAR$ are the industry fixed effects and year fixed effects, respectively, and $\varepsilon_{i,t}$ is the random perturbation term. The model focuses on the positive, negative, and significance of the coefficient δ_1 .

Table 1 is the descriptive statistics of the main variables of the model, the mean value of share price synchronicity fitted using individual stocks R2 reaches 0.4, which is close to the median value of 0.39, while the difference of the extremes is 0.79, indicating that the share price synchronicity of listed companies in China is generally higher. The mean and median values of peer MD&A tone in the previous year are 0.03, and the range of values is [0.02,0.04], indicating that the overall tone of peer companies tends to be positively expressed, and more optimistic signals about the industry outlook and future performance are conveyed among peer companies. The mediating variables (DisAcc, Dum_ACF), moderating variables (AICIY_A, MeanFA) and control variables in this paper are not significantly different from those in other literatures, which are basically consistent with the actual situation, and the data are reliable enough to carry out further research.

Table 1. Descriptive statistics

variant	sample size	average value	median value	minimum value	maximum values	(statistics) standard deviation
SYN_Mdeq	16363	0.400	0.390	0.0200	0.810	0.190
mean_tone11	13306	0.0300	0.0300	0.0200	0.0400	0
DisAcc	15758	0	0	-0.280	0.250	0.0800
Dum_ACF	17840	0.290	0	0	1	0.450
AICIY_A	8744	-0.0100	-0.0100	-0.0500	0	0.0100
MeanFA	10836	1.490	0.570	0.0400	17	2.620
PRN	16938	0.300	0	0	1	0.460
SHAB	17838	0.820	0.660	0.0400	2.900	0.630
SHR1	17839	33.38	31	8.560	73.66	14.54
IIP	17818	41.90	42.66	0.180	91.85	25.17
BM	17451	0.360	0.350	0.0500	0.800	0.160
ROA	17840	0.0400	0.0400	-0.360	0.210	0.0800
BIG4	17571	0.0600	0	0	1	0.240
AS	14487	22.46	22.28	20.07	26.43	1.300
ALR	17840	0.410	0.400	0.0600	0.890	0.200
ORG	17664	0.340	0.140	-0.710	5.500	0.810

ISSN: 2688-9323

4. Empirical Tests

4.1. Synchronization of Peer MD&A Tone with Target Firms' Share Prices

In this paper, we will test the relationship between peer MD&A tone (one period lagged) and target firms' share price synchronicity using OLS regression for model (3) above. In the main regression analysis as shown in Table 2, the first column, after controlling for industry year fixed effects, share price synchronicity is regressed only on peer tone in the previous period, with a regression coefficient of -2.3389, which is negatively correlated with the target firms' share price synchronicity by the 1% significance level test for peer MD&A tone positivity. The second column controls for firm characteristic variables such as nature of ownership, equity checks and balances, and book-to-market ratio on the previous basis, and the regression coefficient is -2.3905, which is significantly negative at the 1% significance level, proving the hypothesis that peer MD&A tone positivity reduces target firms' stock price synchronicity. The third column of the regression continues to add the characteristics of the target enterprise MD&A non-financial information disclosure and the characteristics of the average operating status of the same industry control variables, the regression coefficient is -2.4949, not only is it significantly negative at the 1% significant level but also the absolute value of the coefficient is greater than that of the two aforementioned OLS models, which fully verifies the negative relationship between the peer MD&A intonation positivity and the synchronicity of the target enterprise's stock price. relationship between peer MD&A tone positivity and stock price synchronicity of target firms.

Table 2. Synchronisation of peer MD&A tone with target firms' share price

	(1)	(2)	(3)
	SYN_Mdeq	SYN_Mdeq	SYN_Mdeq
mean_tone11	-2.3389***	-2.3905***	-2.4949***
	(-3.6201)	(-3.3015)	(-3.3717)
control variable	uncontrolled	containment	containment
Year and industry effects	containment	containment	containment
observed value	13235	11136	11130
Adjustment R^2	0.2762	0.3591	0.3601

Note: *, **, and *** denote 10%, 5%, and 1% significance levels in two-tailed tests, respectively, with t-values in parentheses, and mitigating for heteroskedasticity by using robust standard errors for individual clustering of firms. The following tables are identical.

4.2. Mediating Effects of Accounting Information Quality

The more positive the tone of peer MD&A, the more intense industry competition signals, coupled with the existence of behavioral contagion mechanism in the capital market, making the target enterprise unconsciously by the industry overly optimistic signals of interference, ignoring the disclosure of potential risk information; at the same time, inter-industry information cascade effect, the industry positive signals will make the target enterprise's operating uncertainty decline, the possibility of implementation of differentiation strategy The possibility of implementing differentiation strategies rises, and the risk of enterprise operation increases. Whether it is ignoring risk information disclosure, selective disclosure of negative content, or management's surplus management behaviour due to opportunistic motives, all of them will reduce the quality of accounting information and exacerbate the degree of information asymmetry within and outside of the target firms; the transparency of corporate information declines, the marginal benefit of investors' private information arbitrage is greater than the marginal cost, and the increase in the amount of private information available for collection leads to a stock price that contains more firm-specific information, and stock price

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synchronicity decreases. Therefore, two mediating variables, accrual surplus management (Dis_Acc) and the existence of accounting robustness (Dum_ACF), are selected in this paper to examine the effect of peer MD&A tone on stock price synchronicity through the lens of accounting information quality.

The contingent surplus management indicator in this paper is calculated using Dechow's (1995) modified Jones model, manipulative accrual surplus. Accounting robustness is obtained using Ray Ball and Lakshmanan Shivakumar's (2006) model to obtain the coefficient of accounting robustness, which is defined as a value less than zero, accounting robustness exists. In Table 3, the first column has a regression coefficient of 1.7261 with a positive 1% significance level, indicating that positive peer tone in the previous period is significantly and positively related to the degree of surplus management in the target's current period. While in the second column, the regression coefficient of DisAcc is -0.054, which indicates that the degree of corporate surplus management is negatively related to stock price synchronicity at 5% significance level. The regression coefficient in the third column is significantly positive at the 5% significance level, indicating that positive peer tone in the previous period increases the probability of accounting instability of the target firm in the current period, and fixing all other factors unchanged, for every one-unit increase in the peer tone, on average, the chances ratio of the existence of accounting instability in the target firm increases by a factor of 31 times of the original one. And in the fourth column, the regression coefficient of Dum_ACF is -0.0157, which indicates that the existence of accounting information instability in a firm is negatively related to stock price synchronicity at 1% significance level. In summary, the more positive and optimistic the peer MD&A tone, the more negative the impact on the accounting environment and information quality, empirical evidence suggests that the peer MD&A tone leads to a decline in the quality of accounting information by increasing the degree of surplus management and the probability of accounting information instability in the target firms, an increase in the expected return from investors' trading in private information, a strong incentive to trade in private information, and a strong incentive to arbitrage in private information behaviour makes more idiosyncratic information enter the stock price and stock price synchronicity decreases.

Table 3. Mediating effects of accounting information quality

	(1)	(2)	(3)	(4)
	DisAcc	SYN_Mdeq	Dum_ACF	SYN_Mdeq
DisAcc		-0.0540**		
		(-2.5412)		
Dum_ACF				-0.0157***
				(-4.1128)
mean_tone11	1.7261***	-2.8881***	31.21485**	-2.4326***
	(3.9899)	(-3.6182)	(2.12)	(-3.2847)
control variable	containment	containment	containment	containment
Year and industry effects	containment	containment	containment	containment
observed value	11025	10981	8854	11130
Adjust R^2 /Pseudo R^2	0.3444	0.4387	0.2100	0.3609

4.3. Impact of Comparability of Accounting Information and Accuracy of Analysts' Forecasts

In order to examine how accounting information comparability and analyst forecast accuracy affect the reduction effect of peer MD&A tone on stock price synchronicity, the cross-multiplier term indicator of accounting information comparability and analyst forecast accuracy with peer tone is introduced on the basis of model (3). From the regression results in column (1) in Table

ISSN: 2688-9323

5, it can be seen that the regression coefficient of mean_tone11×AICIY_A is significantly positive at the 10% level, and for every 1-unit increase in the comparability of accounting information, the reduction effect of peer MD&A tone on stock price synchronicity is reduced by a factor of 102. The regression results in column (2) show that the regression coefficient of MEAN_TONE11×MeanFA is significantly negative at the 1% level, and the peer MD&A tone reduces the stock price synchronicity reduction effect by 35.96% for every 1 unit increase in analyst forecast accuracy.

Table 4. Impact of comparability of accounting information and accuracy of analysts' forecasts

	(1)	(2)
	SYN_Mdeq	SYN_Mdeq
mean_tone11	-1.4950	-1.9638*
	(-1.0820)	(-1.9581)
AICIY_A	-2.3705	
	(-1.2836)	
mean_tone11×AICIY_A	102.6386*	
	(1.7167)	
MeanFA		0.0113***
		(3.2564)
mean_tone11×MeanFA		-0.3596***
		(-3.3010)
control variable	containment	containment
Year and industry effects	containment	containment
observed value	6978	6695
Adjustment R^2	0.4017	0.4153

4.4. Cross-sectional Inspection

This paper also performs OLS grouping tests using the peer average book-to-market ratio and the peer average return on total assets as boundaries. As shown in Table 5, the coefficient of peer tone is significantly negative at the 1% significance level for the first and third columns representing the group below the level of the peer average book-to-market ratio and the peer average return on total assets with coefficients of -2.703 and -3.0789, respectively, whereas the corresponding coefficients in the second and fourth columns are not significant. The cross-sectional test shows that the worse the performance and the lower the investment value of the firm, the more significant is the effect of peer tone in reducing stock price synchronicity. If the information efficiency view holds, the better the performance, the more worthy of investment in the company's information disclosure tends to be a true reflection of the situation of the enterprise, the quality of information disclosure is also higher, the increase in the company's idiosyncratic information leads to a reduction in stock price synchronicity; however, this paper finds that the phenomenon of reduced stock price synchronicity is only manifested in the performance and value of poor performance of the company, the quality of disclosure of this type of company compared to the probability of violating the real reflection However, this paper finds that the phenomenon of reduced stock price synchronicity is only found in firms with poor performance and value performance, where the quality of disclosure is more likely to be contrary to the true reflection than in firms with poor performance and value.

ISSN: 2688-9323

Table 5. Synchronisation of Peer MD&A Tone of Voice and Target Firms' Stock Prices - Cross-sectional Tests

	(1)	(2)	(3)	(4)
	SYN_Mdeq	SYN_Mdeq	SYN_Mdeq	SYN_Mdeq
mean_tone11	-2.7030***	-1.3594	-3.0789***	-1.5980
	(-2.6953)	(-1.2677)	(-3.0928)	(-1.5237)
control variable	containment	containment	containment	containment
Year and industry effects	containment	containment	containment	containment
observed value	6383	4753	5156	5980
Adjustment R^2	0.3679	0.3058	0.3247	0.4057

4.5. Endogeneity Test

Instrumental variables method. In order to exclude the effect of the average operating status of peer firms and overcome the endogeneity problem caused by omitted variables and mutual causation, this paper selects the industry concentration (CR_10A), the average gearing ratio of peer firms (mean_ALR), the average growth level of peer firms (mean_ORG), and the average book-to-market ratio of peer firms (mean_BM) as the instrumental variables for peer MD& A tone instrumental variable.

In this paper, we use both 2SLS and GMM for instrumental variable tests, where the generalised moment estimation model is more effective for heteroskedasticity in the presence of the disturbance term. The test results in Table 6 show that all instrumental variables are exogenous and there are no endogenous instrumental variables. In the first stage, CR_10A, mean_ALR, mean_BM are significantly negative, mean_ORG is significantly positive, and F is greater than 1000, indicating that the average operating status of the same industry affects peer MD&A tone. In the second stage, the estimated coefficient of peer MD&A tone on stock price synchronicity is still significantly negative when tested using 2SLS and GMM estimation, implying that the results of the benchmark regression still hold after eliminating the endogeneity problem to some extent.

Table 6. Instrumental variable tests

	Phase II (2SLS)	Phase II (GMM)
	(1)	(2)
	SYN_Mdeq	SYN_Mdeq
mean_tone11	-13.56**	-13.6021**
	(-2.16)	(-2.17)
control variable	containment	containment
Year and industry effects	containment	containment
N	10207	
Hansen J statistic	0.093	
P-val of Hansen J statistic	0.9927	
Sargan statistic	0.100	
P-val of Sargan statistic	0.9918	
F	82.403	

Explained variable future period. The paper uses t+1 period stock price synchronicity $SYN\_Mdeq_{i,t+1}$ brought into model (3) for testing, and in the first three columns of Table 7, the results show that the coefficients of peer MD&A tone are -3.0583, -2.5932, and -2.7398, respectively, which are significant and negative at least at the 5% level of significance,

ISSN: 2688-9323

indicating that the paper's conclusions still hold up after mitigating some of the endogeneity issues.

Table 7. Explained variables t+1 period and residual method test

	(1)	(2)	(3)	(4)	(5)	(6)
	SYN_Mdeq1	SYN_Mdos1	SYN_Mdtl1	SYN_Mdeq	SYN_Mdos	SYN_Mdtl
mean_tone11	-3.0583***	-2.5932**	-2.7398***			
	(-2.8540)	(-2.4267)	(-2.5867)			
e				-2.4474***	-2.5905***	-2.7776***
				(-2.9735)	(-2.9146)	(-3.1132)
control variable	containment	containment	containment	containment	containment	containment
Year and industry effects	containment	containment	containment	containment	containment	containment
observed value	8250	8250	8250	11137	11137	11137
Adjustment R^2	0.2095	0.3882	0.3964	0.3087	0.3855	0.3961

4.6. Robustness Tests

Table 8. Robustness test after replacing explanatory variables

	(1)	(2)	(3)	(4)	(5)
	SYN_Mdos	SYN_Mdtl	SYN_Cmdeq	SYN_Cmdos	SYN_Cmdtl
mean_tone11	-2.3687***	-2.5554***	-1.7863**	-2.0513**	-2.2724**
	(-2.6413)	(-2.8417)	(-2.1723)	(-2.3221)	(-2.5451)
control variable	containment	containment	containment	containment	containment
Year and industry effects	containment	containment	containment	containment	containment
observed value	11137	11137	11137	11137	11137
Adjustment R^2	0.3853	0.3959	0.3066	0.3739	0.3911

Table 9. Robustness test after replacing explanatory variables

	(1)	(2)	(3)	(4)	(5)
	SYN_Mdeq	SYN_Mdeq	SYN_Mdeq	SYN_Mdeq	SYN_Mdeq
mean_tone21	-0.1971**	-0.1860*	-0.1874*	-0.0068	-0.1024
	(-2.2857)	(-1.9571)	(-1.9378)	(-0.0378)	(-0.7929)
AICIY_A				-3.3686*	
				(-1.8658)	
mean_tone21×AICIY_A				16.7407**	
				(2.2693)	
MeanFA					0.0125***
					(3.5885)
mean_tone21×MeanFA					-0.0492***
					(-3.6413)
control variable	uncontrolled	containment	containment	containment	containment
Year and industry effects	containment	containment	containment	containment	containment
observed value	13235	11136	11130	6978	6695
Adjustment R^2	0.2758	0.3587	0.3597	0.4023	0.4148

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Firstly, the robustness of the replacement indicator for the dependent variable stock price synchronicity is tested. Specifically, the sub-market equal-weighted average is replaced with the sub-market average of market capitalisation outstanding (SYN_Mdos), the sub-market average of total market capitalisation (SYN_Mdtl), the composite equal-weighted average of market capitalisation (SYN_Cmdeq), the composite average of market capitalisation outstanding (SYN_Cmdos), and the composite average of total market capitalisation (SYN_Cmdtl). Table 8 shows that after replacing the dependent variable, the regression results are significantly negative at least at the 5% significance level, indicating that peer MD&A tone is significantly negatively related to target firms' stock price synchronicity. Secondly, the construction method of the explanatory variable MD&A intonation is adjusted; the intonation is redefined as (number of positive words - number of negative words) / (number of positive words + number of negative words), the larger the value is, the more the affective tendency is biased in favour of positive positivity. Based on this, the coefficient of peer tone remains significantly negative in the three models of the benchmark regression section after calculating the updated peer MD&A tone in Table 9; at the same time, the explanatory validity of the moderated model after replacing the explanatory variables remains the same as in the previous section, and accounting comparability and analysts' forecasting accuracy can attenuate the negative impact of peer MD&A tone on stock price synchronicity. All of the above testing process proves that the more positive peer MD&A tone is, the more it leads to investors' private information trading behaviours, more company-specific information is integrated into the stock price, and the stock price synchronicity eventually decreases, and the conclusions of this paper are robust.

5. Conclusions of the Study

Taking China's Shanghai and Shenzhen A-share listed companies as samples from 2017--2021, from the perspective of private information transaction theory, this paper finds that the more positive the tone of peer management discussions and analyses, the lower the share price synchronicity of target firms; the channel of its effect is mainly realised through the decrease in the quality of accounting information of target firms induced by the positive tone of peers and the negative correlation between the information environment of peer and target firms is significantly weakened when the When the accounting information between peer firms and target firms is more comparable and analysts' forecasts are more accurate, the information environment of target firms is optimised, significantly weakening the negative relationship between peer tone and stock price synchronicity brought about by the decline in accounting information quality. Previously, more studies have taken the informational efficiency view, which argues that share price synchronicity negatively reflects the informational efficiency of the market, as the theoretical basis for discussing the factors affecting the pricing efficiency of the capital market.This paper has certain policy significance, corporate management should have strategic determination to avoid being influenced by peers' emotions or behaviours, and strengthen the disclosure of risk information and corporate governance; listed companies need to continuously improve the disclosure of non-financial information in accordance with the institutional norms and regulations, and the regulatory authorities need to improve the review and supervision of the quality of disclosure of listed companies to guard against potential accounting information behind the positive tone of peers. "The regulators need to improve their review and supervision of the quality of information disclosure by listed companies, so as to prevent the occurrence of potential accounting information behind the positive tone of peers.

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References

[1] Feng Yufu, Dong Yan, Yuan Zebo, and Yang Renmei, 2009 "Analysis of Private Information Arbitrage in the Chinese Stock Market Based on R2 ", Economic Research, Vol. 8.

[2] Huang, Jun and Guo, Zhaorui, 2014 "News Media Coverage and Capital Market Pricing Efficiency - An Analysis Based on Share Price synchronicity", Management World, Vol. 5.

[3] Jin Zhi, 2010 "New Accounting Standards, Accounting Information Quality and Stock Price synchronicity", Accounting Research, Vol. 7.

[4] Li,Ni,Zeng,Gayi,Cai,Guilong and Hu, Zhiyong, 2021 "Firm Strategic Heterogeneity and Stock Price synchronicity", Accounting and Economic Research, Vol. 3.

[5] Li, Qingyuan and Wang, Lumeng, 2020 "Accounting Information Comparability and Spillover Effects of Performance Forecasts of Listed Firms", Economic Management, Vol. 5.

[6] Li,Shu,Du,Yaguang, and Zhang, Xiaozhe, 2021 "Spillover effects of peer MD&A tone on firms' investment in innovation".

[7] Tian, Gao-Liang, Feng, Hua,and Zhang, Ting, 2019 "Risk-taking, information opacity and stock price synchronicity", Systems Engineering Theory and Practice, Vol.3.

[8] Huacheng Wang, Xiuping Zhang, Charman Hou, and Xinyu Li, 2017 "Corporate Strategy Differences and the Cost of Equity Capital - A Study of the Mediating Effect Based on Business Risk and Information Asymmetry", China Soft Science, Vol. 9.

[9] Wang, Yaping, Liu, Huilong, and Wu, Liansheng, 2009 "Information Transparency, Institutional Investors, and Stock Price synchronicity", Financial Studies, Vol. 12.

[10] Xu Ning, Wu Haoyu and Wang Shuai, 2017 "Motivation or Burden? --Review and Prospect of Research on the Utility of Dual Governance of Executive Reputation", Foreign Economics and Management, Vol. 10.

[11] Xu Nianxing, Hongtao, Wu Shinong, Xu Xinzhong, 2011 "Information Transmission Patterns, Investors' Psychological Bias and the Phenomenon of Stock Prices "Rising and Falling at the Same Time"", Economic Research, No. 4.

[12] Xin, Qingquan, Kong, Dongmin, and Hao, Ying, 2014 "Corporate Transparency and Stock Price Volatility", Financial Studies, Vol. 10.

[13] Ye Kangtao, Dong Xueyan, and Cui Yijing, 2015 "Corporate Strategic Positioning and Behavioural Choice of Accounting Surplus Management", Accounting Research, Vol. 10.

[14] Yi, Zhihong, Yang, Shengzhi, and Chen, Chin-Yuan, 2019 "Can Analysts Reduce Stock Price Synchronicity - An Empirical Study Based on Textual Analysis of Research Reports".

[15] Zhu Hongjun, He Xianjie and Tao Lin, 2007 "Can Securities Analysts in China Improve the Efficiency of Capital Markets - Empirical Evidence Based on Stock Price synchronicity and Stock Price Information Content", Financial Studies, Vol. 2.

[16] Jing Zhang and Yanzhao Zhang, 2021 "The Degree of Corporate Strategic Differentiation and Financing Constraints - A Study Based on the Perspective of Information Asymmetry", Journal of Beijing Technology and Business University (Social Science Edition), Vol. 2.

[17] Badertscher B, Shroff N, White H D., 2013, "Externalities of public firm presence: evidence from private firms' investment decisions ", Journal of Financial Economics, 109(3): 682-706.

[18] Bonsall IV, S. B., Z. Bozanic, and P. E. Fischer, 2013, "What Do Management Earnings Forecasts Convey about the Macroeconomy" , Journal of Accounting Research, 51(2):225-266.

[19] Chiu P C, Teoh S H, Tian F., 2013, "Board interlocks and earnings management contagion", The Accounting Review, 88(3): 915- 944.

[20] Dasgupta S, Gan J, Gao N., 2008, "Does lower R2 mean more informative stock prices? Theory and evidence", Journal of Financial and Quantitative Analysis.

[21] Durnev A, Morck R, Yeung B, et al. ,2003, "Does greater firm-specific return variation mean more or less informed stock pricing?", Journal of Accounting Research, 41(5): 797-836.

ISSN: 2688-9323

[22] Durnev, A., and C. Mangen., 2020, "The Spillover Effects of MD&A Disclosures for Real Investment:The Role of Industry Competition ", Journal of Accounting and Economics, 70(1):10 1299.

[23] Hutton A P,Marcus A J,Tehranian H., 2009, "Opaque financial reports,R2 ,and crash risk", Journal of financial Economics, 94(1):67-86.

[24] Hou K, Xiong W, Peng L., 2006, "R2 and price inefficiency", Fisher College of Business Working Paper, (03): 007.

[25] Kelly P J. , 2014, "Information efficiency and firm-specific return variation", The Quarterly Journal of Finance, (04). 1450018.

[26] Marvin B. Lieberman, Shigeru Asaba, 2006, "Why do firms imitate each other?", The Academy of Management Review, (2):366 -385 .

[27] McNichols, M., and S. Stubben, 2015, "The Effect of Target-Firm Accounting Quality on Valuation in Acquisitions", Review of Accounting Studies, 20(1): 110-140.

[28] Roll, R., 1988, "R2 ", Journal of Finance, 43: 541-566.

[29] Skaife H A, Gassen J, LaFond R., 2006, "Does stock price synchronicity represent firm-specific information? The international evidence ", papers.ssrn.com.