



# Effect of Financial Reporting Quality on the Cost of Capital and Investment in China

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**Abstract.** Financial reporting helps reduce information asymmetry between external personnel and the internal members of the company. A high-quality financial reporting can help people better understand the company's business operations and financial performance and make the best investment decisions. Since the financial reports in the U.S. can reduce the cost of capital, the purpose of this paper is to look for the possibility that any financial reporting could have effects on Chinese companies. The data samples in this paper include thirty listed Chinese companies from 2000 to 2020. By comparing these Chinese companies' data, the statistics show that high-quality financial reporting could not reduce the cost of capital or bring more investment income to Chinese companies. This result may be due to language barriers and different investment habits. Moreover, the auditing system and reporting standards may vary for different listed companies in Asia and Europe. This paper will further analyze why the conclusion drawn from the U.S. companies' data may not apply to Chinese companies. In conclusion, using the initial public offering of equity securities (IPO), research, and analysis, financial statements have little impact on the cost of capital and investments. Also, due to the information asymmetry and different writers of prospectuses, the result from U.S. companies may not be applicable to Chinese businesses.

**Keywords:** Financial Reporting Quality, Cost of Capital, Investment

## 1 Introduction

The quality of financial reporting has a significant impact on the firm's cost of capital and investment opportunities. Financial reporting is commonly used in the business industry as a procedure of recording a company's financial operations throughout certain time periods. The users of financial reporting are often classified into two

categories: internal and external. Internal users, including firm managers and board of directors, typically show banks their financial performance and profitability through those reports so that they can receive more funds. Since the financial reporting gives people in-depth insights into financial information of the company, external users, including individual investors and banks, can use it as a measure for whether to invest in the company. However, some companies may provide less-than-complete disclosure because they want to cover up the unhealthy financial performance. Those fraudulent reports will deliver some false information and lead to some unadvisable investing decisions.

We can see from U.S. companies' data that disclosure could help companies use less cost of capital in financial activities. For example, disclosures should state the correct account of the taxes that a company needs to pay. Therefore, if a business fails to disclose, it can evade taxes and retain more income. Under this circumstance, many companies falsify disclosures and financial statements to reduce the cost of capital.

Theoretically, high-quality financial statements could provide investors with the most critical information to understand a company's business performance. For instance, annual financial statements clearly outline yearly returns change in assets and liabilities, and operating cash flows of a company. According to this information, individual investors could know whether the company has earned more or less profit within a fiscal year. Thus, high-quality financial disclosures with more accurate information will help improve market efficiency, that is, reduce information asymmetry between company management and capital market participants. As such, the quality of financial statements can have a significant impact on investors' expectations of a company's future business.

## **2 Factors that weaken the impact of disclosure**

Cultural differences may bring about huge information asymmetry. In the United States, new shares are issued under the registration-based IPO system, which means that the stock market is essentially an information-based trading market with information asymmetry. Companies could reduce information asymmetry by improving the quality of voluntary disclosure and thus reduce the cost of capital. However, for Chinese companies listed in the United States, investors lack other sources of information, such as advertising, so that they can just rely on information disclosed in the IPO. Regional, language and cultural differences, as well as investors' inadequate understanding of the Chinese institutional environment, may affect investors' interpretation of information. These factors may lead to more serious information asymmetry that cannot be solved by sufficient disclosure.

The standards for disclosure are loose, and more detailed information is voluntarily disclosed by companies. Companies listed in the United States comply with the I.F.R.S. standards that stipulate only broad rules rather than specific business practices. Comparing IPOs of different companies, we can see that U.S. companies disclose risk factors more clearly than Chinese companies. The differences may be caused by the degree of regulation or people who wrote the prospectus. A considerable part of American

prospectuses are written by lawyers, while most Chinese prospectuses are mainly written by securities brokers. The difference in professional background and stand is also an important reason for the huge difference in risk disclosure between Chinese and American prospectuses.

Reputation also has a significant impact on the cost of capital, reducing the influence of information disclosure quality. Since 2010, many small and medium-sized enterprises have been found to have accounting fraud, distortion of information disclosure and other problems, which damaged the collective reputation of Chinese companies. For a period of time, Chinese companies gained abundant operating space in financial reporting because of conflicts and loopholes in U.S. and Chinese securities regulatory laws. Many of the issues ultimately lead to a crisis of confidence that fraudulent company's share price suffered a disastrous decline while other Chinese companies listed in the United States were also implicated. The scandals of individual companies have shaken investors' confidence in all Chinese companies listed in the U.S.. The decline in reputation has affected the IPO pricing which in turn has affected the cost of capital.

### **3 Effect of financial reporting quality on the investment**

This paper mainly discusses the relationship between the cost of capital and the quality of financial reporting. The first topic is the method to measure the quality of disclosure. So far, there is no uniform standard to measure the quality of disclosure, therefore many scholars choose to measure information disclosure with alternative variables such as the amount of information disclosed and price [1]. We comprehensively evaluate the disclosure quality using some related metrics set in (Leone, 2005) [2, 3].

We calculate the cost of capital using the price difference. We define the price difference as subtracting the offering price from closing price on the first day of trading. As our analysis mainly uses the IPO data of Chinese companies listed in the United States, we focus on the price data on the day of issue. Using this method of calculation can reduce the impacts brought by people's reaction to other additional messages.

#### **3.1 Sample**

As of June 2022, there are 298 Chinese companies listed in the United States. We select 30 companies with higher total market value as the information of these companies is more comprehensive, more standardized and more representative.

In this paper we only investigate Chinese companies listed in the United States. Due to insufficient samples, we ignore the influence of time-related factors. Similarly, differences in industry characteristics are not discussed. Companies we selected are mainly in industries that will not be adversely affected by high quality disclosure such as Internet, healthcare and energy. Although this statistical method may introduce some inaccuracies, we believe it has little impact on conclusion.

### 3.2 Statistics

We obtained the information in Table 1 from the IPO data on the official website and Yahoo finance. For the sample of 31 companies, descriptive statistics are given in Table 1.

Pricing difference = Difference between the closing price on the first day of trading and the offering price

Proceeds = Gross proceeds from IPO in billions

Assets = Pre-IPO total assets in thousands

Age = Years from founding or incorporation, if founding date is unavailable, to IPO

NYSEAMEX = One if stock is listed on the NYSE or AMEX and zero otherwise

Risk Factors = Level of detail in the company's description of its risks [4]

HighTech = One if a high technology company such as Internet, healthcare and energy and zero otherwise.

Big 6 = One if a Big 6 audit firm and zero otherwise

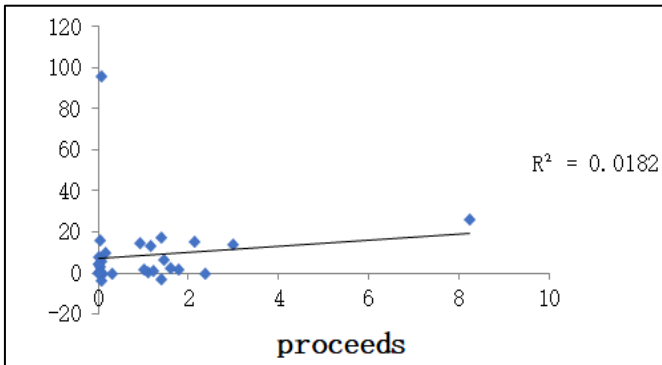
**Table 1.** Descriptive Statistics

		Total	1st Quartile	2nd Quartile	3rd Quartile	4th Quartile
Price	Mean	18.4	8.781	14.875	18.929	32.893
	Median	17	10.25	15	19	24.25
Price difference	Mean	8.476	3.196	3.181	8.177	20.859
	Median	2.870	0.375	2.120	9.930	4.320
Proceeds	Mean	0.99465	0.375625	0.80525	1.1439	1.7694
	Median	0.221	0.0605	0.6245	1.4000	0.0800
Assets	Mean	2204308.27	743851.88	1000500.38	2700317.86	4753172.14
	Median	596627	555121.5	281278	1592293	1450828
Age	Mean	11.9	9.375	12.5	12.57143	13.42857
	Median	10	10	11	10	12
NYSEAMEX	Mean	0.667	0.625	0.75	0.714286	0.571429
	Median	1	1	1	1	1
Risk Factors	Mean	6.067	7	5.375	6.86	5
	Median	7	7.5	5.5	8.00	5
HighTech	Mean	0.63	0.75	0.75	0.285714	0.714286
	Median	1	1	1	0	1
Big6	Mean	1	1	1	1	1
	Median	1	1	1	1	1

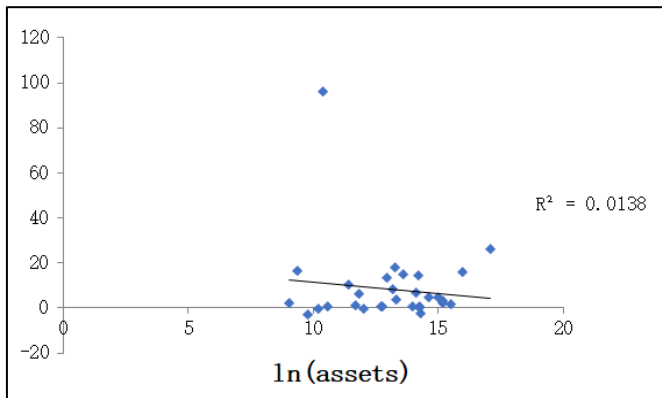
Note: Pricing = Target price in the statement

As shown in Table 1, this research selected some specific indicators to be added to the descriptive statistics as quantitative indicators of the company and the capital. We focused on the time from company establishment to going public because we wanted to understand the impact of the length of preparation time for going public on our research. The other is the choice of listed companies for the listed exchanges. According to our survey, most companies choose Nasdaq/NYSE as the two top markets, but the

possibility of some companies trading in OTCBB cannot be ruled out. We also looked at risk factor levels, which in this case are the number of warnings companies make about their risks, and we graded them. However, it does not mean that the less the risk factors are suggested, the less the risk of the company itself will be. It may also be caused by the low quality of disclosure. Finally, it can be clearly seen from table 1 that each company we investigate chooses six major accounting firms as audit institutions to add authority. Therefore, it can be seen that Chinese companies listed in the United States attach great importance to the authority of audit institutions.



**Fig. 1.** Scatter diagram of Proceeds



**Fig. 2.** Scatter diagram of Assets

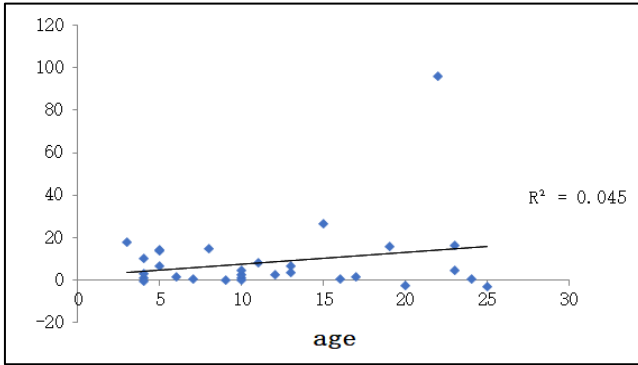


Fig. 3. Scatter diagram of Age

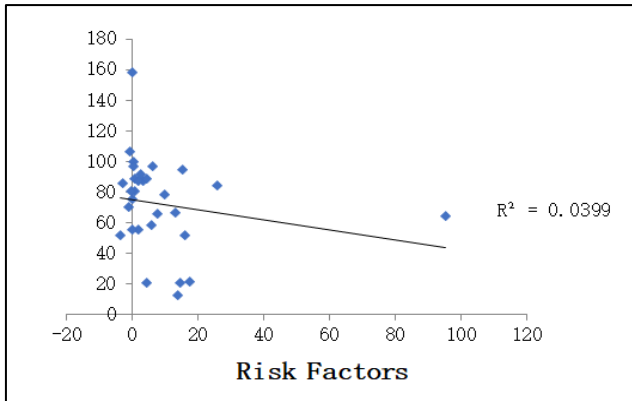


Fig. 4. Scatter diagram of Risk Factors

Taking price difference as the vertical axis, proceeds, assets, age and risk factors as the horizontal axis, we make the above four scatter diagrams to observe the relationship between each variable and price difference. As seen in the statistics, the correlation between the price difference and the data related to the quality of financial reporting is very poor. Attempts at linear regression of stock price spreads to assets, proceeds, age and risk factors yield minuscule R-squared values. Some possible reasons such as the differences between Chinese and U.S. investment markets draw to the result. (Figure 1-4)

#### 4 Cost of equity capital

A dividend growth model was used to measure the cost of equity capital, calculated as follows:

*Cost of equity capital = Expected annual dividend / market price of common stock \* (1 - expense ratio) + annual dividend growth rate of common*

**stock****Alternative:****Price difference=closing price on the first day of trading - offering price**

First consideration when we were in a measure of the cost of financing is the CAPM model, but in our from the selected in the IPO prospectus for dividend policy of listed company, found that when we choose the 30 companies in the IPO to release the information of the company doesn't have any plan after this offering for the foreseeable future pay any cash dividends to the company's common stock. Future dividend payments are at the discretion of the Board of Directors. Therefore, we cannot use the CAPM model to calculate, because these companies do not issue dividend data in the IPO prospectus. Therefore, according to the particularity of the newly listed company, we choose another way to estimate its financing cost. Although this way is not particularly accurate, it can roughly explain the financing cost of the company issuing shares. We did this by subtracting each company's offering price from its closing price on the first day of trading. Because these price changes are a response to as few messages as possible, the effect of additional messages on prices can be ignored. We also show these data in Table 2.

**Table 2.** Price difference of each company

<b>Company Name</b>	<b>Price difference</b>
Baidu, Inc. (BIDU)	95.54
Alibaba Group Holding Limited (BABA)	25.89
RLX Technology Inc. (RLX)	17.51
Trip.com Group Limited (TCOM)	15.94
KE Holding Inc. (BEKE)	15.4
Kanzhun Limited (BZ)	14.5
Legend Biotech Corporation (LEGN)	14.00
Autohome Inc. (ATHM)	13.07
Zai Lab Limited (ZLAB)	9.93
Daqo New Energy Corp. (DQ)	7.75
XPeng Inc. (XPEV)	6.22
New Oriental Education & Technology Group Inc. (EDU)	5.88
Yum China Holdings, Inc. (YUMC)	4.32
BeiGene, Ltd. (BGNE)	4.32
Weibo Corporation (WB)	3.24
Full Truck Alliance Co. Ltd. (YMM)	2.50
Huazhu Group Limited (HTHT)	1.94
JD.com, Inc. (JD)	1.90
Tencent Music Entertainment Group (TME)	1.00
JOYY Inc. (YY)	0.81
GDS Holdings Limited (GDS)	0.41
NIO Inc. (NIO)	0.34
Sohu.com Limited (SOHU)	0.06
JinkoSolar Holding Co., Ltd. (JKS)	0.01

TuSimple Holdings Inc. (TSP)	0.00
Bilibili Inc. (BILI)	-0.26
Lufax Holding Ltd (LU)	-0.65
Vipshop Holdings Limited (VIPS)	-1.00
ZTO Express (Cayman) Inc. (ZTO)	-2.93
NetEase, Inc. (NTES)	-3.38

## 5 Possible Reasons

There are several reasons that may cost this not obvious relationship between disclosure quality and reducing the cost of capital. Culture difference may be the biggest reason. As this paper mentioned before, culture difference may cause information asymmetry that will decrease the willingness of investors to invest in the company. Among the cultural differences, there are two aspects that are most influential: Language barriers and Different investment habits.

American investors may not feel comfortable investing in those companies because they are not familiar with these companies and do not have a deep understanding about the risk factor that is disclosed in the prospectus. It's hard for American investors to gather information about Chinese companies when they first enter the market because of the language barrier. Many detailed information and relevant laws that mention the risk factors are written in Chinese, which cause difficulties for individual investors to understand the company and gain confidence to invest in it. The lack of familiarity with the companies and the difficulty of gathering relevant details have resulted in fewer initial investments for Chinese companies listed in the United States.

Another aspect is the difference in investment habits between Chinese investors and American investors. In the old tradition of Chinese culture, people tend to save money rather than invest in the market. According to the data from the internet, over 58% of Americans reported that they own stock in the market in 2022 [5]. However, in 2022, the number of natural person investors in China for the first time reached 200 million marks, which is only 14% of the population [6]. This shows that Chinese people do not like to invest their money in the stock market. Chinese people are more likely to invest a small amount of money in funds because they are less risky. Differences in investment habits mean that Chinese people are less likely to invest in companies from China, even though they are familiar with them.

## 6 Limitations

We have considered that there are some limitations in our paper, mainly in the data related parts. For example, the data we selected were mainly companies with large assets. There may be no exaggerated difference in the financial reporting quality of these companies, thus we failed to find the relationship between disclosure quality and capital cost. In addition, the method of linear regression naturally has some limitations. Our result shows that there is no obvious relationship between variables. However, we



cannot exclude the possibility that they have some kind of complicated relationship.

In the future, we can collect more variables that can reflect the quality of disclosure, and try to use some other models which are more complex and comprehensive to examine the relationship between variables. Collecting data from more companies is another way to make the results more comprehensive. Moreover, whether the investment environment has impacts on the cost of capital and what factors are affected by the disclosure quality are some interesting topics that we can study further.

## 7 Conclusion

In this paper, we discussed the relationship between disclosure quality and decreasing cost of capital. Through a high-quality disclosure of their own company's financial situation and risk factors, Chinese companies hope to gain the affection and investment of investors in the United States, thereby reducing the cost of capital.

In order to examine the quality of disclosure and if there is any relationship between decreasing cost of capital, we selected 30 sample companies that are already listed in the United States and gathered key information about them. After analyzing and modeling the data that is collected, the result shows that the sample companies have pretty high levels of disclosure quality. However, the result also shows that high levels of disclosure quality do not have a significant impact on decreasing the cost of capital.

The current result is based on the impact of high quality disclosure to the decreasing cost of capital. The result shows that even though many Chinese companies bring high quality of disclosure when they enter the stock market, their cost of capital will still not decrease. This may be caused by the great culture difference between China and America which includes language barriers and different investment habits.

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Rongfei Diao, Ziyu Wang, Fang Yuan and Qiwen Zhou contributed equally to this work and should be considered co-first authors. Danqi Liu is the second author.

## References

1. Kim, O., & Verrecchia, R. E. (2001, October). *The relation among disclosure, returns, and trading volume*. - *jstor.org*. The Relation among Disclosure, Returns, and Trading Volume Information. <https://www.jstor.org/stable/3068930>
2. Li, X., & Bai, Y. (2016, September 11). Listing and IPO pricing of Chinese enterprises in the United States - Baidu academic. [https://xueshu.baidu.com/usercenter/paper/show?paperid=e6b13e7d7eee34096a07671cede20fbd&sc\\_from=pingtai4&cmd=paper\\_forward&title=%E4%B8%AD%E5%9B%BD%E4%BC%81%E4%B8%9A%E8%B5%B4%E7%BE%8E%E4%B8%8A%E5%B8%82%E4%B8%8EIPO%E5%AE%9A%E4%BB%B7&wise=0](https://xueshu.baidu.com/usercenter/paper/show?paperid=e6b13e7d7eee34096a07671cede20fbd&sc_from=pingtai4&cmd=paper_forward&title=%E4%B8%AD%E5%9B%BD%E4%BC%81%E4%B8%9A%E8%B5%B4%E7%BE%8E%E4%B8%8A%E5%B8%82%E4%B8%8EIPO%E5%AE%9A%E4%BB%B7&wise=0)

3. Leone, J. A., Rock, S., & Willemborg, M. (2006). Disclosure of Intended Use of Proceeds and Underpricing in Initial Public Offering. *Journal of Accounting Research*, 45(1). <https://doi.org/10.1111/j.1475-679X.2006.00229.x>.
4. Loughran, T., & Ritter, J. (2004). *Jstor Home*. Why Has IPO Underpricing Changed Over Time? <https://www.jstor.org/>
5. Jones, J. M., & Saad, L. (2022, May 12). *What percentage of Americans owns stock?* Gallup.com. <https://news.gallup.com/poll/266807/percentage-americans-owns-stock.aspx>
6. Read and create (2022, April 15). In March, 2.2975 million natural person investors were added, and China's shareholders have exceeded 200million. <https://baijia-hao.baidu.com/s?id=1730175713955490993&wfr=spider&for=pc>

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