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MONASH CENTRE FOR FINANCIAL STUDIES

RESEARCH BRIEF

ESG EVENTS AND GLOBAL STOCK PRICES

How a focus on investment ethics impacts on stock prices in different countries

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Incorporating social and environmental ethics into investment decision making is an accelerating trend – nowhere more than in the United States. As listed companies have come under more public pressure to consider environmental, social and governance (ESG) issues, researchers and analysts have been dissecting the outcomes. In a recent project, Dr. Bei Cui from Monash Centre for Financial Studies (MCFS) researched and analysed the share prices of US S&P1500 companies before and after ESG events over an extended period. The study found evidence of significant market overreactions to ESG controversies, resulting in opportunities for traders to earn abnormal profits. But would these observations – and opportunities – hold true in markets other than the US? For this latest MCFS research project, stock market and news data was collected from 23 countries, including Australia, to examine the extent of the ESG culture globally, and to test and compare the impacts on stock prices when listed companies in various countries become the subject of environmental, social or governance news events.

KEY FINDINGS

- Environmental, social and governance issues have assumed an important role in global markets, with ESG controversies triggering significant investor responses in most countries.
- Over-emphasis on ESG considerations by investors can lead to markets overreacting when companies are the subject of negative ESG news.
- Patterns of market overreaction were similar across most countries surveyed, with a few notable exceptions.
- Due to market overreaction, contrarian investors are able to profit from the unpopular strategy of buying stocks after the release of negative ESG news.
- Investors wishing to reduce exposure following bad ESG news can sometimes be better off waiting – in some cases up to 90 days after the announcement - to execute the necessary trades.

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INTRODUCTION

The ESG phenomenon is on the rise globally – with significant implications for listed companies and investors worldwide. Between 2016 and 2018, the total value of sustainable and responsible investment assets in the five major markets including Europe, the United States, Japan, Canada, and Australia/New Zealand surged 34% to $30.7 trillion [1]. Moreover, the proportion of sustainable investing relative to total managed assets grew globally. Sustainable and responsible investment assets in Australia/New Zealand have remained the highest proportion, with 63.2% of total managed assets.

The United States has led the world in the trend towards ethical investment in recent years, and continued to manage more than one-third of global sustainable investing assets. While other major developed economies may not yet have an ESG culture on the same scale, there is no doubt that the ESG phenomenon is on the rise globally – with significant implications for listed companies and investors worldwide. My previous research paper focusing on US S&P1500 index constituents uncovered new evidence and insights into how investors in listed US companies behave collectively in response to ESG news events (both positive and negative), and how this can present opportunities for contrarian investors and managers to profit. [2] While other studies have measured returns within short periods around the announcement of ESG-related news, our study was the first to examine longer-run returns up to 90 days after ESG events.

For this new and broadened study of ESG events in international markets, the same analytical parameters have been applied – examining abnormal returns on company shares in response to ESG news events. The study was motivated by other research highlighting how large inflows into investment funds with high social responsibility ratings [3] encourage institutional investors to focus relatively more on ESG characteristics of stocks than fundamentals, [4] and how socially responsible funds are less inclined to sell stocks with high ESG ratings, even after negative news on fundamentals [5].

As with the study of US markets, this study began with a prediction that investors' bias towards ESG considerations might result in overreaction to ESG-related news announcements. The prediction is grounded in salience theory, which holds that when decision makers' attention is disproportionately directed to one or a few factors – in this case environmental, social and governance issues – those factors will receive disproportionate weighting in judgements and decision making. The substantial increase in assets managed in a socially responsible manner indicates that ESG issues are a salient aspect of the information set of a firm. The salience of ESG news should be particularly accentuated in the eyes of mutual fund managers, given evidence that the sustainability of mutual funds is positively related to fund flows [6]. For this study it was hypothesised that these predictions should apply particularly to ESG controversies, given that bad news tends to be more salient than good [7].

Thus, when institutional investors observe a negative shock to the ESG attributes of a stock, it is expected that they will overestimate the probability of further shocks, resulting in a stronger tendency to sell, and a larger fall in the stock price than might be justified by fundamental considerations.

STUDY METHOD AND FINDINGS

The study investigates large and mid-cap equities across 23 developed markets countries, which include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. All the equities are constituents of the Bloomberg World Index which represent top 85% market capitalisation of each country.

Information about ESG news events was obtained from RavenPack News Analytics, which monitors news on more than 40,000 listed stocks across the Americas, Europe and Asia-Pacific. Using RavenPack's news classification system, I was able to isolate individual events in ESG-related sub-categories such as labour issues, war conflict, security, pollution, civil unrest, industrial accidents, corporate responsibility, crime, and health. Events were categorised further – as positive or negative – using RavenPack's news sentiment methodology.

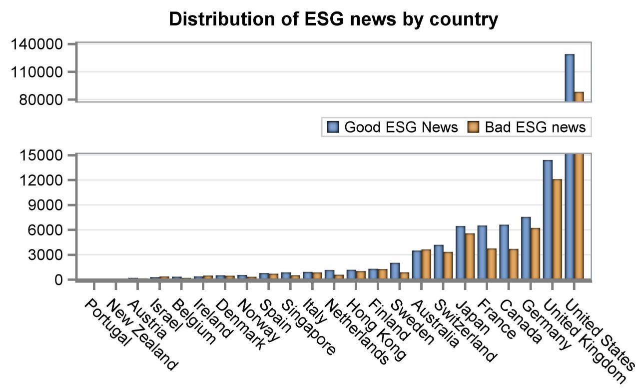


Figure 1: Distribution of ESG news by country.

As seen above in Figure 1, the prevalence of ESG-related company news is higher in the United States than any

[1] See Global sustainable investment alliance (2018)
[2] For details, please refer to research brief and Cui and Docherty (2020).
[3] See Hartzmark and Sussman (2019).
[4] See Cao et al. (2019).
[5] See Starks et al. (2017).
[6] See Hartzmark and Sussman (2019).
[7] See Fiske (1980).

other country surveyed. During the survey period, the combined number of good and bad ESG news in the US (as reported by RavenPack) was almost eight times that of the next country (the United Kingdom) – a considerable gap in both per capita and absolute terms. Australia, like the US, is also notable for a high prevalence of ESG news, particularly considering its relatively small economy and population.

To have a clear understanding of the announcement effect, I included only news stories with Event Novelty Score (ENS) of 100, which means that no similar news about the same event for the same company has been reported in the past 24-hour window. Moreover, to eliminate the impact of confounding news, I kept companies with only one ESG related news within an event date. My final sample comprised more than 331,000 firm-event observations in 23 countries between January 2000 and December 2019. Stock returns around ESG news events were examined using the event study statistical method – which is commonly employed when assessing the impact of an event on the value of a firm. The method involves finding the abnormal return attributable to the event, adjusting for returns that stem from the price fluctuation of the market as a whole. In this case, I first calculated the cumulative abnormal return (CAR) for event window [0,1], [-1,1] and [-10,10] - all day notion is relative to the event date (day 0). I used market-model abnormal returns for analysis. Daily market returns are obtained from MSCI Country Indexes series, which represent the performance of 85% market capitalisation of the market for each country.

Consistent with the previous study (which focused solely on the US), this study also found that market overreaction tends to be more pronounced for bad ESG news than for good news across most countries.

Country	CAR [0,1](%)	CAR [-1,1](%)	CAR [-10,10](%)	Observations
Australia	-0.16***	-0.26***	-0.40***	2,743
Austria	-0.57***	-0.94***	-1.31**	135
Belgium	0.02	-0.14	0.31	189
Canada	-0.02	-0.08**	-0.12	2,780
Denmark	-0.45***	-0.52***	-1.12***	355
Finland	-0.14**	-0.16**	0.19	906
France	-0.04	-0.06	-0.44***	2,931
Germany	-0.09*	-0.11**	-0.21	4,375
Hong Kong	-0.32***	-0.61***	-1.13***	782
Ireland	-0.32**	-0.42***	-2.92***	307
Israel	-0.21*	-0.37***	-1.16***	270
Italy	-0.24***	-0.44***	-0.27	716
Japan	-0.35***	-0.45***	-1.35***	4,173
Netherlands	-0.18**	-0.38***	-0.47	483
New Zealand	0.22	0.21	0.53	93
Norway	-0.44***	-0.61***	-0.32	278
Portugal	0.33	0.51	-1.57	23
Singapore	-0.08*	-0.06	-0.08	445
Spain	-0.12	-0.16	-0.48**	607
Sweden	-0.39***	-0.55***	-1.06***	689
Switzerland	-0.12**	-0.15***	-0.29***	2,224
United Kingdom	-0.06***	-0.12***	-0.41***	8,200
United States	-0.11***	-0.15***	-0.43***	59,793

Table 1. Cumulative abnormal returns (CARs) surrounding bad ESG events in 23 countries.
* Statistically significant test statistic of average CAR at the 90% confidence level.
**Statistically significant test statistic of average CARs at the 95% confidence level.
*** Statistically significant test statistic of average CARs at the 99% confidence level.

Cumulative abnormal returns for bad ESG news

Table 1 (below) reports cumulative abnormal returns (CARs) surrounding bad ESG events in 23 countries, with various event windows as robustness checks. It shows that the mean 3-day CARs centered on the ESG news announcement date are significantly negative for bad ESG events for 17 countries – providing evidence that the release of negative ESG news leads to significant declines in the stock prices of target companies in the short term. The significant negative average abnormal returns during other event windows also hold for most of the countries reported in the table.

Cumulative abnormal returns for positive ESG events

Table 2 (below) reports cumulative abnormal returns for positive ESG events in 23 countries. Consistent with findings for the previous US-focused study, abnormal market reactions to positive ESG news were statistically positive significant for only two countries, which are dramatically less pronounced than for negative news in most countries. The above results show that stock market reacts to ESG news in an asymmetric manner; there is a significant negative reaction to the bad ESG news but a little reaction to the good news. It is worthy noting that 4 countries including Belgium, Canada, Spain and Sweden experienced negative post-announcement returns after good ESG news. Potentially, the investors in these four economies discount the good ESG news.

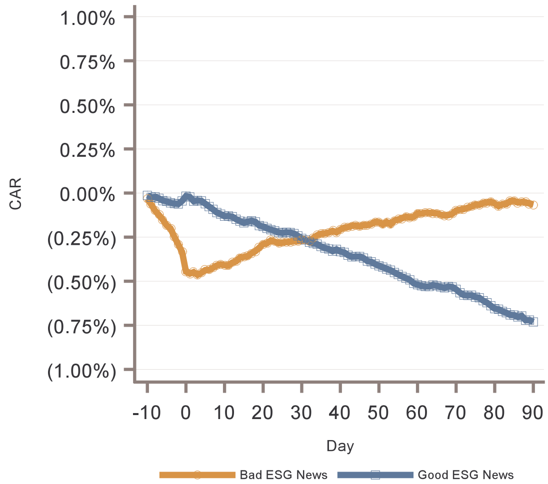
Long-run post-announcement returns

Figure 2 (below) shows cumulative average abnormal returns for a 101-day window [-10,90] surrounding ESG news announcements in the United States, the United Kingdom, Germany, Canada, France, Japan, Switzerland and Australia (the countries with the highest numbers of ESG-related events). The significant negative abnormal return around ESG controversies (each of these countries had statistically significant negative abnormal returns for the 21-day [-10,10] window) indicate that investors shun the company's stock when it is involved in ESG controversies, the so-called "controversy screening". However, in the majority of cases the results demonstrate a post-announcement mean reversion in abnormal returns

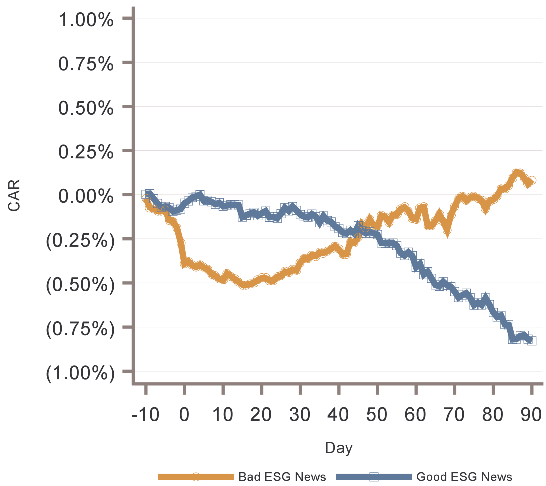
Country	CAR [0,1](%)	CAR [-1,1](%)	CAR [-10,10](%)	Observations
Australia	0.04	0.05	-0.35***	2,580
Austria	-0.04	0.07	-0.71	185
Belgium	-0.21***	-0.36***	-0.94**	301
Canada	0.00	-0.03**	-0.17***	5,001
Denmark	-0.21	-0.23	0.02	419
Finland	0.16*	0.12	0.16	973
France	0.03	0.02	-0.10	5,284
Germany	0.03*	0.02*	0.06	5,588
Hong Kong	-0.14	-0.07	-0.42	908
Ireland	-0.08	-0.22	0.09	255
Israel	-0.26**	-0.23	-0.05	191
Italy	0.07	0.08	-0.34*	777
Japan	-0.02	-0.05	-0.45***	5,047
Netherlands	0.05	0.07	0.07	938
New Zealand	0.05	-0.00	-0.30	107
Norway	0.04	-0.05	0.64*	447
Portugal	-0.31	-0.20	1.51	29
Singapore	-0.04	-0.04	-0.04	713
Spain	-0.01	-0.14**	-0.38*	660
Sweden	-0.09*	-0.15***	-0.39**	1,649
Switzerland	0.03	0.01	-0.15*	2,904
United Kingdom	0.01	0.02	-0.10*	10,125
United States	0.00	0.02**	-0.21***	91,494

Table 2. Cumulative abnormal returns (CARs) surrounding good ESG events in 23 countries.
* Statistically significant test statistic of average CAR at the 90% confidence level.
**Statistically significant test statistic of average CARs at the 95% confidence level.
*** Statistically significant test statistic of average CARs at the 99% confidence level.

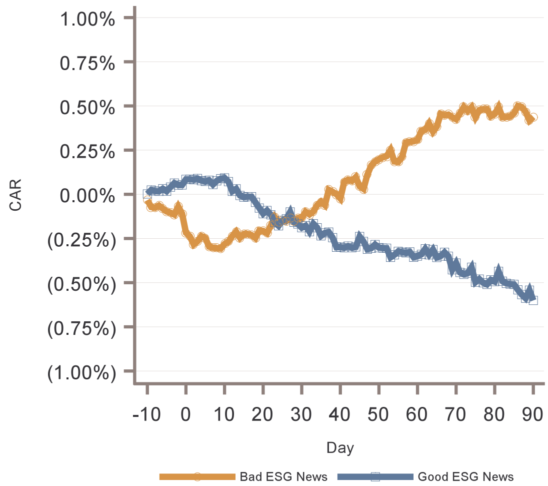
over a longer period. The phenomenon can, therefore, provide contrarian traders with an opportunity to buy the stock at a discount and then sell at a profit. It also suggests that investors wishing to reduce exposure following bad ESG news can sometimes be better off waiting, in some cases up to 90 days after the announcement - to execute the necessary trades at a better price. Among all the countries, on average, long-run post-announcement returns of companies with bad ESG events outperform those with good ESG events. Moreover, all the firms associated with good ESG news are underperforming the market at the end of the observation window. It is possible that the avoidance of ESG controversies helps drive change in the companies, and improves operations toward good ESG. On the flipside, however, some investors come along to take the place of the "responsible" investors. The stocks end up outperforming for those who don't avoid seemingly bad ESG companies. In addition, there are potential information leakage before the news announcement as the affected stock's price usually begins declining several days before the bad ESG announcement.



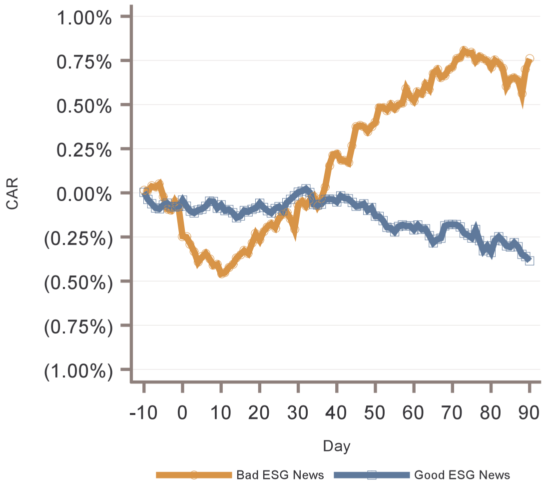
(a) Long-run cumulative average abnormal returns up to 90 days after ESG news announcements - United States.



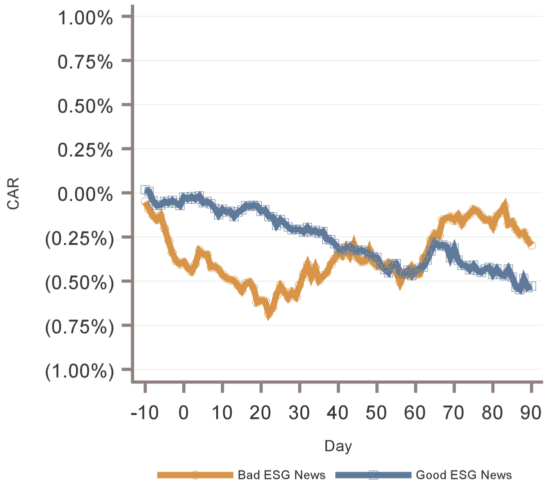
(b) Long-run cumulative average abnormal returns up to 90 days after ESG news announcements- United Kingdom.



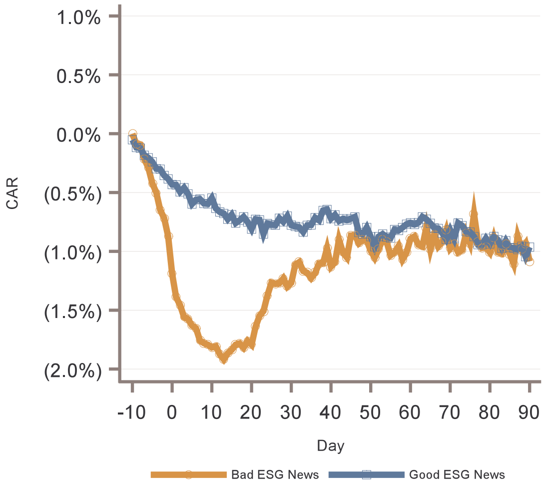
(c) Long-run cumulative average abnormal returns up to 90 days after ESG news announcements - Germany.



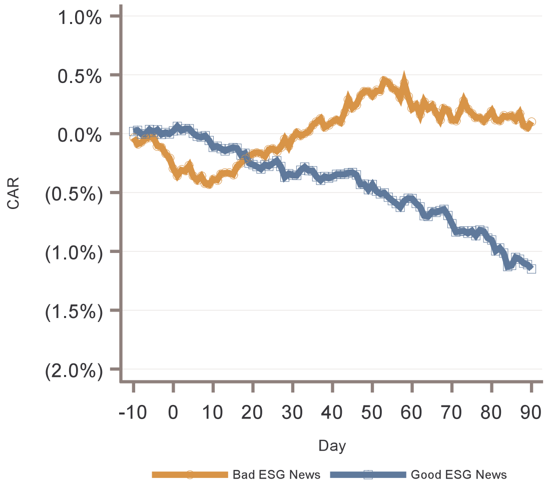
(d) Long-run cumulative average abnormal returns up to 90 days after ESG news announcements- Canada.



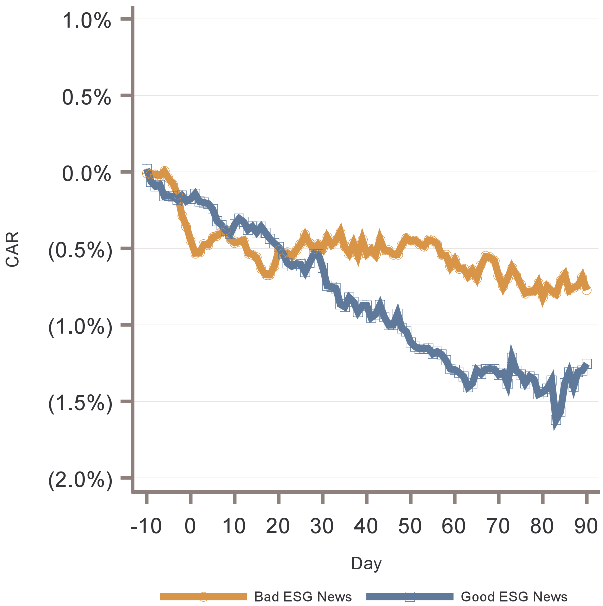
(e) Long-run cumulative average abnormal returns up to 90 days after ESG news announcements- France.



(f) Long-run cumulative average abnormal returns up to 90 days after ESG news announcements- Japan.



(g) Long-run cumulative average abnormal returns up to 90 days after ESG news announcements- Switzerland.



(h) Long-run cumulative average abnormal returns up to 90 days after ESG news announcements- Australia.

CONCLUSION

Salience theory suggests that investors overestimate the probabilities associated with salient events. So when an ESG controversy occurs, investors give too much weight to the possibility that the event will be repeated and therefore overreact to the news. Consistent with this proposition, my study found a negative effect on returns when negative ESG news was released, but that these returns mean reverted over the subsequent 90 days.

My research has several important implications. First, I verify the important role ESG have played in global markets. Second, I demonstrate the potentially adverse implications for market efficiency of biases induced by the growing focus on ESG information. Third, my study demonstrates why institutional investors that adopt ESG in their information set need to carefully condition their trading activities around ESG news releases to avoid overreaction and consequent losses. Finally, given the observed overreactions to ESG news, there may be potential for contrarians to buy stocks after the release of negative ESG news and profit from the subsequent mean reversion.

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