

# VALUATION EFFECT OF CORPORATE NAME CHANGE IN CHINESE TECHNOLOGY STOCKS

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## **Description**

Each year, hundreds of firms change names in China. A firm's name is considered an intangible asset, representing a firm's reputation and can be traded. While there are many legitimate reasons why a firm changes its name, there are also cases where name change is more of a trend-riding strategy. A corporate name change is an expensive proposition. Hence, one may wonder whether investors truly reward such corporate actions. This study uses an event-study methodology to examine the short-term valuation effect of corporate name changes for China technology stocks. Our data consists of all technology companies listed in the Shenzhen stock exchange and Shanghai stock exchange that have changed names between January 1st, 2014 and December 31st, 2018. We classify the nature of name changes into the concept- vs.

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non-concept related name changes and strategic- vs. cosmetic name changes. In addition to the nature of name change, we also examine the effect of market sentiment on the name change of technology companies' values. Our findings reveal that firms with concept-related name changes and strategic name changes generate significantly positive cumulative abnormal returns on the announcement date, but the same outcomes cannot be achieved in the pre- and post-event periods. Our results further show that investors of Chinese tech stocks are not influenced by their sentiment, suggesting that investors are bounded rational in China.

## **1. Introduction**

Over the past few months of the Covid-19 pandemic crisis, companies are scrambling to file for a change of subsidiaries' names to include buzzwords related to the hottest market trend such as "bio" or "biotech." A firm's name change is not uncommon in the corporate landscape. A firm's name is considered an intangible asset, representing a firm's reputation and can be traded. The firm's name reflects a firm's identity, which is used to transmit information about its prospects to investors or is viewed as a signal for its future development and plans (Karim & Bicha, 2011). A corporate name change can be either structural, indicating the firm's change of ownership or matching the change of the firm's business lines, or a pure name change. Kashmiri and Mahajan (2015) document that name changes help firms improve their inherent value and signaling value. A firm's name change is an expensive proposition. It can lead to hefty tangible costs and intangible costs, such as legal payment, advertisement spending, reputation, and goodwill. Therefore, we naturally expect firms to change names only when it can lead to shareholders' value creation.

The valuation effect of name change is defined as a positive market reaction to the name change announcement. Ideally, managers take specific corporate actions only if it results in increased shareholder's value. There are many legitimate reasons why firm changes name, including major asset restructuring, changes in controlling shareholders, leading business changes, and name changes compelled by regulation. There are also less common cases where managers change the corporate names to cope with the market conditions, such as attempting to associate the firm with the current hot industries. Since name change is an expensive corporate exercise, it is worth investigating how investors respond to firms' decisions to such a corporate action. Several studies have focused on examining whether a relationship exists between a name change and its nature and the relationship between a name change's valuation effect and firms' past performance. However, few have focused on the relationship between the name change's valuation effect and market sentiment. Besides, most studies focus on the developed markets, but how investors in the emerging market respond to name change may differ from developed markets. This study aims to fill these gaps by examining whether a name change is associated with abnormal returns

for the China A-share market and explore how the characteristics associated with name change affect the abnormal returns.

Name change of listed companies is a common phenomenon in the Chinese A-share market. However, studies in this area are scant for the market. We select the China market, and the technology industry in particular, for the following reasons. Due to the high growth and high earnings, technology stocks have always been the investors' focal point. The increased attention in technology stocks is particularly evident during the current pandemic crisis. Secondly, the ongoing intensified China-US trade war targets the technology industry, reshaping the worldwide suppliers of telecommunications networks, and directly affecting the sector's capital flow. Kwan, Ito, Kojima, McKenzie, and Urata (2020) suggest that a trade war would negatively impact global trade, investment, and economic growth. Currently, both China and the US impose regulations and policies to protect the domestic technology sector, pushing the tech sector into the global spotlight. Thirdly, China's stock market is dominated by individual investors. This market structure makes it more vulnerable to stock price manipulation when firm shores up share price by taking corporate actions unrelated to the fundamentals. In such an environment, Baker and Wurgler (2007) argue that the demand for speculative securities would be higher, and speculative stocks are expected to have a higher return when investor sentiment ups. For the above reasons, we are convinced that the China technology industry presents a suitable platform to investigate the issue, that is, how investors respond to firms' decisions to change names.

This study adds to the limited evidence of emerging markets in several ways. First, it investigates whether investors of Chinese technology stock are subjected to market sentiment. Second, the study examines whether the investor behaviors differ when facing different types of name change, and third, whether firms can deceive investors through name changes without structural changes, that is, a pure name change.

Firms transmit valuable information, such as the reason for a name change, in and around the announcement date. The existing literature reported mixed evidence of the valuation effect of a name change. Typically, three scenarios are observed following a corporate name change announcement: positive impact (Kot, 2011; Karim & Bicha, 2011; Henk, Nick & Liping, 2011), adverse impacts (Asyngier, 2018), or an absence of a significant effect (Lin, Fok, Yang & Chang, 2016). Following the rationality perspective, the valuation effect should be positively significant in the event date. In contrast, Baker and Wurgler (2007) suggest that individual investors can overreact or underreact to companies due to their irrational psychology, such as overconfidence, representativeness, and conservatism, resulting in the mispricing in the stock market.

Some studies focus on how the valuation effect differs for different types of name change, such as a major name change, a minor name change, an addition type of name change, or a deletion kind of name change. It is documented that the major name change, which means changing the whole name, results in a firm earning a higher abnormal return as it passes on stronger signals to investors. This finding contrasts with a minor name change (Khorana, Cooper, Patel, Rau & Osobov, 2003; Kot, 2011). In China,

stocks are commonly yet uniquely classified into various concepts based on firms' businesses. Therefore, this study adopts a concept-related classification system. In this context, we define hot concept stocks as those that receive intense attention from investors. We hypothesize that hot stocks have a higher chance of being overvalued. Due to investors' limited attention to securities, the firms whose names contain concept terms may be more likely to receive investors' attention (Jiang, 2016). It is likely that managers take advantage of this investor behavior, change the stock name in a grandstanding way to lure less-informed investors into buying the stocks.

A firm name can be considered an intangible asset whose value depends on the firm's future income. Several studies examine the relationship between the drivers of a name change and cumulative abnormal return. Kashmiri and Mahajan (2015) and Biktimirov and Durrani (2017) document that the perceived reasons for a firm name change influence its value. Wu (2010) reports that firm name change indicates the subsequent change in businesses. We also classify the name change into a strategic name change versus cosmetic name change in addition to market sentiment. Our result reports the presence of significant positive abnormal returns only for strategic name changes.

Many reasons were advanced to explain the drivers of a corporate name change. Two broad theories underlying the motivations are signaling theory and behavioral finance. The signaling perspective claims that firms use the name change to transmit information to investors, such as changes in the company structure and leading businesses. Behavioral finance theorists contend that managers exploit investors' irrational behavior to push up stock prices and attract investors' attention by changing names. This irrationality perspective explains the valuation effect of cosmetic name changes. It is likely that as investors are influenced by cosmetic changes as managers rationally time the firm's actions to take advantage of investor behavioral biases (Gupta & Aggarwal, 2014; Khorana, Cooper, Patel, Rau & Osobov, 2003).

This study contributes to the limited empirical literature by examining the effect of a name change within the Chinese stock market framework. This remaining of the paper is organized as follows. We discuss the sample selection process and methodology in the next section. Empirical results are discussed in Section 3. We then present the discussion and implications of our findings, and the last section concludes.

## **2. Data and Methodology**

### **2.1. Data**

This study's sample data consists of all technology companies listed in the Shenzhen stock exchange and Shanghai stock exchange that have changed names between January 1<sup>st</sup>, 2014 and December 31<sup>st</sup>, 2018. Since the technology industry is a general term for several industries related to science and technology, which contain more than one industry, this study chooses several industries based on a technology-related index. For instance, since CSI Technology Top Index contains the computing industry, the computing industry is included in this study. Thus, the technology industry consists of

the following sub-industries - electronic component industry, computing industry, communication industry, pharmaceutical industry, and aerospace industry. To construct the sample, we first use the RESSET database to identify the technology industry companies that have changed names between 2014 and 2018. Our initial dataset consists of 196 name change announcements. Next, we use Eastmoney Choice Database to collect firms' former names and data for other variables. The reasons for name changes are collected from firms' official announcement documents.

**Table 1: Descriptions of Sample Selection**

<b>Sample Selection</b>	<b>Number of Firms</b>
Original Sample	196
Less Regulation	(70)
Less Confounding Events	(72)
Less Missing Data and Outliers	(17)
<b>Final Sample</b>	<b>33</b>

Table 1 summarizes the sample selection of this study. The study first filtered out name changes required by the government (denote as passive name change hereafter). Secondly, we removed the firms that have announced some confounding events five days before and five days after (-5, +5), the announcement date  $t$ . The confounding events include earnings and dividend announcements, mergers or acquisitions, and operational and capital restructuring. This study defines the announcement date  $t$  as when shareholders vote on the proposed name change or the meeting date at which shareholders approved the name change. If event dates fall on the weekend, then the next trading day is used as the announcement date. Firms that did not trade from  $t-1$  to  $t+1$  relative to the announcement date are excluded. The study also excluded 17 firms due to missing data. The final sample pool consists of 33 firms.

## 2.2. Event Study Methodology

This study uses the event study methodology and focuses on short-term cumulative abnormal return (CAR). It uses the method of Lin, Yang, and Chang (2016) to calculate CAR. First, the capital asset pricing model (CAPM) is used to estimate  $\alpha_i$  and  $\beta_i$ , given the market return  $R_{m,t}$  and stock return  $R_{i,t}$  at time  $t$ :

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t}$$

where  $R_{i,t}$  is the return for security  $i$  on day  $t$ , and  $R_{m,t}$  is the market return using SZSE Tech Index with the estimation period from (-120, -16). Then this study computes the abnormal return (AR) for security  $i$ :

$$AR_{i,t} = R_{i,t} - \alpha_i - \beta_i R_{m,t}$$

Where  $\alpha_i - \beta_i R_{m,t}$  is the stocks' expected return. Then this study computes the mean  $CAR_i$  for security  $i$  for the event windows from  $t = j$  to  $t = k$ :

$$CAR_i = \sum_{t=j}^k \overline{AR_{i,t}}$$

This study conducts multivariate regression analysis and uses student t-test to examine hypotheses. We use three-event periods for subsequent investigations. These include the pre-event period from  $t-5$  to  $t-1$ , event day from  $t-1$  to  $t+1$ , and post-event period from  $t+1$  to  $t+5$ . The  $[-5, -1]$  window is included to investigate information leakage before announcement day. The  $[-1, 1]$  window is designed to examine if investors react immediately to the announcement, and the  $[1, 5]$  window is imposed on accessing the investor's short-run reaction after the announcement. Karim and Bicha (2011) document that CAR for the post-event period could be positive due to investors' delayed response to collect more information regarding the firms' economic potential or need time to make a complex analysis.

### 2.3. Regression Model

This section examines the effect of the name change's nature and turnover on cumulative abnormal return (CAR). The name change natures are either classified as a concept- versus non-concept name change or a strategic versus cosmetic name change. The relationship is controlled for information asymmetry as represented by a firm's age and size, past performances as proxied by return on asset (ROA), and Tobin's Q. The equation is shown below.

$$CAR = \alpha_1 + \beta_1 Concept + \beta_2 Turnover + \beta_3 Strategic + \beta_4 Age + \beta_5 Size + \beta_6 ROA + \beta_7 Tobin's Q + \varepsilon_1$$

#### *Explanations of variables*

- *Concept*: Concept is a generic term for a class of stocks with common characteristics. This stock classification is unique in China. For illustration, network concept stocks refer to the companies involved in the information network industry. Hot concepts will change based on the market and societal developments over time. Investors can easily and quickly locate different kinds of concept stocks grouped under various specific categories in apps. Besides, investors usually choose stocks from the preferred concept group, and concept stocks always enjoy

favorable advertising effects. A stock in itself may not be too attractive, but investors will closely follow it once it is incorporated into a concept. Therefore, under an irrationality perspective, investors may overreact to the firm name changes when the new names contain concept terms. We divide the sample into new names that contain concept terms and those that do not. Concept variable equals 1 for concept related name change, 0 if otherwise.

- *Turnover*: Turnover is used to measure liquidity, thus a proxy for the market sentiment (Baker & Stein, 2004). Turnover is measured as the SZSE Tech Index's average turnover in a firm's trading period [-35, -6].
- *Strategic*: This control variable differentiates the strategic name change from the cosmetic name change. When name changes were accompanied by strategic reasons such as a change of business model, restructuring, mergers or acquisitions, diversification or expansion, or reputation reason, it is treated as a strategic change. When there were no such reasons associated with the name change, it is regarded as a cosmetic change. For a strategic name change, the dummy variable is 1, and 0 if otherwise.

It is well documented that information asymmetry leads to abnormal stock prices. As more pronounced information asymmetry denotes greater firm-specific risk, the effect must be eliminated. Chae (2001) uses firm size to measure information asymmetry and find that the smaller the firm size, the greater the asymmetry. Wu (2010) measures information asymmetry using firms' age since IPO and trading activities, documenting more significant asymmetry for younger firms. Following the studies, we use a firm's age and size to measure information asymmetry. In addition to information asymmetry, we also control for a firm's prior performance, as firms with poor past performance are more likely to outperform, resulting in higher abnormal returns. We use return on asset (ROA) and Tobin's Q to proxy for past performances.

#### *Control Variables*

- *Information Asymmetry*: We measure information asymmetry using the age and size of the firm. Age is the number of days between the firm's IPO and name change announcement date, and size is measured as the natural logarithm of the firm's total assets in the year to name change.
- *Past Performance*: Past performance is measured using ROA and Tobin's Q. ROA is the ratio of firm return to total asset in year period to name change. Tobin's Q is the firm's market value ratio to total asset in the year prior to name change.

### **3. Empirical Results**

This study conducts multivariate regression analyses to test all hypotheses. We control for the potential effects of information asymmetry and past performance using firms' ROA, Tobin's Q, size, and age. The SZSE Tech Index's turnover is used to proxy for

technology-related market sentiment. The higher the investor sentiment, the greater the turnover. Table 2 illustrates the descriptive statistics and correlation coefficients for all common measures in the regression model. Excluding the correlation between size and Tobin's Q, and between concept and CAR[-5,-1], all pair-wise correlations are lower than the benchmark of 0.5. For the three models examined, all of the variance inflation factors are less than the benchmark of 10.

**Table 2: Descriptive Statistics**

	Mean	SD.	1	2	3	4	5	6	7	8	9	10
1 CAR[-5, -1]	0.0070	0.0100	1									
2 CAR[-1, 1]	0.0031	0.0125	-0.31*	1								
3 CAR[1, 5]	-0.0031	0.0117	-0.06	-0.03	1							
4 Concept	0.2121	0.4151	0.51***	0.28	0.12	1						
5 Strategic	0.6363	0.4885	0.41**	0.02	-0.24	0.08	1					
6 Turnover	0.0202	0.0082	-0.09	0.16	-0.44***	0.03	-0.31*	1				
7 Age	4420.9	2379.3	0.15	0.13	0.10	-0.05	0.14	-0.07	1			
8 ROA	2.2638	3.6665	-0.31*	-0.23	-0.36**	-0.09	-0.38**	0.04	0.00	1		
9 Size	21.722	0.9320	0.07	-0.12	-0.08	0.14	-0.00	0.26	0.07	0.11	1	
10 Tobin's Q	3.2932	2.3806	-0.05	-0.09	-0.08	-0.13	-0.00	0.02	0.01	-0.02	-0.61***	1

Notes: \*\*\*, \*\* and \* indicate the coefficient is significant at 1%, 5%, and 10% levels, respectively.

**Table 3: Result of OLS Regression with Cumulative Abnormal Return (CAR) on Three Event Periods**

	[-5, -1]	[-1, 1]	[1, 5]
C	0.0468 (0.9470)	-0.0121 (-0.2523)	0.0733 (1.0574)
Turnover	-0.7411*** (-3.604)	0.0748 (0.3748)	0.3069 (1.0644)
Concept	0.0050 (1.3133)	0.0115*** (3.1110)	0.0082 (1.5375)
Strategic	-0.0143*** (-4.0313)	0.0063* (1.8330)	-0.0015 (-0.3139)
ROA	-0.0012** (-2.6737)	-0.0004 (-1.0098)	-0.0009 (-1.3531)
Size	-0.0013 (-0.5991)	0.0004 (0.2018)	-0.0034 (-1.1412)
Tobin's Q	0.0002 (0.2629)	0.0001 (0.1730)	-0.0012 (-1.0287)
Age	8.13E-07 (1.2300)	5.73E-07 (0.8927)	9.79E-07 (1.0564)



*Notes: T statistics are reported in parentheses. \*\*\*, \*\* and \* indicate the coefficient is significant at 1%, 5%, and 10% levels, respectively, using a two-tail test.*

Table 3 depicts multivariate regression results with cumulative abnormal return on three event periods as independent variables. We find that for the firm's name changes with higher turnover, the abnormal returns are not significant on the event date and post-event periods but negatively significant in the pre-event period. According to the efficient market perspective, this result suggests that investors in the Chinese technology market are not influenced by sentiment. Instead, they behave rationally. Tech firms cannot generate positive abnormal returns through timing the name changes when investor sentiment is high.

Also, containing concept term in new name produce significant CARs on the event day. However, non-significant CARs are observed for the pre-event and post-event periods. The result is consistent with that in Jiang (2016), who finds positively significant CAR for firms name changes that involve concept terms in their new names in the Chinese market. The finding can be explained with the irrationality perspective in that investors are more likely to be attracted to, and overprice firms that contain concept terms in their names. It follows that managers can associate firms with hot industries to attract investors' attention by containing concept terms in new names, resulting in a valuation effect. This finding lends support to the investor's limited attention conjecture, which suggests that investors cannot fully digest and understand the information, and they only pay attention to the more obvious information.

Finally, we found that the CAR for firms with the strategic name change is positively significant on the event day, negatively significant in the pre-event period, but not significant in the post-event period. Investors react immediately and positively to strategic name changes. We posit that China's investors view the name changes rationally, which is slightly surprising, and react to the information efficiently. Moreover, significant abnormal return for strategic name changes indicates that firms enjoy the signaling effect. Firms that experienced structural changes successfully transmit valuable information to investors through name changes. Finally, our findings support the proposition that the motivation behind a firm's name changes would influence the firm's valuation, and thus, price (Kashmiri & Mahajan, 2015).

In summary, the results suggest that investors of China stock market consider the reasons behind the firm's name change rationally, and their sentiment does not their behaviors in a significant way. However, investors are more likely to be attracted by stocks related to hot industries, tech stocks in this case, and overprice firms whose new names involve concept terms.

#### **4. Implications for Stakeholders**

By shedding light on the investors' reactions to name change, this study has important implications for policymakers, corporations that contemplate a name change, and investors. First, the Chinese government can impose stricter rules on a corporate name

change to protect investors' interests. The government can curb unscrupulous name change to lure investors into trading their stocks. This action can help screen out inappropriate name change behavior, thus protecting investors' interest. This study also benefits managers from a decision-making perspective. Our findings show that investors in the Chinese technology stock industry are bounded rational, and firms can generate a positive cumulative return through the structural name change. Therefore, firms can change names when they have a structural basis to do so, but not to change names for cosmetic reasons. Moreover, investors in the Chinese technology stock industry are more likely to be attracted by concept-related name changes and overreact to those name changes. Managers can associate themselves with the hot industry and benefit from investors' limited attention and overreaction through involving concept terms in new names. Last but not least, this study may benefit investors in their investment decision making.

## **5. Conclusion**

This study examines the short-term valuation effect of corporate name changes based on the announcements made during the 2014-2018 period by technology firms listed in the Shanghai stock exchange and Shenzhen stock exchange. We find that investors in the Chinese technology stock market are not swayed by sentiment, which is somewhat unexpected due to its market structure. Secondly, our results further report that concept-related name change is more appealing to investors, as compared to non-concept related name change. Moreover, firms with strategic name change experience significant valuation effects on the event day. There are several limitations to our study. First, the sample size is small after the filtering procedures. Second, this study focuses on the Chinese technology industry, and hence, the results do not necessarily reflect the characteristics of the entire Chinese stock market. Hence, future research can include broader coverage and examine the valuation effect of name change in the longer run.

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