

Accounting Applications of Social Media Data

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Dr. Richard M. Crowley
rcrowley@smu.edu.sg
<http://rmc.link/>

Social media data



What data is on social media?

Posting on all sorts of things by all sorts of groups and individuals

1. General population (with some caveats)
2. Specific groups of interest (e.g., investors)
3. Corporations (for many reasons!)
4. Individuals with influence over or information about company matters (e.g., executives)

What can we learn from it?

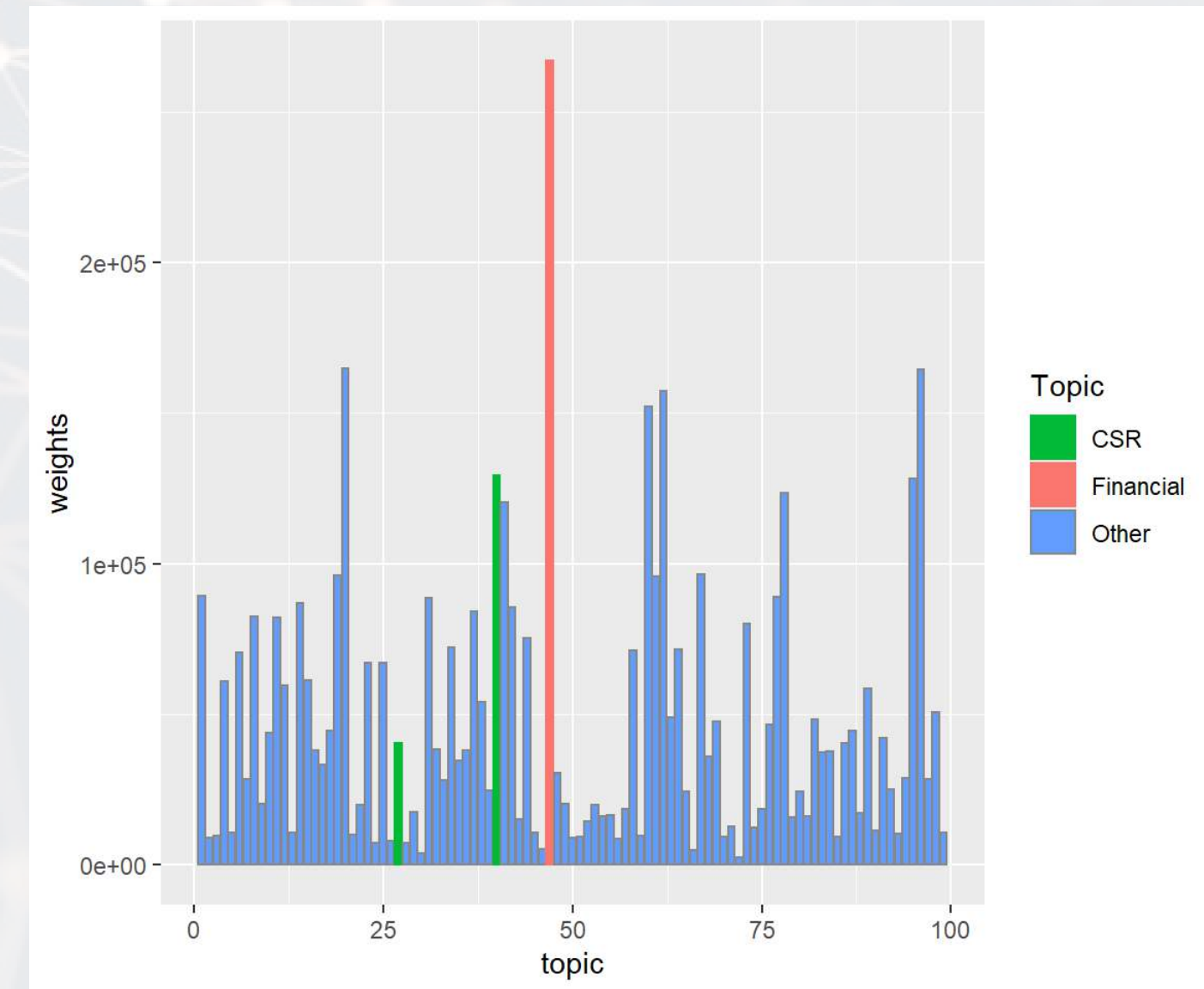
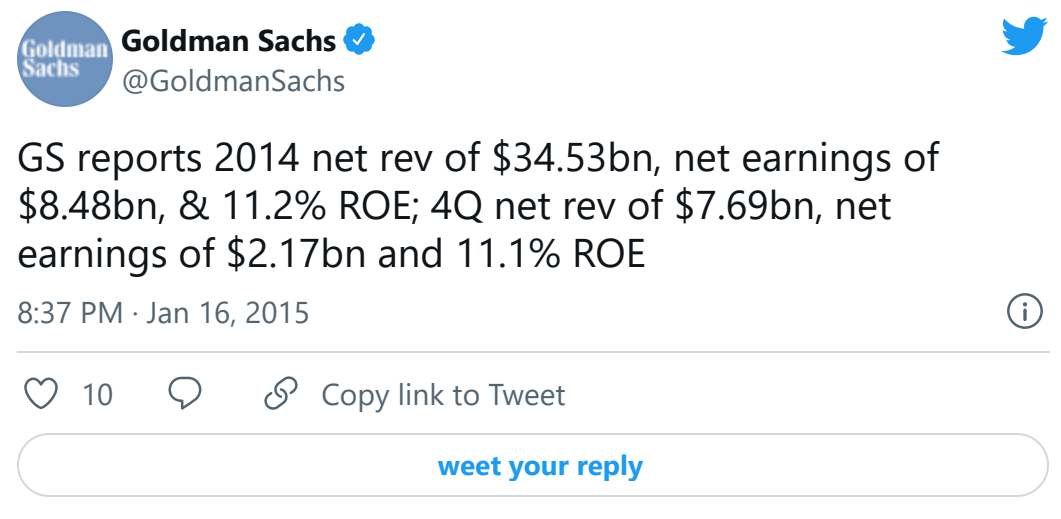
1. Gain some understanding of broad-level views on topics at granular time scales
 - Much easier than a survey, and easily scalable
2. Observe changing sentiments, interests, or behaviors of a group
3. Can directly observe corporate actions regarding disclosure, marketing, etc.
4. Can examine how certain individuals play a roll in a bigger picture

Applications of narrower measures to accounting

How does social media activity disclose info *or* impact participants' interpretation of info?

How do companies disclose...

- Around earnings announcements?^[1]
- Around product recalls?^[2]
- Financial information?^[3,4]
- ESG information and activities?^[5]



Applications of narrower measures to accounting

How does social media activity disclose info *or* impact participants' interpretation of info?

What role do executives play?

- Impact of their sentiment on social media^[6]
- Economically important, provide trust^[7]

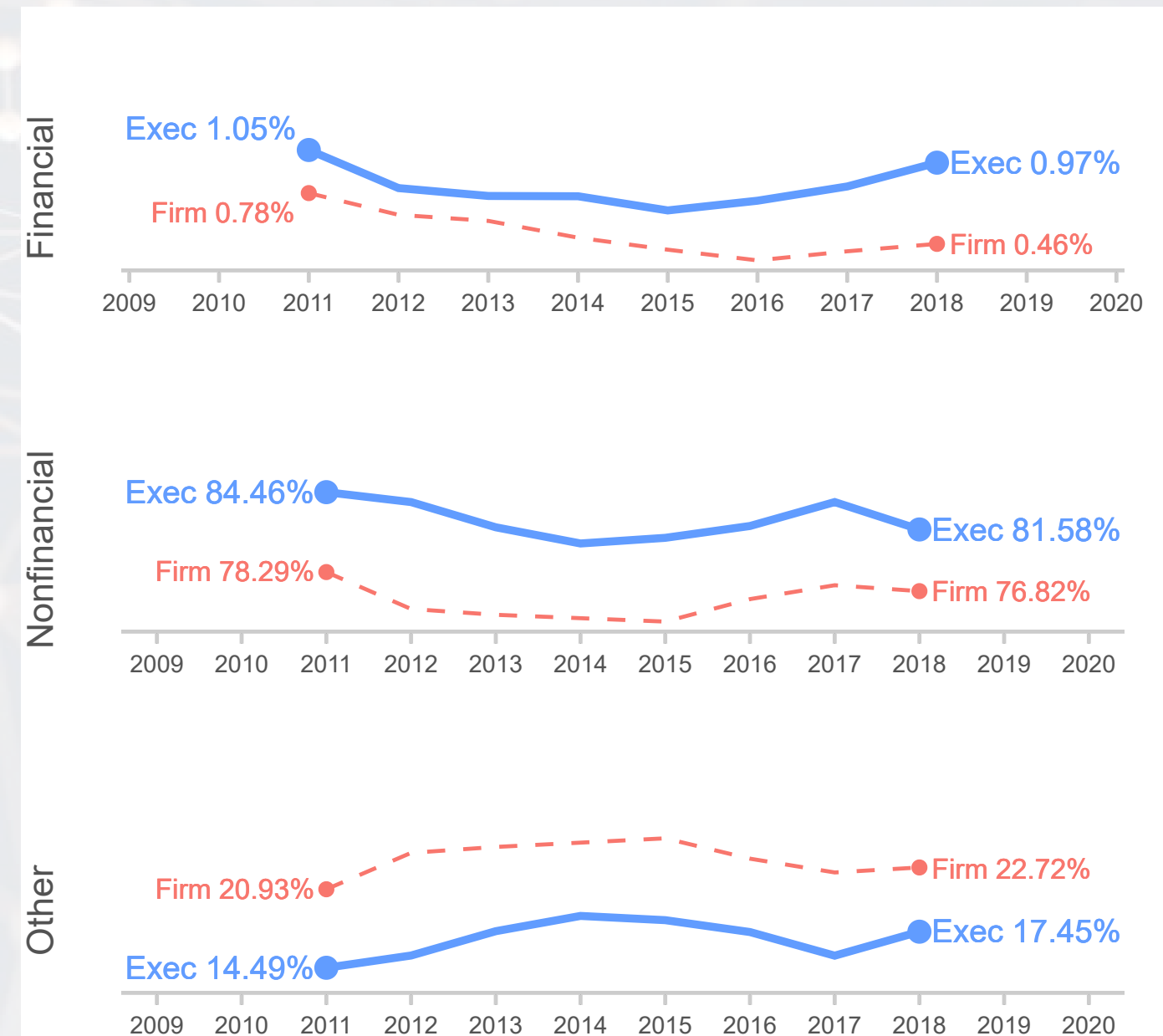


Continuing to execute in both our product & SG&A cost reduction initiatives will provide consistent EPS leverage #MDTEarnings

7:05 AM · Feb 20, 2013

2 Copy link to Tweet

weet your reply



Applications of broad measures to accounting

Broader measures can capture constructs/behaviors that are otherwise unobservable

Can misinformation regulations reduce the threat of misinformation in capital markets?

Examine 450M+ posts on an investor forum in conjunction with multiple anti-fake news laws^[8]

- Requires training a supervised ML model for fake news or rumor classification in Chinese

Are there unintended consequences of misinformation regulations on capital market efficiency?

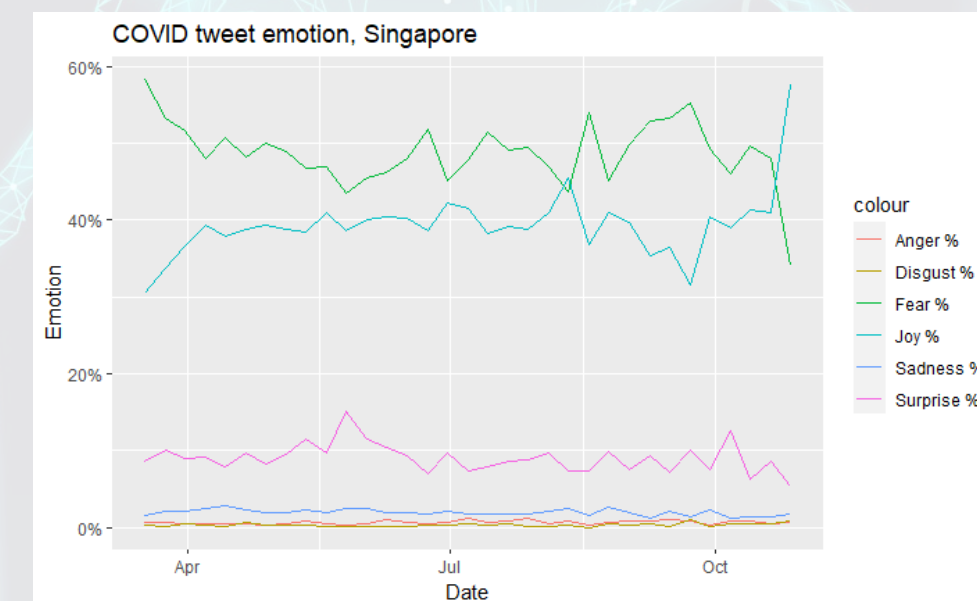
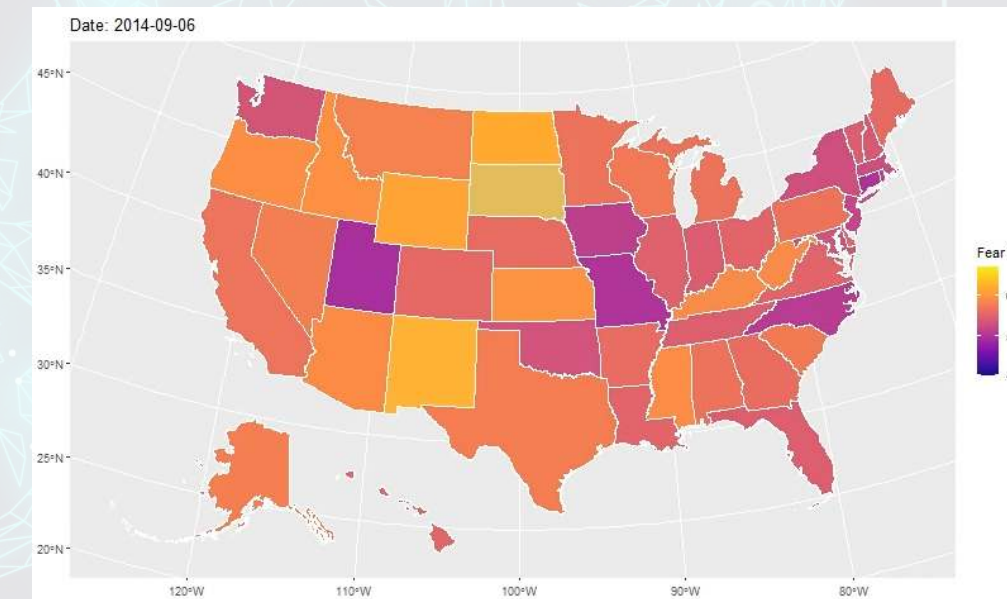
- Requires collecting a global set of corporate tweets
 - 10,000+ profiles tracked

Applications of broad measures to accounting

Broader measures can capture constructs/behaviors that are otherwise unobservable

How does a populace's emotion about reopening with COVID impact economic recovery?

- Examine 1B+ tweets to capture emotion at fine-grained geographic and temporal scales^[9]
 - State-day level variation in fear, sadness, anger, joy, and surprise



Thank you!

For more details, you can check out slides from my research talks and PhD courses,
hosted at <https://rmc.link/>

Dr. Richard M. Crowley
rcrowley@smu.edu.sg
<https://rmc.link/> • [@prof_rmc](#)

References

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6. Chen, Hailiang, Byoung-Hyoun Hwang, and Baixiao Liu. “The Emergence of ‘Social Executives’ and Its Consequences for Financial Markets.” Available at SSRN 2318094 (2019).
7. Crowley, Richard M., Wenli Huang, and Hai Lu. “Executive Tweets.” (2020): 1.
8. Current work in progress by Richard M. Crowley, Yun Lou, Samuel Tan, and Liandong Zhang under an MOE Tier 2 grant.
9. Current work in progress by Richard M. Crowley, Hai Lu, and Jee-Eun Shin under an MOE Tier 1 grant.

Packages used for these slides

- dplyr
- ggplot2
- gridExtra
- kableExtra
- knitr
- revealjs