FEDERICO SIANO

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SSRN Google Scholar Website

EDUCATION

Ph.D. in Accounting, *Boston University*	2017–2022 (*expected*)
M.Sc. in Accounting and Finance, *London School of Economics*	2012–2013
M.Sc. in Business Administration and Law, *Bocconi University*	2009–2011
B.Sc. in Business Administration and Management, *Bocconi University*	2006–2009

RESEARCH INTERESTS

I specialize in empirical capital markets and disclosure research. I am particularly interested in applying frontier data science—including textual analysis, machine learning, and Neural Language Models—to investigate the decision-relevance of unstructured accounting information.

TEACHING INTERESTS

I have taught, and I am interested in teaching accounting analytics and financial accounting courses.

RESEARCH PUBLICATIONS

[1] **Transfer Learning and Textual Analysis of Accounting Disclosures: Applying Big Data Methods to Small(er) Data Sets**

- *with Peter Wysocki*
- ***Accounting Horizons***

Abstract: We introduce and apply machine transfer learning methods to analyze accounting disclosures. We use the examples of the new BERT language model and sentiment analysis of quarterly earnings disclosures to demonstrate the key transfer learning concepts of: (i) pre-training on generic "Big Data", (ii) fine-tuning on small accounting data-sets, and (iii) using a language model that captures context rather than stand-alone words. Overall, we show that this new approach is easy to implement, uses widely-available and low-cost computing resources, and has superior performance relative to existing textual analysis tools in accounting. We conclude with suggestions for opportunities to apply transfer learning to address important accounting research questions.

WORKING PAPERS

[2] **Contextualized News in Corporate Disclosures: A Neural Language Approach**

- *Job Market Paper*
- *Committee: Peter Wysocki (Chair); Francois Brochet; Eddie Riedl; Sugata Roychowdhury*

Abstract: This study applies a new textual analysis approach—a BERT-based neural language model—to quantify and understand value-relevant news using word context within textual disclosures. I improve upon traditional disclosure analysis methods by: (i) modeling disclosures as sequentially connected and interacting elements (rather than isolated textual attributes), and (ii) directly predicting the magnitude and direction of disclosure news. Using this new approach, I find that contextualized news in quarterly earnings announcement text explains five times more variation in short-window stock returns, volumes, and future earnings than accounting numbers and traditional textual attributes. I also document that most news arises from (a) word sequencing (i.e., context), (b) text at the beginning of disclosures, and (c) text describing numbers. Overall, I highlight the importance of contextualized disclosures for researchers, regulators, and practitioners.

[3] **Changes in Risk Factor Disclosures and the Variance Risk Premium**

- *with Matt Lyle and Eddie Riedl*
- *Revise and Resubmit at* ***The Accounting Review***

Abstract: This paper examines how changes in firms' risk disclosures affect a key market measure of risk. Our proxy for changes in risk disclosures is the addition and deletion of individual risk factors to firms' 10-K annual filings, identified via textual analysis of the risk factors section. Our market measure proxy for risk is the variance risk premium (VRP), which captures the market's uncertainty about the risks the firm faces. Following the theoretical predictions of recent literature, we expect that newly disclosed signals of risk-factor exposure decrease the uncertainty surrounding firm risk, as proxied via the VRP. Empirical results strongly support these predictions: greater changes in individual risk factors are related to a lower VRP. Importantly, our new proxy based on individual risk factors offers incremental insights as compared to aggregate textual measures (including of risk) based on word counts. Collectively, our findings suggest that textually evaluating individual risk factors reveals information about the uncertainty regarding firm risk.

[4] **Assessing the SASB Materiality Map Using Textual Analysis**

- *with Aliya Korganbenkova, Eddie Riedl, and Estelle Sun*

[5] **Finding the Narrative in the Numbers: Long-Term Investors' Demand for Accounting Information**

[6] **The Primacy of Numbers in Financial and Accounting Disclosures: Implications for Textual Analysis Research**

- *with Peter Wysocki*

WORK-IN-PROCESS

[7] **Visual, Vocal and Verbal Attributes of Real-Time Managerial Disclosures: Evidence from Virtual Annual Shareholders' Meetings**

[8] **Reported Financial Statements and Corporate Accounting Disclosure**

- *with Peter Wysocki*

[9] **Are Disclosures Conservative? A Machine Learning Approach**

- *with Sugata Roychowdhury and Peter Wysocki*

ACADEMIC PRESENTATIONS AND INVITED SPEECHES

Columbia University – The Accounting Design Project *(presenter)*	2021
Microsoft Internal Virtual Seminar Series *(presenter)*	2021
AAA/Deloitte Foundation/J. Michael Cook Doctoral Consortium *(presenter)*	2021
EAA Annual Congress *(presenter and discussant)*	2021
Accounting Horizons Conference on Data Analytics in Accounting *(presenter)*	2019
Conference in Financial Economics and Accounting (CFEA) *(presenter)*	2019
INFORMS Annual Meeting *(presenter)*	2019
Panel on Data Analysis in Finance – INFORMS Annual Meeting *(presenter)*	2019
AAA Northeast Region Impact the Future Conference *(presenter)*	2019
XV International Accounting Research Symposium *(presenter)*	2019

CONFERENCE PARTICIPATION

Contemporary Accounting Research (CAR) Conference (*invited*)	2021
Boston Empirical Accounting Conference	2019, 2018
UC Irvine Accounting Brown Bag Series (*invited*)	2019

Questrom Junior Faculty Mini-Conference 2019, 2018
BU Accounting Conference 2019
European Accounting Association Annual Meeting 2018
European Accounting Association PhD Forum 2018
Lisbon Accounting Conference 2017

TEACHING EXPERIENCE

Instructor
Introduction to Financial Analytics, *Boston University*, Evaluation: 4.8/5.0 Summer 2020

Teaching Assistant
Topics in Financial and Accounting Analytics, *Boston University* Spring 2020
Financial Accounting, *Boston University* Fall 2019
Financial Management, *Bocconi University* Spring 2012

PROFESSIONAL EXPERIENCE

Head of Listing, **Hi-MTF Stock Exchange** (Milan) 2014-2017

- Responsible for the admission to trading of fixed income and illiquid equity securities (€20+ billion traded/year)

Corporate Finance Analyst, **KPMG Advisory** (Rome) 2013-2014

Research Fellow, **Centre for Research on Sustainability and Value** (CReSV) (Milan) 2011

Assurance Summer Intern, **PWC** (London) 2010

SERVICE

Reviewer, *Contemporary Accounting Research* 2021
Reviewer, *FARS Midyear Meeting* 2021
Discussant, *EAA Virtual Annual Congress* 2021
Reviewer, *FARS Midyear Meeting* 2020
Reviewer, *Accounting Horizons* 2019
Reviewer, *Accounting Horizons Conference on Data Analytics in Accounting* 2019
Contributor, *Accounting Ph.D. Classes at Boston University on Applied Data Science* 2019
Contributor, *GitHub* 2018

HONORS AND AWARDS

AAA/Deloitte Foundation/J. Michael Cook Doctoral Consortium Fellow 2021
INQuires Fellowship, PwC 2020
Krish Menon Accounting Doctoral Fellowship, *Boston University* 2019
Travel Grants (x6), *Boston University* 2018-2019
Ph.D. Fellowship, *Boston University* 2017-2022
Graduation Honour Mention, *London School of Economics* (LSE) 2013
Excellent Dissertation Award, *Bocconi University* 2011
Summa Cum Laude Graduation, *Bocconi University* 2011

MEMBERSHIPS

American Accounting Association (AAA) 2019-present
National Investor Relations Institute (NIRI) 2019-2021
Institute for Operations Research and Management Sciences (INFORMS) 2019-2020
European Accounting Association (EAA) 2018-present

SPECIALIZED SKILLS

Python, Parallel Computing

REFERENCES

Professor Peter D. Wysocki
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Boston University
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Professor Eddie Riedl
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