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Environmental Risk and Shareholder Returns: Evidence from the Announcement of the Toxic 100 Index

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Abstract: This paper examines the stock price response to the announcement that a U.S. company has been named to the Toxic 100 list of the largest air polluters, where rankings are based on data from the Environmental Protection Agency's (EPA) Risk Screening Environmental Indicator (RSEI) project. We find a significant negative average abnormal return (AR) of -1.20% in 2006 and -1.60% in 2008 over the two-day announcement periods for the Toxic 100 announcements, representing an average drop in market value for the average firm in the index of -\$235,944,909 in 2006 and -\$237,595,885 in 2008. Firms in the top 10 ranking of the index had a significantly, larger negative abnormal return than in the bottom 10 ranking. Firms that were not on the 2006 index, but were added to the 2008 index experienced an average abnormal return of -3.5%. The results are interesting for two reasons. One, they show that investors impound environmental risk into their company valuations, implying that environmental disclosure and reporting is important. Two, the results suggest that although analysts had the RSEI data prior to the release of the Toxic 100 lists, they view the Toxic 100 as a significant event. This suggests limits to the semi-strong form of market efficiency, suggesting that the anticipated payoff from computing their own environmental risk assessment may not justify their time and effort required to do so.

1. Introduction

By early June 2010, British Petroleum's (BP) shares fell by 40 percent following the explosion of BP's Deepwater Horizon rig on April 20, 2010,