"The Value of Visibility"
by Alexander Hillert and Michael Ungeheuer

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March 8, 2017, Columbia Business School, New York
Articles on Pfizer Inc. in the New York Times in 2011:

1. Article on January 2, 2011
   - Headline: “Coupons for Patients, but Higher Bills for Insurers”
   - Text: “[…] Last month, for instance, Pfizer introduced a new card that can reduce the co-pay on its blockbuster drug Lipitor to $4 a month, a savings of up to $50 […]”

2. Article on January 4, 2011
   - Headline: “In Japan, Pfizer Is Short of Drug To Help Smokers”
   - Text: “[…] The tax increase should also have been a bonanza for Pfizer, the world's biggest pharmaceutical company, which makes the leading drug to help smokers break the habit. Instead, it became a missed opportunity […]”

…
Articles on Pfizer Inc. (continued):

11. Article on May 4, 2011
   • Headline: “Weak Earnings Deflate Wall Street Rally”
   • Text: “After two weeks of strong earnings pumped up the markets, weak results from the drug maker Pfizer and others deflated a broad earnings rally […].”

31. Article on December 27, 2011

→ 31 articles in 2011
Articles on Allergan Inc. in the New York Times in 2011:

1. Article on February 17, 2011:
   • Headline: “F.D.A. Approves Band Device for Less Obese”
   • Text: “[…] The Food and Drug Administration on Wednesday approved the wider use of Allergan's Lap-Band stomach-restricting device to some people who are just barely obese […]”

→ 1 article in 2011

→ What is the relation between firm visibility and financial markets?
Research Question

What is the relation between firm visibility and stock returns?

More visible firms have higher returns because…

1. media coverage serves as advertising
2. and lowers costs of monitoring corrupt or inefficient managerial behavior

→ Visibility positively related to performance.
Our Contribution

  - All ordinary shares listed on the major exchanges.
  - NYSE, Amex, and Nasdaq: 23,517 over our sample period from 1926 to 2014.

- Carefully control for determinants of media coverage.

- Analyze the channels of the visibility effect.
Newspaper Data (1)

• New York Times Chronicle
  • Yearly number of NYT articles since 1851.

• New York Times
  • One of the leading US newspapers (3rd largest by circulation)
  • Large business section (2nd highest firm coverage)
  • Used in previous studies, e.g., García (2013)
• Coverage of Chrysler and General Motors

→ GM has higher visibility than Chrysler.
• Alternative newspaper dataset: LexisNexis
  • National newspapers:
    • New York Times (1973-2013)
    • Washington Post (1977-2013)
    • Wall Street Journal (1973-2013)
    • USA Today (1989-2013)
    • LexisNexis provides a “Relevance Score”
      80 and more indicates “major reference” to the company
  • Article text available
Quintile portfolios on raw media coverage

<table>
<thead>
<tr>
<th>Portfolio</th>
<th># of articles</th>
<th>NYSE Size Decile</th>
</tr>
</thead>
<tbody>
<tr>
<td>low 1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>high 5</td>
<td>57</td>
<td>6</td>
</tr>
</tbody>
</table>

- High coverage firms are much larger → not comparable.
- Small firms earn higher returns (Fama and French, 1992, 1993).
  → returns of no coverage stocks overstated.

→ Not controlling for differences in characteristics will bias results!

Low coverage: **Depomed Inc.**
2nd NYSE size decile, $288 million mcap, 0 articles.

High coverage: **Pfizer Inc.**
10th NYSE size decile, $166,346 million mcap, 31 articles.
Quintile portfolios on residual media coverage

<table>
<thead>
<tr>
<th>Portfolio</th>
<th># of articles</th>
<th>NYSE Size Decile</th>
</tr>
</thead>
<tbody>
<tr>
<td>low 1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>high 5</td>
<td>35</td>
<td>5</td>
</tr>
</tbody>
</table>

- Low coverage: **Allergan Inc.**
  10\textsuperscript{th} NYSE size decile, $27$ billion mcap, 1 article.

- High coverage: **Pfizer Inc.**
  10\textsuperscript{th} NYSE size decile, $166$ billion mcap, 31 articles.

- Low coverage (portfolio 1) and high coverage (portfolio 5) are now comparable.
Media Coverage and Returns – Univariate Portfolio Sorts

Quintile portfolios on residual newspaper coverage in year t

<table>
<thead>
<tr>
<th></th>
<th>Year t + 1</th>
<th>Year t + 2</th>
<th>Year t + 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>low 1</td>
<td>13.89%</td>
<td>14.30%</td>
<td>15.53%</td>
</tr>
<tr>
<td>2</td>
<td>14.98%</td>
<td>15.94%</td>
<td>16.49%</td>
</tr>
<tr>
<td>3</td>
<td>15.25%</td>
<td>16.08%</td>
<td>17.46%</td>
</tr>
<tr>
<td>4</td>
<td>16.35%</td>
<td>16.21%</td>
<td>17.88%</td>
</tr>
<tr>
<td>high 5</td>
<td>16.49%</td>
<td>16.90%</td>
<td>17.60%</td>
</tr>
<tr>
<td>5-1</td>
<td>2.60%***</td>
<td>2.60%***</td>
<td>2.07%***</td>
</tr>
<tr>
<td></td>
<td>(3.56)</td>
<td>(3.85)</td>
<td>(3.20)</td>
</tr>
</tbody>
</table>

→ Firm visibility is positively related to future stock returns.
Media Coverage and Returns – Sharpe Ratios

Sharpe Ratios of Investment Strategies
1928 - 2014

- Market,
- Carhart (1997) factors,
and visibility strategy:
- buy high visibility stocks and sell short low visibility stocks.
- Sharpe ratio: 0.47

<table>
<thead>
<tr>
<th>Year</th>
<th>Market</th>
<th>Small - Big</th>
<th>Value - Growth</th>
<th>Momentum</th>
<th>Visibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1928 - 2014</td>
<td>0.40</td>
<td>0.25</td>
<td>0.39</td>
<td>0.48</td>
<td>0.47</td>
</tr>
</tbody>
</table>
Media Coverage and Returns – Subsamples

Performance of the visible firm strategy in different periods

<table>
<thead>
<tr>
<th>High-Low Visibility Returns</th>
<th>Year t + 1</th>
<th>Year t + 2</th>
<th>Year t + 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1928-1974 (NYT Chronicle)</td>
<td>2.67%***</td>
<td>2.30%**</td>
<td>2.18%**</td>
</tr>
<tr>
<td></td>
<td>(2.71)</td>
<td>(2.49)</td>
<td>(2.52)</td>
</tr>
<tr>
<td>1975-2014 (NYT Chronicle)</td>
<td>1.94%**</td>
<td>2.30%***</td>
<td>1.33%**</td>
</tr>
<tr>
<td></td>
<td>(2.33)</td>
<td>(3.19)</td>
<td>(1.99)</td>
</tr>
<tr>
<td>1975-2014 (NYT LexisNexis)</td>
<td>2.30%**</td>
<td>2.92%***</td>
<td>2.55%***</td>
</tr>
<tr>
<td></td>
<td>(2.23)</td>
<td>(3.10)</td>
<td>(3.27)</td>
</tr>
<tr>
<td>2009-2014 (Internet Searches)</td>
<td>6.80%***</td>
<td>7.06%***</td>
<td>6.55%**</td>
</tr>
<tr>
<td></td>
<td>(2.60)</td>
<td>(3.72)</td>
<td>(2.38)</td>
</tr>
</tbody>
</table>

- Stable performance in all subperiods.
- Today’s world (digitalization): visibility premium even larger.
Media Coverage and Returns – Robustness

Alternative explanations
- Industry effects / visible industries vs. visible firms ✗
- Analyst coverage ✗
- Number of shareholders (Merton, 1987) ✗
- Ownership structure ✗
- Illiquidity ✗
Apple Inc. – New York Times article on January 10, 2007:

Apple, Hoping for Another iPod, Introduces Innovative Cellphone

“With characteristic showmanship, Steven P. Jobs introduced Apple's long-awaited entry into the cellphone world Tuesday, pronouncing it an achievement on a par with the Macintosh and the iPod. [...] But it was the ability to fuse those elements with a raft of innovations and Apple's distinctive design sense that had the crowd here buzzing. [...]”
Amazon.com Inc. – New York Times article on April 25, 2014:

Amazon's Revenue Grew 23 Percent in First Quarter, Nearing $20 Billion

“Amazon defines corporate prosperity in terms of sales growth rather than profit. By its definition, which has been embraced on Wall Street, the big Internet merchant had a strong first quarter. […] A few weeks ago, Amazon quietly introduced Dash, a wand that can be used to reorder household items, from toilet paper to guitar strings. […] The video commercial for Dash shows children restocking their house. And on Wednesday, Amazon introduced Prime Pantry, a grocery delivery service for its Prime customers. […]”
American Apparel Inc. – New York Times article on June 24, 2014:

When the Founder Misbehaves

“[…] Mr. Charney, who founded American Apparel, once an upstart darling retailer, was ousted last week by the company's board. He long lived under the shadow of speculation about inappropriate behavior with female employees and, in some cases, accusations of sexual harassment and assault that he always denied. Mr. Charney's dismissal raises all sorts of thorny corporate-governance questions for investors and boards about iconic -- and notorious -- leaders, especially in creative fields. Corporate America is filled with examples of chief executives and founders who stepped down after proof, or even suggestions, of impropriety. Some are fired quickly when investors and boards are alerted. […]”
Yahoo Inc. – New York Times article on April 17, 2014:

Yahoo's Former No. 2 Received $96 Million

“Henrique de Castro, who was fired in January as Yahoo's chief operating officer, was paid handsomely for his largely unsuccessful efforts to turn around the company's flailing advertising business. [...] Yahoo's board of directors -- which, like all boards, is supposed to justify its decisions on executive pay-outs to the company's shareholders -- said that Mr. de Castro's diamond-crusted golden parachute wouldn't have been quite so valuable if Yahoo's stock hadn't been on a tear during his tenure. [...] There was no word on how much of that stock price increase the board attributed to Mr. de Castro's work, as opposed to the rising value of Yahoo's investment in Alibaba. The Internet company did signal that it was trying to start a fresh chapter, nominating three new board members. [...]”
Does the tone of the news play a role?

- Textual analysis approach by Loughran and McDonald (2011):
  
  $\text{Negativity} = \frac{\text{# of negative words}}{\text{total # of words}}$

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**Returns of High - Low Visibility Strategy**

- **Good news** $\rightarrow$ advertising channel
- **Bad news** $\rightarrow$ governance channel

<table>
<thead>
<tr>
<th>Toned</th>
<th>Returns</th>
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<tbody>
<tr>
<td>Negative</td>
<td>3.17%</td>
</tr>
<tr>
<td>Neutral</td>
<td>2.43%</td>
</tr>
<tr>
<td>Positive</td>
<td>3.66%</td>
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Media coverage as advertising
• more visible firms should have stronger sales growth.
• regression results are consistent.

Media coverage as monitoring device
• higher visibility should be related to improvements in corporate governance.
• regression results ("entrenchment index", Bebchuk et al., 2009) are consistent.
Value of Visibility – Profitability

Media coverage and profitability: more visible firms have...

- significantly higher three year gross profitability growth.
  Firms from top decile have 4.02 percentage points higher growth than firms from the bottom decile.

- significantly higher three year operating profitability growth.
  Firms from top decile have 3.84 percentage points higher growth than firms from the bottom decile.

More visible firms are more profitable. ✔
A signal for mispricing: returns in earnings announcement (EA) months

Investors do not price the benefits of visibility adequately.
Conclusion

- Visibility is positively related to future stock returns.

- Visibility as inadequately priced valuable advertising and monitoring: High coverage firms exhibit
  - higher sales growth and improvements in corporate governance
  - higher profitability growth
  - particularly high returns around earnings announcements

- Positive role of the media as a watchdog for managerial misbehavior.
Thank you very much for your attention!