

[Home](#) > [Journal of Business Ethics](#) > Article

Stock Market's Reaction to Disclosure of Environmental Violations: Evidence from China

| Published: 05 October 2011

| Volume 107, pages 227–237, (2012) [Cite this article](#)

Bookmark [Save article](#)

[View saved research](#) >



[Journal of Business Ethics](#)

[Aims and scope](#) →

[Submit manuscript](#) →

[X. D. Xu¹](#), [S. X. Zeng](#)  ¹ & [C. M. Tam²](#)

 5281 Accesses  193 Citations [Explore all metrics](#) →

Abstract

The stock market's reaction to information disclosure of environmental violation events (EVEs) is investigated multi-dimensionally for Chinese listed companies, including variables such as pollution types, information disclosure sources, information disclosure levels, modernization levels of the region where the company locates, ultimate ownership of the company, and ownership held by the largest shareholder. Using the method of event study, daily abnormal return (AR) and accumulative abnormal return (CAR) are calculated under different event window for examining the extent to which the stock market responds to the EVEs. Furthermore, statistical significance of the difference in stock market reaction is

compared between event firms with different characteristics. The relationship between CAR and its impact factors is examined by multivariate analysis. The findings reveal that the average reduction in market value is estimated to be much lower than the estimated changes in market value for similar events in other countries, demonstrating that the negative environmental events of Chinese listed companies currently have weak impact on the stock market.

 This is a preview of subscription content, [log in via an institution](#)  to check access.

Access this article

[Log in via an institution](#) 

Subscribe and save

 Springer+

from €37.37 /Month

- Starting from 10 chapters or articles per month
- Access and download chapters and articles from more than 300k books and 2,500 journals
- Cancel anytime

[View plans](#) 

[Buy Now](#)

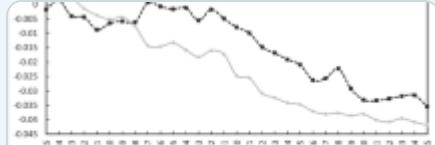
[Buy article PDF 39,95 €](#)

Price includes VAT (Poland)

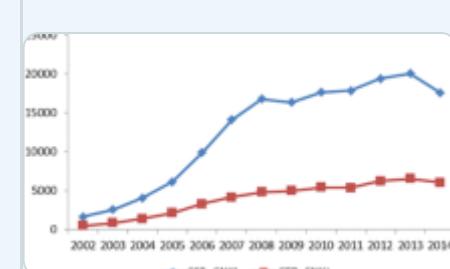
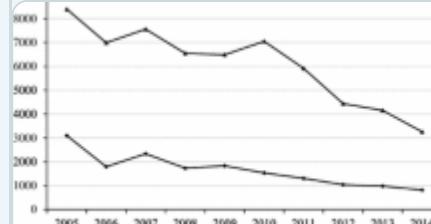
Instant access to the full article PDF.

[Institutional subscriptions](#) 

Similar content being viewed by others



Notes: The horizontal axis in Fig. 1 is the event day, and the vertical axis is the corresponding value of the cumulative average abnormal return (CABR). The event window is [-15, 15]. Heavily polluting enterprises and non-heavily polluting enterprises are distinguished according to the List of Listed Companies' Environmental Verification Industry Classification Management. The dotted line reflects the CABR for non-heavily polluting firms. The solid



How does stock market react to environmental penalty announcements?

Article | 08 June 2024

Stock market's reaction to self-Chinese shareholders' disclosure of work safety accidents: an empirical study in China

Article | 19 May 2016

reaction to the disclosure of environmental violations: a CSR perspective

Article | Open access

29 December 2017

Explore related subjects

Discover the latest articles, books and news in related subjects, suggested using machine learning.

[Business Ethics](#)

[Corporate Environmental Management](#)

[Environmental Impact](#)

[Environmental Economics](#)

[Environmental Social Sciences](#)

[Resource and Environmental Economics](#)

Notes

1. Environmental violation events (EVEs) refer to environmental incidents caused by companies due to violation of existing Chinese environmental laws and regulations, resulting in serious pollutions or having potential environmental risk.
2. CSMAR is developed by the China Accounting and Finance Research Center of the Hong Kong Polytechnic University and the Shenzhen GTI Financial Information Limited.
3. That follows the industry classification codes promulgated by the China Securities Regulatory Commission in 2001.

4. Source: Wu, J.Q. Huaxia Times, <http://rich.online.sh.cn> (2010-10-09).

References

Aerts, W., Cormier, D., & Magnan, M. (2008). Corporate environmental disclosure, financial markets and the media: An international perspective. *Ecological Economics*, 64(3), 643–659.

[Article](#) [Google Scholar](#)

Ahmad, Z., Hassan, S., & Mohammad, J. (2003). Determinant of environmental reporting in Malaysia. *International Journal of Business Studies*, 11(1), 69–90.

[Google Scholar](#)

Al-Tuwaijri, S. A., Christensen, T. E., & Hughes, K. E., I. I. (2004). The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equations approach. *Accounting, Organizations and Society*, 29(5/6), 447–471.

[Article](#) [Google Scholar](#)

Blanco, E., Rey-Maquieira, J., & Lozano, J. (2009). The economic impacts of voluntary environmental performance of firms: A critical review. *Journal of Economic Surveys*, 23(3), 462–502.

[Article](#) [Google Scholar](#)

Brown, N., & Deegan, C. (1998). The public disclosure of environmental performance information: A dual test of media agenda setting theory and legitimacy theory. *Accounting and Business Research*, 29(1), 21–41.

[Article](#) [Google Scholar](#)

Capelle-Blancard, G., & Laguna, M. A. (2010). How does the stock market respond to chemical disasters. *Journal of Environmental Economics and Management*, 59(2), 192-205.

[Article](#) [Google Scholar](#)

Cohen, M. A., & Santhakumar, V. (2007). Information disclosure as environmental regulation: A theoretical analysis. *Environmental & Resource Economics*, 37(3), 599-620.

[Article](#) [Google Scholar](#)

Cormier, D., & Magnan, M. (1999). Corporate environmental disclosure strategies: Determinants, costs and benefits. *Journal of Accounting, Auditing and Finance*, 14(4), 429-452.

[Google Scholar](#)

Cormier, D., Magnan, M., & Velthoven, B. V. (2005). Environmental disclosure quality in large German companies: Economic incentives, public pressures or institutional conditions? *European Accounting Research*, 14(1), 3-39.

[Article](#) [Google Scholar](#)

Criado-Jimenez, I., Fernandez-Chulian, M., Larrinage-Gonzalez, C., & Husillos-Carques, F. J. (2008). Compliance with mandatory environmental reporting in financial statements: The case of Spain (2001-2003). *Journal of Business Ethics*, 79(3), 245-262.

[Article](#) [Google Scholar](#)

Dasgupta, S., Hong, J. H., Laplante, B., & Mamingi, N. (2006). Disclosure of environmental violations and stock market in the Republic of Korea. *Ecological Economics*, 58(4), 759-777.

Dasgupta, S., Laplante, B., & Mamingi, N. (2001). Pollution and capital markets in developing countries. *Journal of Environmental Economics and Management*, 42(3), 310-335.

[Article](#) [Google Scholar](#)

Deegan, C. (2002). Introduction: The legitimizing effect of social and environmental disclosures—a theoretical foundation. *Accountability, Auditing & Accountability Journal*, 15(3), 282-311.

[Article](#) [Google Scholar](#)

Diao, X. D., Zeng, S. X., Tam, C. M., & Tam Vivian, W. Y. (2009). EKC analysis for studying economic growth and environmental quality: A case study in China. *Journal of Cleaner Production*, 17(5), 541-548.

[Article](#) [Google Scholar](#)

Fan, J. P. H., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics*, 33(3), 401-425.

[Article](#) [Google Scholar](#)

Gupta, S., & Goldar, B. (2005). Do stock markets penalize environment-unfriendly behavior? Evidence from India. *Ecological Economics*, 52(1), 81-95.

[Article](#) [Google Scholar](#)

Hamilton, T. (1995). Pollution as news: Media and stock market reaction to the toxics release inventory data. *Journal of Environmental Economics and Management*, 28(1), 98-113.

[Article](#) [Google Scholar](#)

Hong, J. H., Laplante, B., & Meisner, C. (2003). *Public disclosure of environmental violations in the Republic of Korea*. Policy Research Working Paper, No. 3126. Washington, DC: The World Bank.

Jacobs, B. W., Singhal, V. R., & Subramanian, R. (2010). An empirical investigation of environmental performance and the market value of the firm. *Journal of Operations Management*, 28(5), 430-441.

[Article](#) [Google Scholar](#)

Janney, J. J., Dess, G., & Forlani, V. (2009). Glass houses? Market reactions to firms joining the UN global compact. *Journal of Business Ethics*, 90(3), 407-423.

[Article](#) [Google Scholar](#)

Jones, K., & Rubin, P. H. (2001). Effects of harmful environmental events on reputations of firms. In M. Hirschey, K. John, & A. Makhija (Eds.), *Advances in financial economics* (Vol. 6, pp. 161-182). Amsterdam: Elsevier Science.

[Google Scholar](#)

Karpoff, J. M., Lott, J. R., Jr., & Wehrly, E. W. (2005). The reputational penalties for environmental violations: Empirical evidence. *Journal of Law and Economics*, 48(2), 653-675.

[Article](#) [Google Scholar](#)

Klassen, R. D., & McLaughlin, C. P. (1996). The impact of environmental management on firm performance. *Management Science*, 42(8), 1199-1214.

[Article](#) [Google Scholar](#)

Konar, S., & Cohen, M. A. (1997). Information as regulation: The effect of

community right to know laws on toxic emissions. *Journal of Environmental Economics and Management*, 32(1), 109–124.

[Article](#) [Google Scholar](#)

Kothari, S., & Warner, J. (2006). Econometrics of event studies. In E. Eckbo (Ed.), *Handbook of empirical corporate finance*. North-Holland: Elsevier.

[Google Scholar](#)

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2002). Investor protection and corporate valuation. *The Journal of Finance*, 57(3), 1147–1170.

[Article](#) [Google Scholar](#)

Lanoie, P., Laplante, B., & Roy, M. (1998). Can capital markets create incentives for pollution control? *Ecological Economics*, 26(1), 31–41.

[Article](#) [Google Scholar](#)

Laplante, B., & Lanoie, P. (1994). The market response to environmental incidents in Canada: A theoretical and empirical analysis. *Southern Economic Journal*, 60(3), 657–672.

[Article](#) [Google Scholar](#)

Liu, X. B., & 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.

[Article](#) [Google Scholar](#)

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

[Google Scholar](#)

Madsen, P. (2009). Does corporate investment drive a “Race to the Bottom” in environmental protection? A reexamination of the effect of environmental regulation on investment. *Academy of Management Journal*, 52(6), 1297-1318.

[Article](#) [Google Scholar](#)

Nakao, Y., Nakano, M., Amano, A., Kokubu, K., Matsumura, K., & Genba, K. (2007). Relationship between environmental performance and financial performance: An empirical analysis of Japanese corporations. *Business Strategy and the Environment*, 16(2), 106-118.

[Article](#) [Google Scholar](#)

Ozen, S., & Kusku, F. (2009). Corporate environmental citizenship variation in developing countries: An institutional framework. *Journal of Business Ethics*, 89(2), 297-313.

[Article](#) [Google Scholar](#)

Patten, D. M. (2002). Media exposure, public policy pressure, and environmental disclosure: An examination of the impact of TRI data availability. *Accounting Forum*, 26(2), 153-171.

[Article](#) [Google Scholar](#)

Patten, D. M., & Trompeter, G. (2003). Corporate responses to political costs: An examination of the relation between environmental disclosure and earnings management. *Journal of Accounting and Public Policy*, 22(1), 83-94.

[Article](#) [Google Scholar](#)

Porter, M. E., & van der Linde, C. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of Economic Perspectives*, 9(4), 97-118.

Rao, S. M. (1996). The effect of published reports of environmental pollution on stock prices. *Journal of Financial and Strategic Decisions*, 9(1), 25-32.

[Google Scholar](#)

Takeda, F., & Tomozawa, T. (2006). An empirical study on stock price responses to the release of the environmental management ranking in Japan. *Economic Bulletin*, 13(6), 1-4.

[Google Scholar](#)

World Bank. (2000). *Greening industry: New roles for communities, markets and governments*. Washington, DC: World Bank.

[Google Scholar](#)

Xu, X. D., Wang, X., & Jin, Y. (2010). Releasing of restricted shares, firm quality, and market trading activity. *China Finance Review International*, 1(1), 78-97.

[Article](#) [Google Scholar](#)

Yamagucji, K. (2008). Reexamination of stock price reaction to environmental performance: A GARCH application. *Ecological Economics*, 68(1/2), 345-352.

[Article](#) [Google Scholar](#)

Zeng, S. X., Wan, T. W., & Tam, V. W. Y. (2009a). Towards FDI and technology spillover: A case study in China. *Transformations in Business & Economics*, 8(1), 50-62.

[Google Scholar](#)

Zeng, S. X., Xie, X. M., Tam, C. M., & Wan, T. W. (2009b). Relationships between

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

Acknowledgments

We would like to thank the anonymous referees for very helpful suggestions that substantially improved this article. The authors gratefully acknowledge Mr. Shen Qi for his contribution in data collection. This study is supported by the National Natural Science Foundation of China (No. 71025006) and the Ministry of Education of China (20090073110029).

Author information

Authors and Affiliations

Antai School of Management, Shanghai Jiaotong University, Shanghai, 200052, China

X. D. Xu & S. X. Zeng

College of Science and Engineering, City University of Hong Kong, Kowloon, Hong Kong

C. M. Tam

Corresponding author

Correspondence to [S. X. Zeng](#).

Rights and permissions

Reprints and permissions

About this article

Cite this article

Xu, X.D., Zeng, S.X. & Tam, C.M. Stock Market's Reaction to Disclosure of Environmental Violations: Evidence from China. *J Bus Ethics* **107**, 227–237 (2012). <https://doi.org/10.1007/s10551-011-1035-2>

Received
19 June 2011

Accepted
05 September 2011

Published
05 October 2011

Issue date

May 2012

DOI

<https://doi.org/10.1007/s10551-011-1035-2>

Keywords

[Environmental violation events](#) [Information disclosure](#) [Stock market](#) [Event study](#)
[Event window](#)

Search

Search by keyword or author



Navigation

[Find a journal](#)

Publish with us

Track your research

