Furkan M. Cetin

Northwestern University
Kellogg School of Management
2211 Campus Drive Room 4480
Evanston, IL 60208

2243016580 (cell)
furkan.cetin@kellogg.northwestern.edu
fmcetin.com
fmcetin

EDUCATION

Kellogg School of Management, Northwestern University — Evanston, IL
PhD, Accounting Information and Management — 2018 – 2023 (expected)

- Thesis Proposal: The Real Effects of Accounting on Innovation
- Committee: Andrew Leone (Co-Chair), Sugata Roychowdhury (Co-Chair), Beverly Walther, Ronald Dye, Dimitris Papanikolaou

Northwestern University — Evanston, IL
MSc, Chemistry — 2017 – 2018

- Thesis: "Chemistry for Renewable Energy Production and Storage: Molecular Engineering, Mechanically Interlocked Molecules and Quantum Investigation"
- Committee: Fraser Stoddart [*Nobel Laureate*] (Chair), Regan Thomson, Michael Wasielewski

Middle East Technical University — Ankara, TURKEY
BSc (High Honor), Industrial Engineering — 2012 – 2017
Double Major Student, Chemistry

RESEARCH INTERESTS

Financial accounting, real effects of accounting, innovation

WORKING PAPERS

The Real Effects of Accounting on Innovation: Evidence from ASC 606
Job Market Paper

- R&R at *The Accounting Review*
- Presented at Seven Minutes of Scholarship: An Interdisciplinary Symposium, LBS Trans Atlantic Doctoral Conference, Wharton Innovation Doctoral Symposium
- **Summary:** This study investigates the impact of the recent revenue recognition rule change, Accounting Standard Codification (ASC) 606, on drug development firms' investments in R&D alliances and innovation outcomes. ASC 606 allows managers to change revenue recognition timing and increases disclosure requirements. I find that drug development firms dependent on R&D alliance revenues accelerate revenue recognition and concurrently disclose more about the recognition process following ASC 606 adoption. Consistent with a resultant decrease in information asymmetry between managers and investors, these firms raise more capital and increase investments in R&D. Importantly, they form more R&D alliances as the information asymmetry between peer firms also decreases upon adopting ASC 606. Finally, I show that affected drug development firms exhibit higher innovation proxied by the number of drug candidates, number of patents, patent values, and citations. These findings suggest a specific and concrete mechanism of the real effects of a specific financial reporting standard on R&D alliances and innovation outcomes.

When Does Innovation Die? Ideas Are Getting Harder to Find
with Ferhat Akbas and Egemen Genc

- **Summary:** In this paper, we propose a novel measure based on patents to identify firms that have a better pipeline for innovations and have a better potential to innovate successfully. Specifically, using advanced machine learning techniques, we compare the textual similarity and distinctiveness of the topical content of each pair of patent claim sections in a firm's innovation pipeline. We first present evidence that firms with a more distinct set of claims have better innovation and operational performance in the future. Second, we show that our measure is a significant predictor of future

stock returns up to three year period. Finally, we compare risk-based and underreaction-based explanations for return predictability and find overwhelming support for the risk-based explanation.

WORK IN PROGRESS

Machine Learning Based Industry Clusters (*with Doyeon Kim and Andrew Leone*)

- **Summary:** It has been puzzling that prior literature shows current industry classifications have limited explanatory power in predicting profitability compared to the aggregate economy. We investigate this puzzle by proposing novel industry clusters based on patents since patents are inherently future looking. Specifically, by using a cutting-edge machine learning technique in textual analysis, we clustered firms based on their patents' textual similarity every year. The results show that our industry clusters explain future profitability and stock returns significantly better than other common industry classifications, SIC, NAICS, and GICS, and the aggregate market.

Market for Innovation and Firm Innovation Strategy (*with Sugata Roychowdhury and Valerie Zhang*)

- **Summary:** In this paper, we investigate how patent disclosure regulations affect the market for innovation, innovation process, and outcomes. We use American Investors Protection Act (AIPA) as an exogenous shock to patent disclosure, which reveals all patent applications are within 18 months after the patent filing while only granted patents were disclosed before. First, consistent with AIPA reducing information asymmetry between firms, we find that AIPA facilitates more patent sales as it provides more information about firms' patent application portfolios timely. Furthermore, we show that the profitability of a patent buyer increases more compared to pre-AIPA sales. Second, we show the heterogenous effect of AIPA on firm innovation strategies across industries. For instance, while drug development firms increase alliances but decrease patent sales to competitors, software companies increase patent sales, especially to competitors.

Financing Innovation with Debt: Patent Collateralizability (*with Efraim Benmelech*)

OTHER PUBLICATIONS

Atilgan, A.; Cetin, F. M.; Yu, J.; Beldjoudi, Y.; Liu, J.; Stern, C.; Cetin, M. ; Islamoglu, T.; Farha, O.; Deria, P.; Stoddart, J. F.; Hupp, J. Post-Synthetically Elaborated BODIPY-based Porous Organic Polymers (POPs) for Photochemical Detoxification of a Sulfur Mustard Simulant. *Journal of the American Chemical Society* **2020** 142 (43), 18554-18564 DOI: 10.1021/jacs.0c07784

- Cited by: 46 (November 9, 2022)

Li, P.; Chen, Q.; Wang, T. C.; Vermeulen, N. A.; Mehdi, B. L.; Dohnalkova, A.; Browning, N. D.; Shen, D.; Anderson, R.; Gómez-Gualdrón, D. A.; Cetin, F. M.; Jagiello, J.; Asiri, A. M.; Stoddart, J. F.; Farha, O. K., Hierarchically Engineered Mesoporous Metal-Organic Frameworks toward Cell-free Immobilized Enzyme Systems. *Chem* **2018**, 4 (5), 1022-1034

- Cited by: 217 (November 9, 2022)

CONFERENCES & PRESENTATIONS

Accounting for an Ever-Changing World (FASB-IASB-TAR Joint Conference)	2022
Journal of Accounting and Economics Conference	2022
Annual Accounting Research Conference in Memory of Nicholas Dopuch *(poster presenter)*	2022
Seven Minutes of Scholarship: An Interdisciplinary Symposium	2022
AAA/Deloitte Foundation/J. Michael Cook Doctoral Consortium	2022
LBS Trans Atlantic Doctoral Conference *(presenter and discussant)*	2022
Wharton Innovation Doctoral Symposium *(presenter and discussant)*	2022
UNC Tax Doctoral Consortium	2022
FARS Doctoral Consortium	2021

OTHER CONFERENCES

13$^{\text{th}}$ International Symposium on Macrocyclic and Supramolecular Chemistry	2018

PROFESSIONAL SERVICES

Ad Hoc Reviewer - *FARS Midyear Meeting*

TEACHING EXPERIENCE

Kellogg School of Management, Northwestern University Evanston, IL
Teaching Assistant 2020 – 2022

- ACCT430 - Accounting for Management Decision Making (MBA course)
- ACCT435 - Accounting for Management Decision Making (MBAi course)
- ACCT430X - Financial Reporting Systems (Executive MBA course)
- ACCT530 - Special Topics in Empirical Accounting Research (PhD course)

Northwestern University Evanston, IL
Teaching Assistant 2017 – 2018

- CHEM-230 Organic Laboratory I, II, III (Undergraduate courses)

The Scientific and Technological Research Council of Turkey (TUBITAK) TURKEY
Teaching Assistant 2012 – 2014

- Instructing high school olympiad students in chemistry branch on Organic, Inorganic, Physical and Analytical chemistry

MAJOR HONORS & AWARDS

Northwestern University Fellowship 2017 – 2023

METU Dean's High Honor List 2012 – 2017

TUBITAK Scholarship 2012 – 2017

Gold Medalist *44th International Chemistry Olympiad* 2012

Bronze Medalist *at International Sustainable World Project Competition* 2012

Bronze Medalist *at INEPO Environmental Project Competition* 2012

Silver Medalist *at 43rd International Chemistry Olympiad* 2011

First Place *at 20th International MEF-EBAV Project Competition* 2011

Gold Medalist *at 19th TUBITAK National Science Olympiad* 2011

Silver Medalist *at 18th TUBITAK National Science Olympiad* 2010

Bronze Medalist *at 17th TUBITAK National Science Olympiad* 2009

OTHER

Computing: Python
Languages: Turkish (native), English (fluent)