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An Assessment of the Environmental Information Disclosure of Listed Companies in Zhejiang Province, China

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Environmental disclosure, corporate environmental management, listed companies

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INTRODUCTION

Statement of the Problem

Launched in February 2008 by the Ministry of Environmental Protection (MED) and the China Securities Regulatory Commission (CSRC), the Green Securities Policy is aimed to enhance the “sustainability of business development” by recommending listed companies to disclose more information regarding their environmental records. (Fugui, Bing & Bing, 2008)

As an essential catalyst for economic transition, the capital market serves an increasingly pivotal role in the economic development of Zhejiang Province. The implementation of the Green Securities Policy provides shareholders with an effective screening mechanism for decision-making and creates a path for improvement in environmental quality. Not only does it mean that companies in pollution-intensive industries involving thermal power, steel and etc. will be under further scrutiny from MED and CSRC when they wish to pursue direct or indirect financing, a more mature environmental information disclosure system can also urge companies to “comply with environmental regulations” in order to achieve better stock market performance. (Liu et al., 2010)

However, a number of problems arise with this environmental policy. For instance, laws and regulations that “govern public access to environmental information” need to be further strengthened to enhance information availability. (Fugui et al., 2008) Moreover, there is still inadequate disclosure of environmental information in many areas. This research aims to

examine the state of information disclosure in Zhejiang as well as its impact on the firm's public market performance.

Scope and Limitations

This research is limited to all 54 firms in Zhejiang Province that have filed CSR or environment-specific disclosure for fiscal year 2014 before August 24th, 2015. The score assigning process is at the author's discretion and may be subjective to bias. Besides, due to the time limit of this study, the sample size cannot be expanded to a national level. As a result, it is difficult to achieve statistical significance in the regression analyses later.

METHODOLOGY

Evaluation Framework for Primary and Secondary Industries

Environmental Awareness and Corporate Culture	15%	Environmental preservation covered in corporate culture	7.5%
		Support of environment-related public welfare	7.5%
Environmental Management	20%	Internal environmental policy	6.7%
		Environmental training	6.7%
		Environmental awards	6.7%
Environmental Performance	40%	Energy	5.7%
		Water resources	5.7%
		Air pollutants	5.7%
		Solid wastes	5.7%
		Noise	5.7%
		Paper	5.7%
		Energy conservation measures	5.7%
Communication with Relevant Parties	25%	Disclosure continuity	5.0%
		Disclosure comparability	5.0%
		Third party verification	5.0%
		Availability of environmental report on official website	5.0%
		Feedback channels	5.0%

Evaluation Framework for Tertiary Industries

Environmental Awareness and Corporate Culture	20%	Environmental preservation covered in corporate culture	10.0%
		Support of environment-related public welfare	10.0%
Environmental Management	25%	Internal environmental policy	8.3%
		Environmental training	8.3%
		Environmental awards	8.3%
Environmental Performance	30%	Energy	4.3%
		Water resources	4.3%
		Air pollutants	4.3%
		Solid wastes	4.3%
		Noise	4.3%
		Paper	4.3%

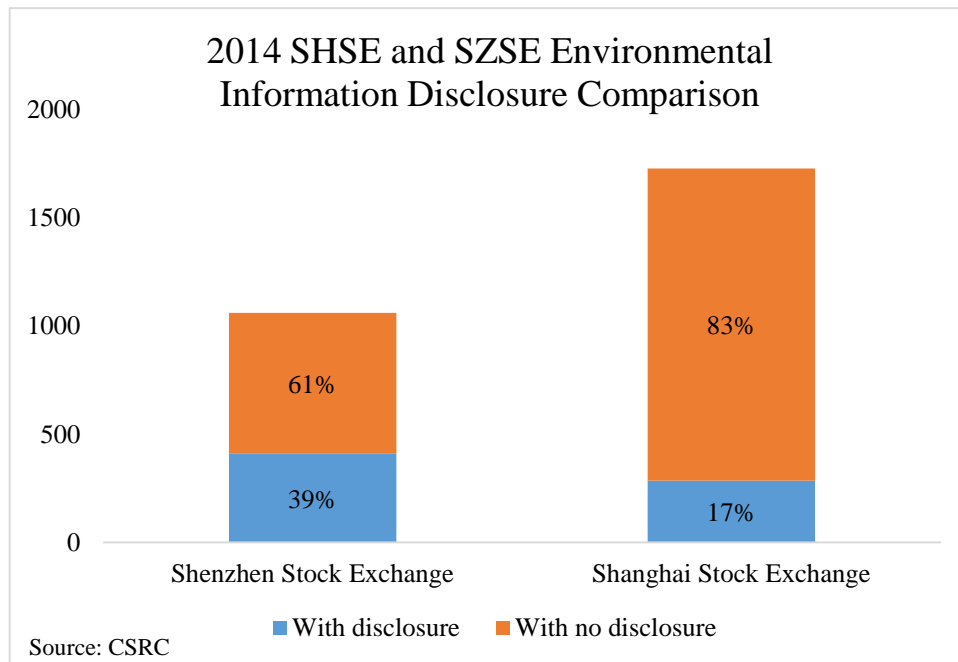
		Energy conservation measures	4.3%
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		Feedback channels	5.0%

This framework builds upon an environmental report evaluation standard established by Qu, Peng, Jiang, and etc. in 2013. The difference between frameworks for different industries lies in the weight of environmental performance, which serves a more critical role for primary and secondary than tertiary industries. Within each sub-category, a percentage score of 0%, 30%, 50%, 70%, and 100% is applied. In the end, the total score is calculated based on the weighted average of each sub-category.

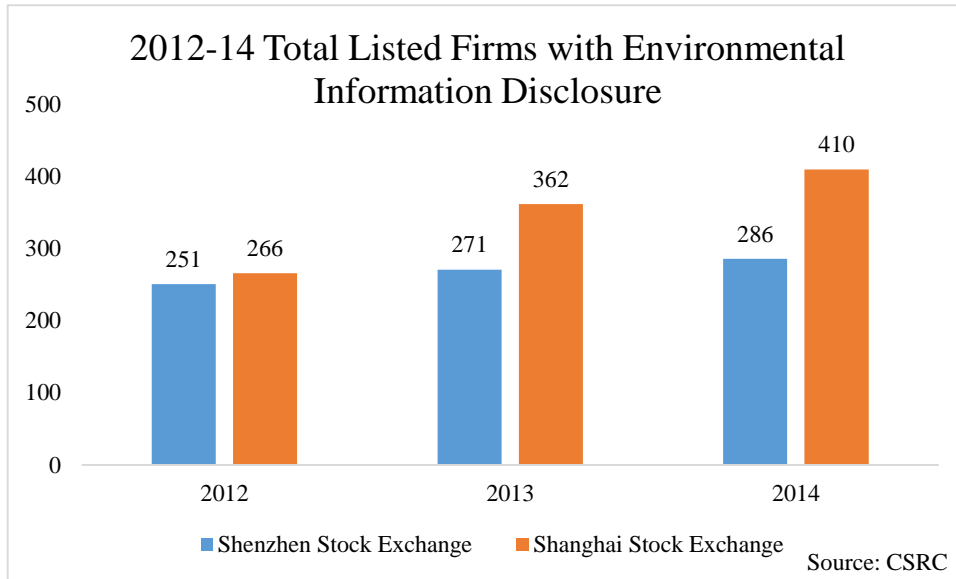
RESULTS & DISCUSSIONS

Environmental Information Disclosure Participation Rate from 2012-2014

I. National Level



The Shanghai Stock Exchange clearly holds more listed firms. However, the smaller capitalization Shenzhen Stock Exchange had a higher disclosure rate in 2014.



Nationally speaking, the number of disclosures climbed from 2,529 to 2,710 from 2012 to 2014. Most of the gain came from the Shanghai Stock Exchange, which saw a 24% compounding annual growth rate in the last 2 years.

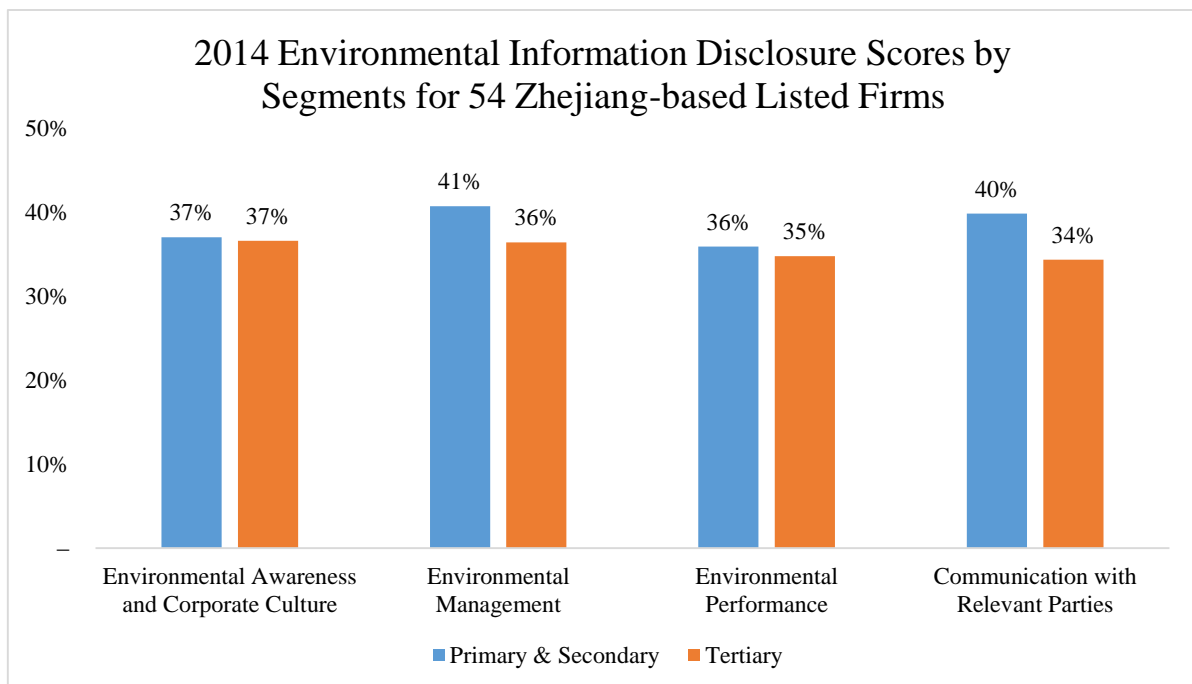
II. Zhejiang Province



The disclosure participation in Zhejiang Province was not on par with national level in the

last 3 years. Out of the 280 listed firms in Zhejiang, only around 20% of them filed CSR or environment-specific disclosure. The participation rate has been stagnant from 2012-2014.

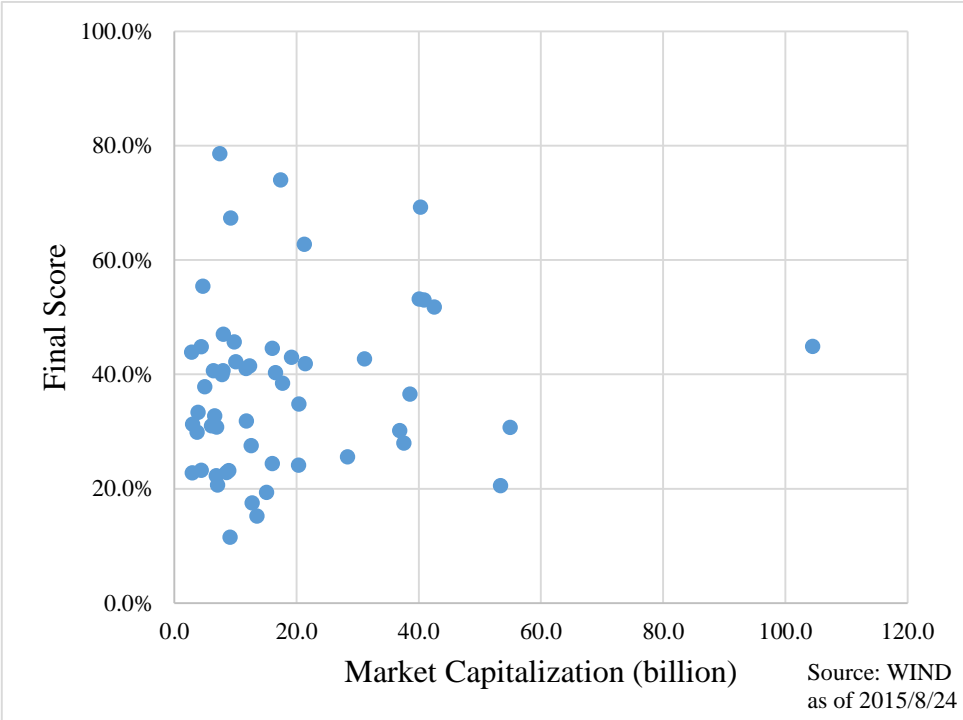
Breakdown Analysis of Environmental Information Disclosure Scores



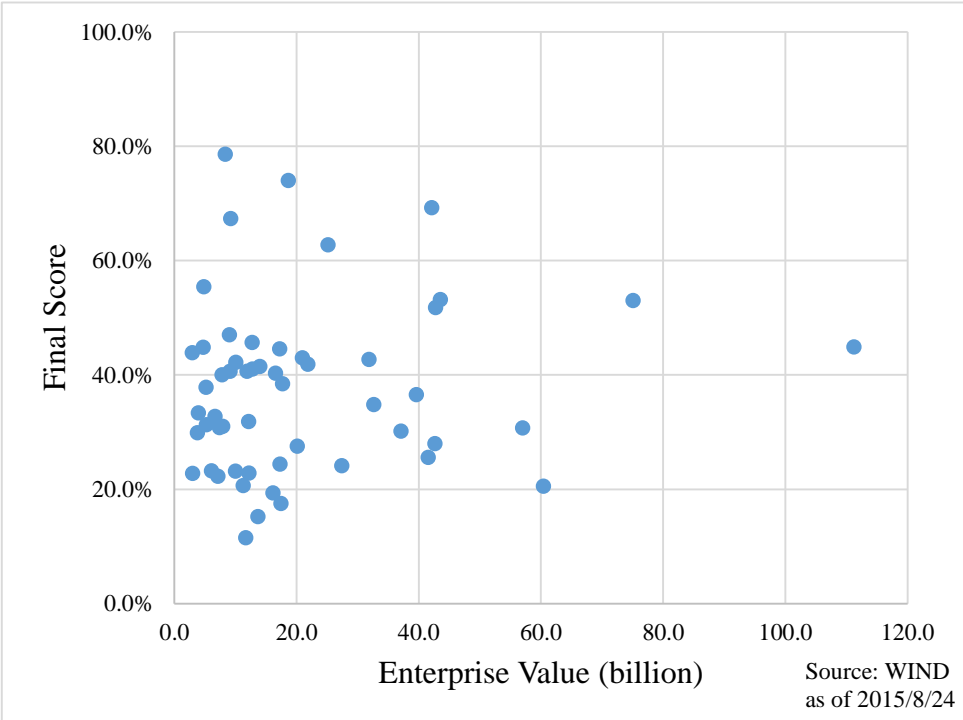
Unsurprising, firms in primary and secondary industries outperformed their counterparts in tertiary industry in almost every category, especially in “communication with relevant parties.” This is mostly due to the stronger public pressure and heightened scrutiny that companies operating in traditional industries face.

Scores on Environmental Information Disclosure in Regard to Financial Metrics

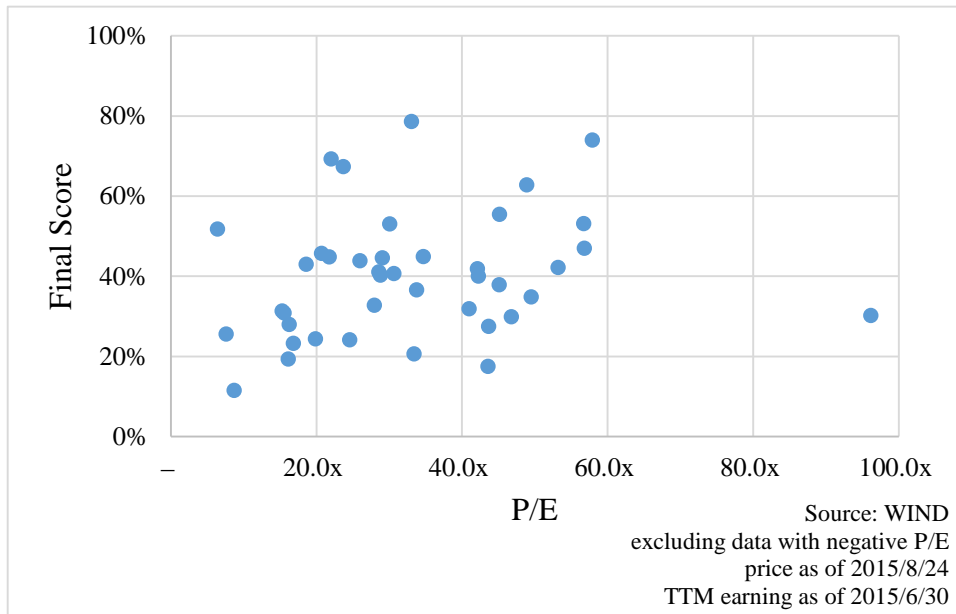
I. Market Capitalization



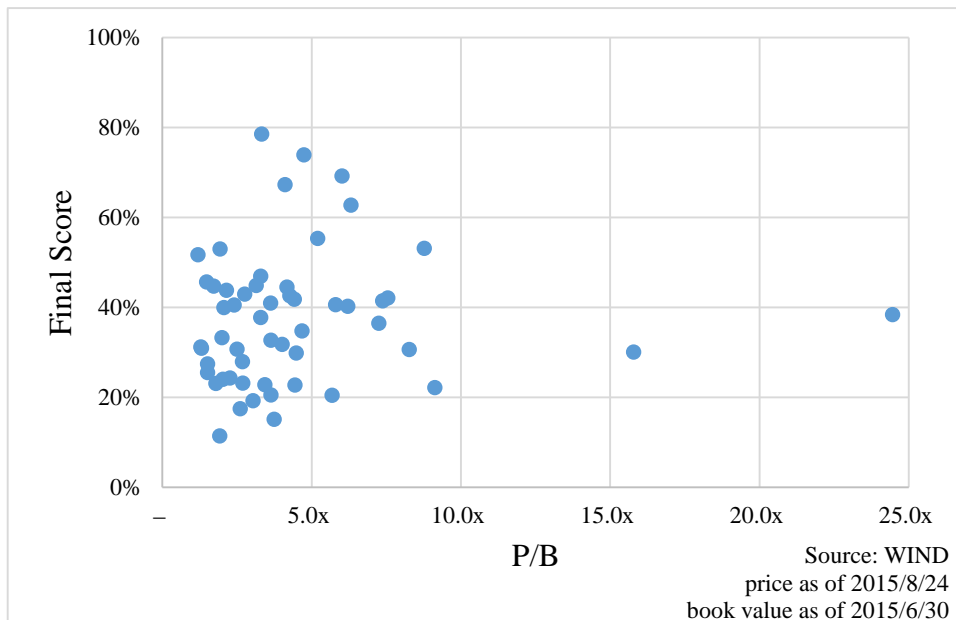
II. Enterprise Value



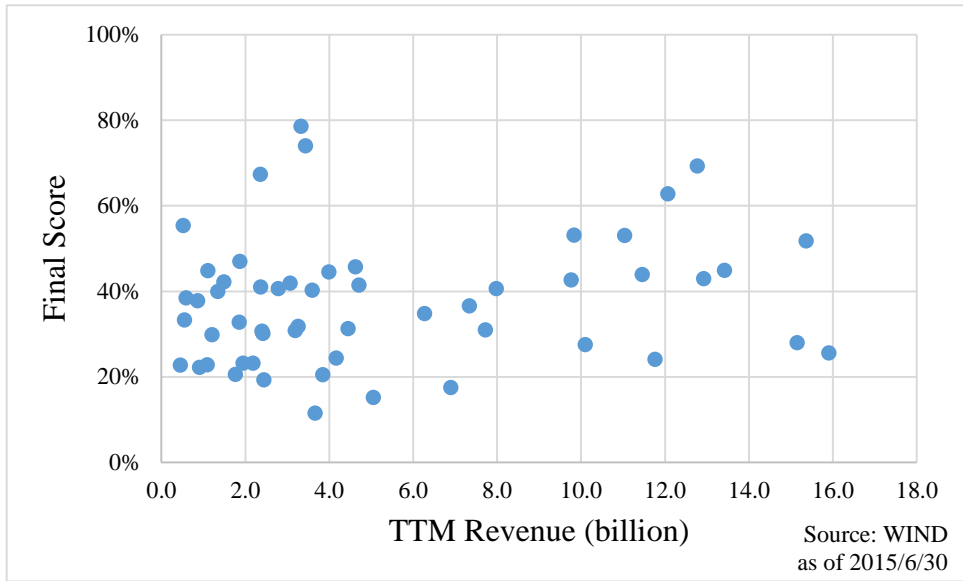
III. TTM P/E



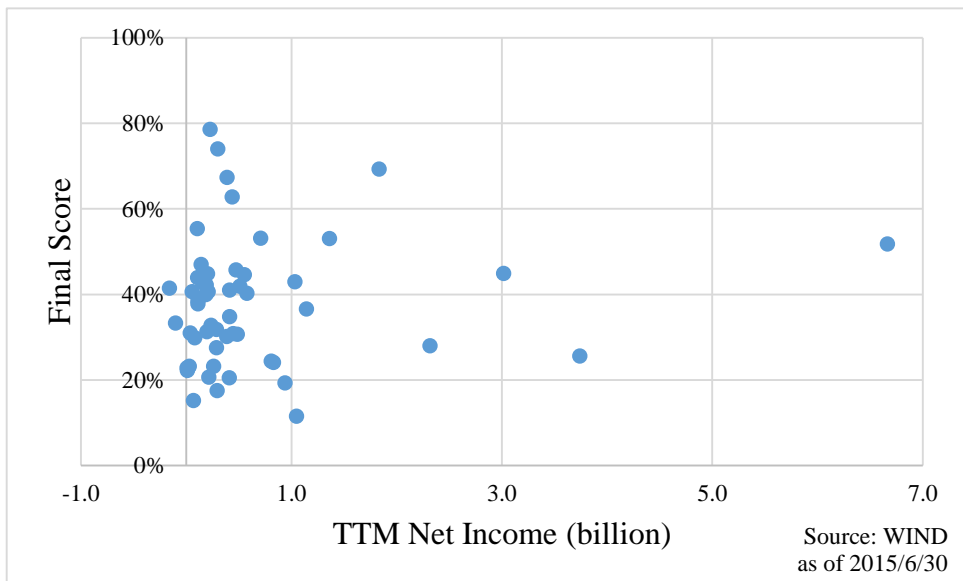
IV. P/B



V. TTM Revenue



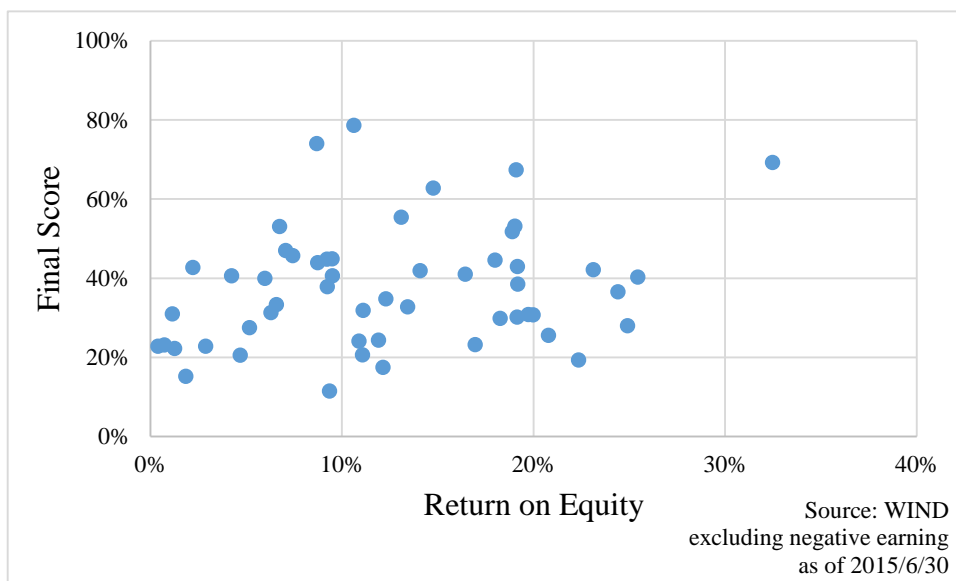
VI. TTM Net Income



VII. Return on Asset



VIII. Return on Equity



The regression analyses between the final score of environmental information disclosure and the eight financial metrics do not show any statistically significant correlation. This can be explained by the limited availability of qualified companies and the small sample size. Besides, the Chinese capital market is still in its developing stage. The vast majority of retail investors might not focus as much on the quality of environmental information disclosure as on the

profitability or growth of the business. As the market matures and the percentage of institutional investors increases, the author is confident that firms with systematic disclosure will have a stronger competitive advantage and be better appreciated by the market.

CONCLUSION

Overall speaking, the environmental disclosure quality isn't satisfying in Zhejiang Province, China. However, what is more concerning is the vast majority of listed companies that have yet started to disclose their environmental footprints. There is still huge potential of improvement of environmental reporting, which will better inform regulatory agencies, shareholders, and other stakeholders such as local communities about the non-financial standing of the firm.

In order to better evaluate the quality of the environmental disclosure, the author would recommend firms to include the G4 Sustainability Reporting Guidelines published by Global Reporting Initiative in its appendix so that relevant parties will have a more accurate understanding of the scope of the disclosure and corresponding left-out items.

Another area of interest is to improve the credibility of information disclosure by encouraging firms to adhere to international standards and pursue third-party verification on their environmental records. In light of the lack of availability of these agencies, from a government perspective, the Ministry of Environmental Protection can help shape the development of independent environmental auditors to offer this service.

APPENDIX

Ticker	Company Name	Final Score	Tertiary Industry
600051	Ningbo United Group	31%	
600052	Zhejiang Guangsha	21%	
600059	Zhejiang GuYueLongShan Shaoxing Wine	40%	
600113	Zhejiang Dongri	23%	√
600160	Zhejiang Juhua	43%	
600173	Wolong Real Estate Group	23%	√
600176	China Jushi	35%	
600177	Youngor Group	26%	
600208	Xinhu Zhongbao	53%	
600261	Zhejiang Yankon Group	32%	
600267	Zhejiang Hisun Pharmaceutical	28%	
600352	Zhejiang Longsheng Group	28%	
600415	Zhejiang China Commodities City Group	21%	√
600460	Hangzhou Silan Microelectronics	47%	
600526	Zhejiang Feida Environmental Science & Technology	41%	
600580	Wolong Electric Group	18%	
600596	Zhejiang Xinan Chemical Industrial Group	31%	
600633	Zhejiang Daily Media Group	42%	√

600763	Topchoice Medical Corporation	38%	√
600797	Insigma Technology	41%	√
600798	Ningbo Marine Company	23%	
600884	Ningbo Shanshan	12%	
600982	Ningbo Thermal Power	45%	
600987	Zhejiang Hangmin	31%	
601018	Ningbo Port	45%	
601339	Bros Eastern	46%	
601579	Kuaijishan Shaoxing Rice Wine	38%	
601877	Zhejiang Chint Electrics	69%	
603611	Zhejiang Noblelift Equipment	30%	
000156	Wasu Media Holding	30%	√
000517	Rongan Property	74%	√
000559	Wanxiang Qianchao	53%	
000607	Zhejiang Huamei Holding	42%	√
002001	Zhejiang NHU Company	24%	
002003	Zhejiang Weixing Industrial Development	33%	
002062	Hongrun Construction Group	41%	
002064	Zhejiang Huafeng Spandex	41%	
002082	Zhejiang Dongliang New Materials	44%	
002103	Guangbo Group	22%	
002122	Tianma Bearing Group	23%	

002142	Bank of Ningbo	52%	√
002144	Hongda High-Tech Holding	33%	
002203	Zhejiang Hailiang	63%	
002236	Zhejiang Dahua Technology	37%	√
002244	Hangzhou Binjiang Real Estate	24%	√
002250	Lianhe Chemical Technology	45%	√
002344	Haining China Leather Market	19%	
002372	Zhejiang Weixing New Building Materials	67%	
002375	Zhejiang Yasha Decoration	43%	
002508	Hangzhou Robam Appliances	40%	
002570	Beingmate Baby & Child Food	15%	
002641	Yonggao	79%	
300027	Huayi Brothers Media	31%	√
300181	Zhejiang Jolly Pharmaceutical	55%	
	Average	38%	

REFERENCES

Ane, P. (2012). An assessment of the quality of environmental information disclosure of corporation in China. *Systems Engineering Procedia*, 5, 420-426.

Li, F., Xiong, B., & Xu, B. (2008). Improving public access to environmental information in China. *Journal of Environmental Management*, 88(4), 1649-1656.

Hsu, A., de Sherbinin, A., & Shi, H. (2012). Seeking truth from facts: the challenge of environmental indicator development in China. *Environmental Development*, 3, 39-51.

Liu, X., Yu, Q., Fujitsuka, T., Liu, B., Bi, J., & Shishime, T. (2010). Functional mechanisms of mandatory corporate environmental disclosure: an empirical study in China. *Journal of Cleaner Production*, 18(8), 823-832.

Liu, X., & Anbumozhi, V. (2009). Determinant factors of corporate environmental information disclosure: an empirical study of Chinese listed companies. *Journal of Cleaner Production*, 17(6), 593-600.

Qu, J., Peng, S., Jiang, D., and etc., (2013). First China's Listed Companies Environmental Responsibility Information Disclosure Evaluation Report. *China Environment Yearbook*, 467-

Wang, H., Bi, J., Wheeler, D., Wang, J., Cao, D., Lu, G., & Wang, Y. (2004). Environmental performance rating and disclosure: China's GreenWatch program. *Journal of Environmental management*, *71*(2), 123-133.

Zeng, S. X., Xu, X. D., Dong, Z. Y., & Tam, V. W. (2010). Towards corporate environmental information disclosure: an empirical study in China. *Journal of Cleaner Production*, *18*(12), 1142-1148.