
EFL Spring Conference Presentation

Master Thesis
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Background and Motivation

Earnings conference calls:
• Popular medium, where U.S. firms communicate information to investors
• Accompany written quarterly earnings reports
• Two parts: (Prepared) presentation and discussion with investors

Earlier research findings:
• Investors trade heavily during conference calls

Do conference calls contain additional valuable information?

Look at how managers speak, rather than what they say
Aim of the Thesis

Hypothesis:
- Managers know more than investors about their firm’s threats and opportunities
→ Managers’ speech can reflect part of this knowledge (intentionally or not)

Research Questions:
1. Does tone in earnings conference calls predict future earnings?
2. Which sections’ and speakers’ tone is most valuable?
Data from Four Different Sources

1. Earnings conference call transcripts
   - Downloaded manually as .txt files

2. Analyst Estimates
   - Earnings forecasts
   - Source: I/B/E/S database

3. Firm characteristics
   - Earnings per share, size, ...
   - Source: Compustat database

4. Market data
   - Stock- / market returns
   - Source: WRDS database

Final Dataset

- 10,258 transcripts
- 429 different firms
- 64 quarters (Q1 2001 – Q4 2016)
Challenges in Analyzing Text Data

Main challenge:
• Managers’ speech is *textual, unstructured* data
• Econometric methods require *quantitative, structured* data

### Company Data

<table>
<thead>
<tr>
<th>Company</th>
<th>Date</th>
<th>Negativity</th>
<th>Optimism</th>
<th>Weakness</th>
<th>Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>Q1 2017</td>
<td>2,0%</td>
<td>5,0%</td>
<td>2,0%</td>
<td>1,0%</td>
</tr>
<tr>
<td>Apple</td>
<td>Q2 2017</td>
<td>5,0%</td>
<td>1,0%</td>
<td>3,0%</td>
<td>1,5%</td>
</tr>
</tbody>
</table>

...
Textual Analysis

Major steps:

1. Gather transcripts
2. Clean raw text files
3. Identify speakers and sections
4. Count word frequencies
5. Categorize words
6. Calculate tone measures

Software used:
- Python 3.5

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
<th>Uncertain</th>
<th>Strong</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>Loss</td>
<td>Could</td>
<td>Will</td>
<td>Could</td>
</tr>
<tr>
<td>Strong</td>
<td>Decline</td>
<td>May</td>
<td>Best</td>
<td>May</td>
</tr>
<tr>
<td>Great</td>
<td>Restructuring</td>
<td>Believe</td>
<td>Always</td>
<td>Maybe</td>
</tr>
</tbody>
</table>

Negativity

"I mean you were sort of surprised by the $75 million loss. How much more of this can we expect?" (Analyst question)

"Despite facing a challenging quarter, we achieved ...“ (CFO presentation)

"We see great opportunities to expand our business in ...“ (CEO presentation)
Main Results

Main result: Tone predicts future firm performance

- A one standard-deviation increase in Negativity predicts
  - a 9% decrease in earnings per share in the next quarter
  - a 1% decrease in market-adjusted returns over the next 60 days

Interesting observations:

1. Asymmetric information content:
   - Negative tone strongly predicts weak next-quarter performance
   - Positive tone has no predictive power

2. Speakers:
   - CEO’s tone is most valuable
   - CFO’s tone is least valuable

3. Sections:
   - Presentation tone is more valuable than Q&A tone
Thank you for your Attention!

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