



## *Syllabus*

# *Investor Sentiment and Textual Analysis - 55757*

*Last update 18-02-2019*

*HU Credits:* 1

*Responsible Department:* Business Administration

*Academic year:* 0

*Semester:* 2nd Semester

*Teaching Languages:* English

*Campus:* Mt. Scopus

*Course/Module Coordinator:* Prof Noah STOFFMAN

*Coordinator Email:* [nstoffma@indiana.edu](mailto:nstoffma@indiana.edu)

*Coordinator Office Hours:*

*Teaching Staff:*  
Prof STOFFMAN

*Course/Module description:*

*This course will introduce students to recent developments in the fast-growing literature*

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that

aims to understand the behavior of investors and firms by analyzing text and other new

sources of information.

Students are expected to come to class prepared to discuss the assigned papers (see below).

Each class will consist of a brief introduction by me, followed by a lengthy discussion of the

papers. I expect students to participate actively in these discussions. In particular, students

should consider the following questions when reading the papers:

1. What is the primary research question that the authors set out to answer?
2. How do the authors try to answer the question? What data do they use, and what

are the econometric approaches taken?

3. What do they find?

4. Are the results believable? Are the conclusions supported by the evidence?

5. How could you improve the paper?

6. Is there a related question that you could answer through your own research?

Course/Module aims:

Learning outcomes - On successful completion of this module, students should be able to:

understand the behavior of investors and firms by analyzing text and other new sources of information

Attendance requirements(%):

Teaching arrangement and method of instruction:

Course/Module Content:

All papers will be discussed in class, and should be read before coming to class. However,

those marked with a \* will be discussed in detail, and students should be especially prepared to discuss these.

1. Overview of techniques and findings

□ \* Loughran, Tim, and Bill McDonald, 2016, Textual analysis in accounting and finance: A survey, *Journal of Accounting Research* 54, 1187-1230.

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□ \* Gentzkow, Matthew, Bryan T. Kelly and Matt Taddy, *Text as data*, working paper.

□ Das, Sanjiv R., 2014, *Text and context: Language analytics in finance*, *Foundations and Trends in Finance* 8, 145-261.

□ *Optional book-length introduction to natural language processing: Bird, S., Klein, E.*

*and Loper, E., 2009, Natural language processing with Python: analyzing text with the natural language toolkit*, O'Reilly Media, Inc.

## 2. Media in financial economics

□ Baker, S. R., N. Bloom, and S. J. Davis, 2016, *Measuring economic policy uncertainty*,

*Quarterly Journal of Economics* 131, 1593-1636.

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□ Bhattacharya, Utpal, Neal Galpin, Rina Ray, and Xiaoyun Yu, 2009, *The role of the media in the internet IPO bubble*, *Journal of Financial and Quantitative Analysis* 44, 657-682.

□ \* Dougal, Casey, Joseph Engelberg, Diego Garcia, and Christopher A Parsons, 2012,

*Journalists and the stock market*, *The Review of Financial Studies* 25, 639-679.

□ \* Engelberg, Joseph E., and Christopher A. Parsons, 2011, *The causal impact of media*

*in financial markets*, *The Journal of Finance* 66, 67-97.

□ Gentzkow, Matthew, and Jesse M. Shapiro, 2010, *What drives media slant? Evidence*

*from U.S. daily newspapers*, *Econometrica* 78, 35-71.

□ Griffin, John M., Nicholas H. Hirschey, and Patrick J. Kelly, 2011, *How important is the financial media in global markets?*, *The Review of Financial Studies* 24, 3941-3992.

□ \* Gurun, Umit G., and Alexander W. Butler, 2012, *Don't believe the hype: Local media slant, local advertising, and firm value*, *The Journal of Finance* 67, 561-598.

□ \* Tetlock, Paul C., 2007, *Giving content to investor sentiment: The role of media in the stock market*, *The Journal of Finance* 62, 1139-1168.

## 3. Investor sentiment and attention

□ Antweiler, Werner, and Murray Z. Frank, 2004, *Is all that talk just noise? The information content of internet stock message boards*, *The Journal of Finance* 59, 1259-1294.

□ Barber, Brad M., and Terrance Odean, 2007, *All that glitters: The effect of attention*

*and news on the buying behavior of individual and institutional investors*, *The Review of Financial Studies* 21, 785-818.

□ Chen, Hailiang, Prabuddha De, Yu Hu, and Byoung-Hyoun Hwang, 2014, *Wisdom of crowds: The value of stock opinions transmitted through social media*, *The Review of*

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*Financial Studies* 27, 1367-1403.

□ Cookson, J. Anthony and Marina Niessner, 2016, *Why Don't We Agree? Evidence from a Social Network of Investors*, Working Paper.

□ \* Da, Zhi, Joseph Engelberg, and Pengjie Gao, 2011, *In search of attention*, *The Journal of Finance* 66, 1461-1499.

□ \* Da, Zhi, Joseph Engelberg, and Pengjie Gao, 2014, *The sum of all FEARS: investor*

*sentiment and asset prices*, *The Review of Financial Studies* 28, 1-32.

□ Das, Sanjiv R., and Mike Y Chen, 2007, *Yahoo! For amazon: Sentiment extraction from small talk on the web*, *Management science* 53, 1375-1388.

□ \* Garcia, Diego, 2013, *Sentiment during recessions*, *The Journal of Finance* 68, 1267-1300.

□ \* Tetlock, Paul C., 2011, *All the news that's fit to reprint: Do investors react to stale*

*information?*, *The Review of Financial Studies* 24, 1481-1512.

#### 4. Corporate reporting and the media

□ \* Ahern, Kenneth R., and Denis Sosyura, 2014, *Who writes the news? Corporate press releases during merger negotiations*, *The Journal of Finance* 69, 241-291.

□ Boudoukh, Jacob, Ronen Feldman, Shimon Kogan, and Matthew Richardson, 2013, *Which news moves stock prices? A textual analysis*, NBER Working Paper.

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□ \* Brown, Stephen V., and Jennifer Wu Tucker, 2011, *Large-sample evidence on firms*□

*year-over-year MD&A modifications*, *Journal of Accounting Research* 49, 309-346.

□ \* Cohen, Lauren, Dong Lou, and Christopher Malloy, 2013, *Playing favorites: How firms prevent the revelation of bad news*, NBER Working Paper.

□ Cohen, Lauren, Christopher J Malloy, and Quoc H. Nguyen, 2016, *Lazy prices*, Working Paper.

□ Hillert, Alexander, Alexandra Niessen-Ruenzi, and Stefan Ruenzi, 2014, *Mutual fund*

*shareholder letter tone: Do investors listen?*, Working Paper.

□ \* Huang, Allen H., Reuven Lehavy, Amy Y. Zang, and Rong Zheng, 2017, *Analyst information discovery and interpretation roles: A topic modeling approach*, *Management Science*.

□ Loughran, Tim, and Bill McDonald, 2017, *The use of EDGAR filings by investors*, *Journal of Behavioral Finance* 18, 231-248.

□ Mayew, William J., and Mohan Venkatachalam, 2012, *The power of voice: Managerial affective states and future firm performance*, *The Journal of Finance* 67, 1-43.

#### 5. Extracting meaning from corporate filings

□ \* Bodnaruk, Andriy, Tim Loughran, and Bill McDonald, 2015, *Using 10-K text to gauge financial constraints*, *Journal of Financial and Quantitative Analysis* 50, 623-646.

□ \* Hoberg, Gerard, and Gordon Phillips, 2016, *Text-based network industries and endogenous product differentiation*, *Journal of Political Economy* 124, 1423-1465.

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- Henry, E. and Leone, A.J., 2015, *Measuring qualitative information in capital markets research: Comparison of alternative methodologies to measure disclosure tone*, *Accounting Review*, 91, 153-178.
- \* Jegadeesh, Narasimhan, and Di Wu, 2013, *Word power: A new approach for content analysis*, *Journal of Financial Economics* 110, 712-729.
- Li, Feng, 2010, *The information content of forward-looking statements in corporate filings—a naïve bayesian machine learning approach*, *Journal of Accounting Research* 48, 1049-1102.
- \* Loughran, Tim, and Bill McDonald, 2011, *When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks*, *The Journal of Finance* 66, 35-65.
- Loughran, Tim, and Bill McDonald, 2014, *Measuring readability in financial disclosures*, *The Journal of Finance* 69, 1643-1671.
- Tetlock, Paul C., Maytal Saar-Tsechansky, and Sofus Macskassy, 2008, *More than words: Quantifying language to measure firms' fundamentals*, *The Journal of Finance* 63, 1437-1467.

Required Reading:

See course content.

Additional Reading Material:

*Grading Scheme:*

Additional information:

The course grade will be determined by a student's preparedness for and participation in class.