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- RESEARCH ABSTRACTS -

A Periodic Review of Research from Industry and Academia

**TITLE:** Investor Response to the Exxon Valdez Oil Spill

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**HYPOTHESIS:**

H1 - Ideosyncratic response: Exxon should experience negative abnormal returns in the aftermath of the Valdez spill because it will probably be found guilty of negligence and because of boycotts, lost sales due to damaged reputation, etc.

H2 - Alyeska Exposure: Members of the Alyeska consortium should also experience negative abnormal returns because they are legally liable for responding to and cleaning up the spill promptly and effectively.

H3 - Vulture Behavior: Exxon’s major retail competitors should experience positive abnormal returns because they have the opportunity of increased profits at Exxon’s expense (boycott sales, decreased supplies offer opportunity to profit from increased prices).

H4 - Green Premium: Firms enjoying a reputation for environmental responsibility should see an increase in firm value as investors realize the benefits of being “green.”

H5 - Oatmeal: Firms with neither a positive nor negative reputation for environmental responsibility should experience no significant change following the Valdez spill.

H6 - Brown penalty: Firms with a reputation for environmentally irresponsible behavior will earn negative abnormal returns as a result of increased scrutiny by consumers, regulators and environmental groups.

H7 - Differential Performance: The abnormal return performance of green firms will exceed that of oatmeal firms which will exceed that of brown firms.

**TEST DATA:** Data was obtained from the Center for Research in Security Prices (CRSP) daily files. The market portfolio was proxied by returns on the CRSP value-weighted return index including dividends. H1 was tested using returns for Exxon. H2 consisted of member of the Alyeska Consortium minus Exxon. H3 was based on a trade publication for Exxon’s ten largest
retail competitors. H4 and its variants used a sample of firms rated by the Council on Economic Priorities (CEP), which has set the categories green, oatmeal and brown and used to determine the test portfolios.

**Test Period:** March 21, 1988 through September 14, 1989; Day 0 was defined as Monday, March 27, 1989 - the first trading day after the accident.

**Sample Size:** 55 firms

**Methodology:** The market model was estimated for each security in the sample over a 255 trading day period ending two trading days before the event date. Abnormal returns were calculated for each security in the sample for each day during the event period -1 to +120. Average abnormal returns were determined for each day during the event period for the various sample portfolios and the standardized average abnormal returns is used to test the significance of the average abnormal return during any day \( t \). Cumulative average abnormal returns (CAARs) were determined for event windows (-1,0), (0, +30), (0, +60) and (0, +120) relative to the event date \( (t=0) \).

**Results:**

1) Effect of the Spill on the Oil Industry: The immediate, cumulative and lasting drop in Exxon’s abnormal returns indicates the market anticipated neither the accident itself nor management’s response following its occurrence. The study’s failure to find a significant effect for the Alyeska group (H2) and Exxon’s retail competitors (H3) may have occurred because the two driving forces (looming Alyeska liability and expected windfall profits at Exxon’s expense) canceled each other out. The longer terms impact is an increased willingness of the industry to release environmental data.
2) Effects of Environmental Reputation: Shareholders in “green” firms earned superior risk-adjusted returns vis-a-vis their “brown” or “oatmeal” counterparts. Apparently the market does not reward fencesitters, as shown by the lack of improved performance of “oatmeal” firms versus “brown” firms.

FOR FURTHER INFORMATION ABOUT THE ECOVALUE'21 ANALYTICAL PLATFORM, PLEASE CONTACT INNOVEST STRATEGIC VALUE ADVISORS, INC.

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