Media and Shareholder Activism

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Introduction

Using more than twenty-five million firm-level articles published in the media, I examine the role of media in shareholder activism events during the years 2002-2014. I find that conditioning on numerous observable firm-specific characteristics and unobservables, broader and negative *ex-ante* media coverage is positively associated with the probability of a firm being a shareholder activist's target. The positive correlation between media coverage and the propensity for targeting by activists is robust to the use of instrumental variable (IV) approach indicating that the documented relation is plausibly *causal*. The association between negative media tone and activism is stronger during the times of greater divergence of opinion about the firm amongst analysts. However, during times of overall low sentiments, the shareholder activists become less sensitive to media tone. I further document that media coverage also plays a crucial role in determining the outcomes of activism events. Target firms with *ex-ante* positive media coverage not only have significantly lower announcement returns but also have a higher likelihood of management winning. Overall, the results provide empirical evidence for the linkage between shareholder activism and limited investor attention and investor opinion, as suggested by theories.

Theoretical Motivation and Main Hypotheses

❖ **Limited Investor Attention Hypothesis :** All else equal, there will be a positive association between ex-ante media coverage of a firm and the likelihood of being targeted by a shareholder activist in future.

❖ **Investor Opinion Hypothesis :** All else equal, there will be a negative (positive) association between ex-ante positive (negative) tone portrayed by the media about a firm and its likelihood of being targeted by a shareholder activist. Such association is stronger with greater media coverage.

❖ **Activism Outcome Hypothesis :** All else equal, there will be a positive (negative) association between ex-ante positive (negative) tone portrayed by the media about a firm and the likelihood of a management win. Such association is stronger with greater media coverage.

Main Research Questions and Answers

❑ **Question:** How is ex-ante media coverage associated with the <u>likelihood of a firm being targeted by a shareholder activist</u> (Limited Investor Attention)?
  ▪ *Main Finding: Positive association.*

❑ **Question:** How is ex-ante negative media tone associated with the <u>likelihood of a firm being targeted by a shareholder activist</u> (Investor Opinion)?
  ▪ *Main Finding: Positive association, and this association is stronger with broader coverage.*

❑ **Question:** How is ex-ante positive media tone associated with the <u>likelihood of management winning</u> (Activism Outcome)?
  ▪ *Main Finding: Positive association, and this association is stronger with broader coverage.*

Data Sources

➢ **Media Data** – RavenPack, a leading global news analytics provider
  ▪ *Other recently published papers that have used the same database: Dang, Moshirian and Zhang (JFE, 2015); Kolasinski, Reed and Ringgenberg (JF, 2013); Shroff, Verdi and Yu (TAR, 2014)*

➢ **Shareholder Activism Data** – EDGAR (Schedule 13Ds/13D/As; Schedule 13Gs)

➢ **Investor Relations Firm Data** – O'Dwyer's public relations annual directories

➢ **Firm Characteristics** – CRSP (return data); Compustat (accounting data); Thomson Reuters Institutional (13f) Holdings (ownership data); Institutional Shareholder Services (G-Index and E-Index); IBES (analyst data)

➢ **Investor Sentiment in the Stock Market** – Prof. Jeffrey Wurgler's website

➢ **Name Fluency** – Following Green and Jame (JFE, 2013)

Media Coverage and Tone Variables

➢ **Media Coverage**
  ▪ *Number of Articles: natural log of (1+number of firm related articles)*
  ▪ *Aggregate Event Volume (AEV): natural log of (1+AEV); AEV proxies for firm-specific news coverage and represents the count of events for a firm, measured over a rolling 91-day window.*

➢ **Sentiment or Tone (Granular scores 0 – 100, increasing in its positive tone)**

Event Sentiment Score (ESS)	Composite Sentiment Score (CSS)	Aggregate Event Sentiment (AES)
Uses expert consensus survey data and factors such as: Emotional Factor, Weather and Climate Factor, Analyst Rating Factor, Credit Rating Factor, Fundamental Comparison Factor	Combines various textual sentiment analysis techniques & RavenPack's proprietary "Expert Consensus Tagging Methodology," and Market Response algorithms	Ratio of positive events reported on a firm compared to the total count of events; also uses RavenPack's proprietary "Expert Consensus Tagging Methodology"

➢ **Expert Consensus Tagging Methodology**
  ▪ *Define the types of stories that contain the content relevant for tagging*
  ▪ *Manual tagging: a team of in-house experts with backgrounds in linguistics, finance, and economics first develop and agree upon a set of parameters and basic assumptions that will guide sentiment tagging*
  ▪ *Experts read and classify all story in the sample using the Tagging Guide developed in step two*
  ▪ *Machine learning algorithms trained from sample to automate tagging*

Primary Results

I. Media Coverage/Tone and Activism (Probability of being targeted)

	Probit Model	Linear Probability
Media Coverage (AEV)	0.329*** (14.62)	0.026*** (5.70)
Media Coverage (No. of Articles)	0.290*** (16.15)	0.022*** (4.43)
Media Tone (ESS)	-1.382*** (-3.71)	-0.061 (-1.50)
Media Tone (CSS)	-0.484 (-0.43)	-0.255** (-2.03)
Media Tone (AES)	-0.260*** (-2.92)	-0.024*** (-2.46)

II. Media Tone and Activism Outcome (Probability of activists winning)

	Probit Model	Linear Probability
Media Tone (ESS)	-2.461** (-2.32)	-0.533** (-1.97)
Media Tone (CSS)	-3.731 (-1.11)	-0.901 (-1.02)
Media Tone (AES)	-0.504** (-2.01)	-0.118* (-1.80)

III. Instrumental Variable for Media Coverage – Name Fluency

	First Stage	Second Stage	First Stage	Second Stage
Company Name Fluency	0.052*** (4.11)		0.038*** (4.33)	
Media Coverage (No. Articles) - Instrumented by name fluency		0.259*** (8.35)		
Media Coverage (AEV) - Instrumented by name fluency				0.365*** (7.22)

IV. Instrumental Variable for Media Coverage – IR Consultants

	First Stage	Second Stage	First Stage	Second Stage
Investor Relation	0.061*** (5.31)		0.107*** (7.95)	
Media Coverage (No. Articles) - Instrumented by IR		0.295*** (10.78)		
Media Coverage (AEV) - Instrumented by IR				0.404*** (8.21)

Addressing Endogeneity and Identification

✓ **Simultaneity or Reverse Causality :** Media variables created prior to the activism announcement date.

✓ **Measurement Error :** Use two measures of coverage; three measures of Tone; use of Principal Component Analysis (PCA).

✓ **Omitted Variables Bias :** Appropriate controls borrowed from the extant shareholder activism literature, with year and firm fixed effects.

✓ **Identification:** Instrumental Variables (IV)
  ▪ *Firm's name fluency (Following Green and Jame, JFE, 2013)*
  ▪ *Use an external Investor Relations (IR) Consultant (Solomon, JF, 2012)*

Instrumental Variables

❖ **First IV – Firm's Name Fluency**
  ➢ Z (Instrument for media coverage, X): Name Fluency
    ▪ **Relevance:** Name Fluency → familiar and preferred → broader coverage in media (psychology literature: See *Alter and Oppenheimer, 2009*): confirmed in the first stage (significant at 1% level; R^2=76.4%).
    ▪ **Exclusion:** Name Fluency (Z) can only influence activism decisions (Y) via its effect on media coverage, but not in any other way. Company names are decided at the time of incorporation.

❖ **Second IV – Use of an external Investor Relations Consultant**
  ➢ Z (Instrument for media coverage, X): Use of External Investor Relations (IR)
    ▪ **Relevance:** IR → broader coverage in media (See Solomon, JF, 2012): confirmed in the first stage (significant at 1% level; R^2=75.8%).
    ▪ **Exclusion:** IR (Z) can only influence activism decisions (Y) via its effect on media coverage, but not in any other way. *"IR firms do not obviously affect company operations, but may affect media coverage directly, making them a very useful way to examine the effects of media itself." – Solomon (JF, 2012)*

Robustness Tests

➢ **Media Tone and Analysts' Divergence of Opinion**
  ▪ During the times of the greatest divergence of opinion, the activists rely more on media.

➢ **Media Tone and The Market Response**
  ▪ Negative association between cumulative abnormal return (CAR) on the announcement of activism and positive tone.

➢ **Media Coverage/Tone and Activism – Principal Component Analysis (PCA)**
  ▪ Results are consistent in all the models using PCA (two different measures of measures media coverage and three different measures of media tone).

➢ **Media Coverage and Hedge Fund Activism**
  ▪ Results are consistent with the main results.

➢ **Sources of Media**
  ▪ Results are consistent when I exclude press releases.

➢ **Media Tone and Investor Sentiment Index**
  ▪ During times of overall low sentiments, the shareholder activists become less sensitive to media tone.