

Ph.D. DISSERTATION DEFENSE

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Degree:	Doctor of Philosophy
School/Department:	School of Business / Business Administration
Date:	Friday, April 19, 2024
Time:	10:30 am – 12:00 pm
Time/Location:	https://stevens.zoom.us/j/97310872383
Title:	More than Words: Mining Managerial Disclosures for Hidden Cues
Chairperson:	Dr. Rong Liu, Information System, School of Business
Committee Members:	Dr. Ying Wu, Finance, School of Business Dr. Bei Yan, Information System, School of Business Dr. Majeed Simaan, Finance/FE, School of Business Dr. Zhongju (John) Zhang, Information System, W. P. Carey School of Business, Arizona State University

ABSTRACT

Extensive research has demonstrated that qualitative information in managerial disclosures holds significant value for understanding financial markets and events. Traditional textual analysis methods often rely on predefined dictionaries to measure qualitative information without adequately considering its contextual nuances. To address this limitation, my dissertation employs contextualized methods based on deep learning to quantify underexplored qualitative information or hidden cues from managerial disclosures. Specifically, it focuses on: (1) granular changes of 10-K reports and (2) analysts' skeptical attitudes in earnings calls. Empirical experiments show that these hidden cues provide predictive capabilities for financial fraud and market activities.

The first essay provides a novel method to granularly track the changes in financial disclosures over time. This method first optimally matches the paragraphs in two consecutive disclosures by their similarities, and then measures the changes in fraud-relevant words in the matched paragraphs. I found that these granular change metrics are predictive of financial fraud. Furthermore, a customized deep-learning model is proposed to predict financial frauds using the year-over-year change trajectory as an input. This study finds that financial fraud can be predicted more accurately with a longer change trajectory.

The second essay introduces a novel and direct measure for quantifying analysts' skeptical attitudes with a deep-learning approach. Skepticism is defined as analysts' skeptical attitudes towards firm fundamentals or managers' interpretation. I developed a customized deep-learning model on top of the recent large language model (BERT) to quantify analysts' skepticism. Through extensive regression analyses, I found that skepticism shows a significant negative association with cumulative abnormal returns. These findings suggest that analysts' skepticism reveals new informative signals about firms' fundamentals.

Extending from the second essay, the third essay investigates how call-attending analysts' skepticism shapes managers' responses and the view of the overall analyst population. I examined the implications of skepticism from two aspects: (1) managers' responses and (2) analysts' revisions. My findings show that analysts' skepticism prompts managers to provide higher-quality responses with less information withholding, and it can illicit more adverse information. Consequently, the overall group of analysts responds to this negative signal and adjusts their expectations or forecasts downwards.