AUCKLAND CENTRE FOR FINANCIAL RESEARCH

2025 NEW ZEALAND FINANCE MEETING
&
2025 DERIVATIVE MARKETS CONFERENCE

14 - 16 December 2025

Queenstown, New Zealand

Kia Ora and Welcome

We are thrilled to welcome you to the 2025 New Zealand Finance Meeting and the 2025 Derivative Markets Conference, organised by the Auckland Centre for Financial Research, Auckland University of Technology, in Queenstown, New Zealand. Since its inception as the Auckland Finance Meeting in 2011, this conference has steadily grown in scope, quality, and reputation. Over the past fourteen years, the NZFM has evolved into a premier international forum for financial research, bringing together leading academics to advance financial scholarship, foster knowledge exchange, and strengthen professional networks. This year, we are excited to welcome close to 140 researchers from 71 universities across 19 countries.

This year’s programme includes keynote addresses, high-quality research presentations, and PhD Student Symposium sessions. We are also excited to host a Women in Finance event, reaffirming our commitment to diversity in the finance field.

Alongside a robust academic programme, the conference offers a range of networking opportunities, including welcome drinks on Sunday, networking drinks on Monday, and the conference dinner on Tuesday night. To ensure a memorable experience in Queenstown, we’re pleased to hold the conference dinner at Skyline Queenstown, offering unforgettable panoramic views of Lake Wakatipu, the Remarkables, and beyond.

We are pleased to announce that selected conference papers will be considered for special issues of the Global Finance Journal and the Journal of Futures Markets. Call for papers for these special issues will be sent out after the conference.

Our sincere thanks go to our sponsors, whose support has been vital to the conference’s success. We are honoured to partner with the NZ Super Fund, CFA Institute, Global Finance Journal, and Financial Research Network (FIRN). Many of these partners have been with us throughout our journey, demonstrating a shared commitment to advancing academic research and enriching the finance community.

A conference of this scale and calibre would not be possible without the dedication of many individuals. We offer special thanks to the members of the Programme Scientific Committee, keynote speakers - Professors Kai Li and Charles Cao, the Women in Finance panellists - Professors Kai Li, Nancy Su, Helen Lu, and Elvira Sojli, the guest editors of the Global Finance Journal Special Issue – Professors Alireza Tourani-Rad and Eliza Wu, the guest editors of the Journal Of Futures Markets Special Issue – Professors John Fan, Neda Todorova, Jose Da Fonseca, and PhD Student Symposium Session Chairs - Professors Henny Jung, Madhu Kalimipalli and Bart Frijns, for their invaluable contributions.

As we gather in beautiful Queenstown, we hope you find inspiration, create meaningful connections, and enjoy your time in Aotearoa, New Zealand.

Olga Dodd
Associate Professor of Finance, Auckland University of Technology
Director of the Auckland Centre for Financial Research

2025 NZFM Programme Scientific Committee

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Alireza Tourani-Rad, Auckland University of Technology
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Thanh (Harris) Vu, Auckland University of Technology
Wanyi Yang, Auckland University of Technology

2025 DMC Organisers

Bart Frijns, Auckland University of Technology
Jose Da Fonseca, Auckland University of Technology
Iris Li, Auckland University of Technology

Keynote Speakers

Professor Kai Li

University of British Columbia, Canada

Dr. Li, a Fellow of the Royal Society of Canada (Class of 2022), holds the Canada Research Chair in Corporate Governance and W. Maurice Young Endowed Chair in Finance at the UBC Sauder School of Business, University of British Columbia. She is the Managing Editor of the Journal of Financial and Quantitative Analysis.

Dr. Li's research focuses on the economic consequences of corporate governance mechanisms. Her current research projects explore: (1) corporate culture, (2) machine learning in finance, and (3) green innovation. Her research has appeared in the Journal of Finance, Journal of Financial Economics, Review of Financial Studies, Journal of Financial and Quantitative Analysis, Management Science, Journal of International Business Studies, and many other leading journals in Finance and Economics. She is a Senior Fellow of the Asian Bureau of Finance and Economic Research, a Research Member of the European Corporate Governance Institute, and a Research Fellow of the FinTech at Cornell Initiative. She is on the Editorial Board of Journal of International Business Studies, Journal of Financial Intermediation, Journal of Financial Stability, and Pacific-Basin Finance Journal. She is a Director of the American Finance Association, a former Chair of the Academic Female Finance Committee, a former Director of the Western Finance Association, a former Council Member of the Society of Financial Studies, and a former Trustee of the Financial Association International.

Keynote talk

Corporate Culture: Founder Influences and Stakeholder Perspectives

Abstract
Using one of the largest panel datasets on corporate culture, we examine its evolution and origins, distinguishing between firm-level values and norms and the individual preferences of corporate insiders. We find that corporate culture is highly persistent, and the majority of the variation in culture is explained by firm fixed effects, reflecting initial cultural imprints around founding. Leveraging rich data on founder characteristics, we show that initial culture is shaped by founders' cultural heritage, the racial diversity of their birthplace, and the business environment at the start of their careers. We then conduct the first large-scale study of how different stakeholder groups assess corporate culture and quantify the economic implications of those differences. We employ generative AI to analyze analyst reports, call transcripts, and employee reviews, and organize the extracted information into a knowledge graph that links a culture type to its perceived causes and effects. We demonstrate that the divergence in different stakeholder groups' assessment of culture aligns with their distinct roles and economic incentives. Moreover, we show that analysts' culture analyses are incorporated into stock recommendations and target prices, and investors react to divergence in stakeholders' assessment of culture.

Keynote Speakers

Professor Charles Cao
Chinese University of Hong Kong, Hong Kong, China

Professor Cao is the Yang Ju Mei Professor of Finance at the Chinese University of Hong Kong (CUHK) Business School. Before joining CUHK, he held the Smeal Chair Professor of Finance in the Smeal College of Business at the Pennsylvania State University.

Professor Cao's research interests include FinTech, cryptocurrencies, hedge funds, mutual funds, derivative securities markets, and market microstructure. His research has been published in a wide range of academic journals, including the Journal of Finance, Review of Financial Studies, Journal of Financial Economics, Journal of Financial and Quantitative Analysis, and Management Science. His research has been recognized with several best paper awards, including The Graham and Dodd Award of Excellence, Best Paper Award on Capital Markets from CFA Society Toronto, and New York Stock Exchange Award for Best Paper in Equity Markets at WFA. He won competitive research grants from the BNP Paribas Hedge Fund Center, the Real Estate Research Institute, the Q-group, Federal Deposit Insurance Corporation-FDIC, and Morgan Stanley. He serves (or has served) as an editor/associate editor of Pacific-Basin Finance Journal, an associate editor of Journal of Financial Markets, and Review of Derivatives Research.

Keynote talk

Signal Fragmentation in Cryptocurrency Markets: Theory and Empirical Evidence

Abstract
We study how cryptocurrency markets process fragmented price-relevant information across media channels. We develop a cryptocurrency valuation model where social media complements traditional media through signal refinement and substitutes for it by providing unique information. Using a comprehensive dataset of 58 granular sentiment and attention measures spanning social media, news, and television coverage for 267 cryptocurrencies, we test our model's predictions. Our findings indicate that social media becomes price-informative primarily when accompanied by concurrent traditional media coverage, with stronger effects when sentiment alignment occurs across platforms. Social media, therefore, complements rather than substitutes traditional media in cryptocurrency price formation.

PhD Student Symposium Session Chairs

Associate Professor Hae Won (Henny) Jung

University of Melbourne, Australia

Hae Won (Henny) Jung is an Associate Professor of Finance at the University of Melbourne. Her research focuses on corporate finance, including executive compensation, capital structure, risk management, and firm ownership, with links to industrial organization and asset pricing. Her work has appeared in leading journals such as Management Science, Journal of Financial Economics, and Journal of Corporate Finance. She has presented at major conferences, including WFA, EFA, MFA, SICF, and FIRN, earning recognition such as the Best Paper Award at SICF. She also serves as an Associate Editor for the Journal of Derivatives and Quantitative Studies and contributes actively through refereeing, program committees, and PhD supervision.

Professor Madhu Kalimipalli

Wilfrid Laurier University, Canada

Madhu Kalimipalli is a Professor of Finance at the Lazaridis School of Business and Economics, Wilfrid Laurier University. His research spans fixed income, financial intermediation, corporate finance, international finance, and financial markets, with publications in leading journals including the Journal of Financial Economics, Review of Corporate Finance Studies, Journal of Financial Intermediation, and Journal of Financial Markets. He has presented at more than 220 academic venues worldwide, earning multiple best paper awards. A former Director of Laurier's PhD and research-based master's programs, he has also held visiting positions at McGill, AUT, NUS-RMI, ISB, IIM, CAFRAL, and Copenhagen Business School.

Professor Bart Frijns

Auckland University of Technology, New Zealand

Bart Frijns is a Professor of Finance and Head of Department of Economics and Finance at the Auckland University of Technology and is an Honorary Fellow of the Auckland Centre for Financial Research. He is the Editor-in-Chief of the Journal of Futures Markets and Editorial Board Member of the Financial Review, the Global Finance Journal, and Applied Finance Letters. Bart conducts empirical research on a broad range of topics, from corporate finance to financial econometrics. He lectures at undergraduate, postgraduate, and executive levels. Besides academia, he has experience in several consultancy roles.

Women in Finance Panel & Networking Event

Join us for an insightful discussion and networking with inspiring women in finance academia. This panel will highlight the achievements, challenges, and future directions for women in the field, fostering collaboration and diversity.

Panellists

Kai Li is a Professor of Finance at the UBC Sauder School of Business and a Fellow of the Royal Society of Canada. She holds the Canada Research Chair in Corporate Governance and serves as Managing Editor of the *Journal of Financial and Quantitative Analysis*. Her research focuses on corporate governance, corporate culture, and innovation.

Nancy (Lixin) Su is a Professor and Head of the School of Accounting and Finance at The Hong Kong Polytechnic University. Her research focuses on auditing, earnings quality, voluntary disclosure, social networks, and supply chains, with publications in leading journals such as *Accounting Review*, *Contemporary Accounting Research*, *Journal of Accounting and Economics*, and *Journal of International Business Studies*.

Helen Lu is an Associate Professor of Accounting and AI at Vlerick Business School. Her academic and business research spans stock return predictability, valuation, ESG disclosure, executive succession, and FinTech disruption. Her work has appeared in top journals such as the *Journal of Accounting Research*, *Journal of Banking & Finance*, and *Journal of International Money and Finance*. Before academia, she worked in investment banking at Credit Suisse and Deutsche Bank, where she advised on capital raising and cross-border M&As across Asia-Pacific.

Elvira Sojli is an Associate Professor of Finance at the School of Banking and Finance, UNSW Business School. She is President of FIRN and a Fellow of both the Asian Bureau of Economic and Finance Research and the Asian Innovation and Entrepreneurship Association. She previously served as Associate Dean (Equity, Diversity and Inclusion) at UNSW Business School and led the Digital Finance group at the CMCRC (Rozetta Institute). Her research focuses on empirical industrial organisation, innovation, and commercialisation, alongside work in international finance and empirical methods.

Everyone is welcome to attend!

This event is sponsored by: FIRN

Workshop

From Draft to Impact: Navigating the Academic Publishing Journey

About the workshop

Ever felt that the publication process is random or that the referee didn't spend the effort on your paper that it deserved? In this session, we look at the publication process from three angles: the author, the referee, and the editor. Insight into these three perspectives and the incentives of each party involved provides a better understanding of why papers get rejected or accepted and can help you craft papers that have a higher chance of success.

Speaker

Professor Bart Frijns
Auckland University of Technology, New Zealand

Bart Frijns is a Professor of Finance and Head of Department of Economics and Finance at the Auckland University of Technology and is an Honorary Fellow of the Auckland Centre for Financial Research. He is the Editor-in-Chief of the Journal of Futures Markets and Editorial Board Member of the Financial Review, the Global Finance Journal, and Applied Finance Letters. Bart conducts empirical research on a broad range of topics, from corporate finance to financial econometrics. He lectures at undergraduate, postgraduate, and executive levels. Besides academia, he has experience in several consultancy roles.

2025 NZFM Sponsors:

NZSUPERFUND
Te Kaitiaki Tahua Penihana Kaumātua o Aotearoa

FIRN

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Best Paper Awards

We extend our sincere thanks to the sponsors of the Best Paper Awards. These awards will be presented during the Best Paper Awards Ceremony on Tuesday, 16 December.

NZFM 2025 Best Paper Award (NZD 2,000)
sponsored by:

NZFM 2025 Runner-Up Award (NZD 1,000)
sponsored by:

Global Finance Journal Award (USD 1,000)
sponsored by:

CFA Society New Zealand Best Paper Award (NZD 1,000)
sponsored by:

NZFM 2025 Best PhD Student Paper Award (NZD 1,000)

sponsored by:

DMC 2025 Best Paper Award (NZD 1,000)

sponsored by:

Venue Information

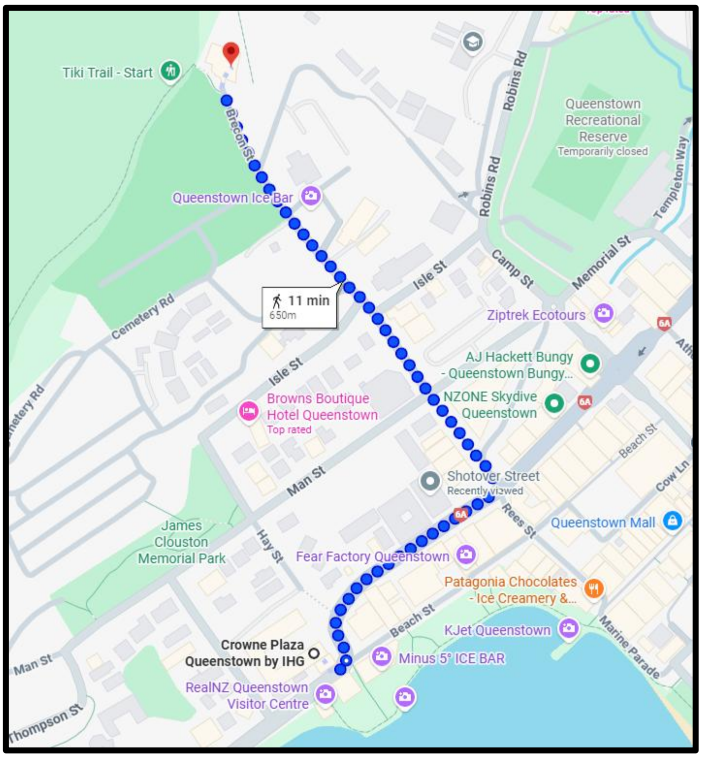
All conference events, except the conference dinner, will take place at the Crowne Plaza, located at 93 Beach Street, Queenstown. **Registration**, **Welcome**, and **Morning/ Afternoon Tea** will be held in the **Atrium** on **Level 3** of the **Crowne Plaza**. Note: attendees can register upon arrival or during any break throughout the conference.

All **presentation sessions** will be in rooms on **Level 3** of the **Crowne Plaza**. **Keynote** addresses will take place in The Crowne II room on Level 3.

The **conference dinner** will be at **Stratosfare Restaurant & Bar - Skyline Queenstown**, an iconic New Zealand destination offering spectacular alpine and lakeside views. Located high above Queenstown and accessible via the Skyline Gondola, the venue offers a unique dining experience with breathtaking views overlooking Lake Wakatipu and the Remarkables mountain range. Please refer to the directions and map to Skyline Queenstown on the next page.

Conference Dinner

Stratosfare Restaurant & Bar is located at Skyline Queenstown, 53 Brecon Street, Queenstown. Please make your way to the **Skyline Gondola** base terminal on Brecon Street, where you will take the gondola to the top. **IMPORTANT: Bring your conference name tag for entry to the dinner**.



Gondola ticket

Attendees will receive a **return Gondola ticket** to Skyline Queenstown for the conference dinner. Although dinner will be from **8:00 PM**, we encourage attendees to arrive earlier to enjoy the spectacular views over Queenstown. Each Gondola ticket also includes the Skyline PhotoPass, which captures professional photographs at key locations throughout the experience. The last Gondola down departs at **10:00 PM**.

2025 New Zealand Finance Meeting Programme Overview

Detailed programme with links to the papers is available online at
2025 NZFM & DMC Programme

Day 1	Sunday, 14 December 2025	
8:30 - 9:30	Welcome and registration, morning tea	Atrium
9:30 - 11:30	Applied AI and ML in Finance	Crowne I
	Gender and Diversity in Finance	Crowne II
	PhD Student Symposium Session I	Crowne III
11:30 - 12:30	From Draft to Impact: Navigating the Academic Publishing Journey: Professor Bart Frijns	Crowne II
12:30 - 13:30	Lunch	Atrium
13:30 - 15:30	Banking and Financial Intermediation	Crowne I
	Personal Finance and Financial Inclusion	Crowne II
	PhD Student Symposium Session II	Crowne III
15:30 - 16:00	Afternoon Tea	Atrium
16:00 - 18:00	Household Finance and Real Estate Investment	Crowne I
	Policy risk and Climate disclosure	Crowne II
	PhD Student Symposium Session III	Crowne III
18:15 - 19:30	Welcome Networking Drinks	Atrium

Day 2	Monday, 15 December 2025	
9:00 - 10:30	Corporate Governance: Boards of Directors	Crowne I
	Corporate Bond Pricing and Credit Risk	Crowne II
	Corporate Decarbonisation and Sustainability	Crowne III
	Quantitative Methods	Boardroom
10:30 - 11:00	Morning Tea	Atrium
11:00 - 12:30	Corporate Bonds and Local Government Debt	Crowne I
	Fintech Innovation	Crowne II
	Executive Compensation and Corporate Strategy	Crowne III
	Volatility Smile	Boardroom
12:30 - 13:30	Lunch	Atrium
13:30 - 14:30	Keynote: Professor Kai Li	Crowne II
14:30 - 16:00	Shareholder Rights and Governance	Crowne I
	Information Advantage in Institutional Trading	Crowne II
	Regulatory Factors and Corporate Outcomes	Crowne III
	Option Markets	Boardroom
16:00 - 16:30	Afternoon Tea	Atrium
16:30 - 18:00	Behavioural Biases, Geopolitics, and Mispricing	Crowne I
	Cryptocurrency and Decentralised Finance	Crowne II

	Corporate Disclosure and Information Asymmetry Option Trading	Crowne III Boardroom
18:15 - 19:00	Women in Finance Panel	Crowne II
18:20 - 19:30	Networking Drinks	

Day 3	Tuesday, 16 December 2025	
9:00 - 10:30	Entrepreneurial Finance and Venture Capital Climate Risk and Financial System Vulnerability Volatility Forecasting	Crowne I Crowne II Crowne III
10:30 - 11:00	Morning Tea	WZ Atrium
11:00 - 12:30	Supply Chain and Corporate Strategy CEOs and Corporate Outcomes Green Innovation and Regulation Cryptocurrency	Crowne I Crowne II Crowne III Boardroom
12:30 - 13:30	Lunch	
13:30 - 14:30	Keynote: Professor Charles Cao	Crowne II
14:30 - 16:00	Corporate Environmental Strategy Macro Policy and International Finance Machine Learning in Forecasting Risk and Return Derivative Markets	Crowne I Crowne II Crowne III Boardroom
16:00 - 16:30	Afternoon Tea	Atrium
16:30 - 18:00	Asset Pricing: The Factor Zoo ESG Investing Market Microstructure	Crowne I Crowne II Crowne III
18:00 - 18:30	Best Paper Awards Ceremony and Closing Remarks	Crowne II
20:00 - 22:00	Conference Dinner	Skyline

ABSTRACTS

Detailed programme with links to the papers is available online at
2025 NZFM & DMC Programme

Applied AI and ML in Finance

Can ChatGPT Analyze Earnings Calls?

Hamish Malloch, The University of Sydney
Yansheng Ming, The University of Sydney
Joakim Westerholm, The University of Sydney

This paper investigates whether large language models can replicate analyst-like insight by analyzing earnings call transcripts. We introduce the Analyst Insight Score (AIS), derived from ChatGPT's evaluation of firm fundamentals using a prompt trained on the behavior of professional equity analysts. The AIS strongly predicts post-call returns, volatility, and analyst forecast revisions, outperforming traditional valuation metrics. Portfolios formed on AIS signals deliver significant abnormal returns. A naive version of the AIS, which omits analyst-informed training, underperforms the AIS in all tasks, underscoring the importance of learning from expert behavior. Our findings suggest that large language models can process unstructured financial text in a manner that approximates human expertise, with implications for asset pricing, analyst research, and the integration of AI in financial decision-making.

Bimodality Everywhere: International Evidence of Deep Momentum

Chulwoo Han, Sungkyunkwan University

This paper presents international evidence supporting the bimodality of momentum returns and the superior performance of Deep Momentum (DM), a machine learning strategy designed to account for financial perspectives. DM consistently outperforms both the momentum and naive machine learning strategies across 45 countries. It effectively mitigates bimodality and improves the naive strategy. The improvement is particularly pronounced in countries with poor momentum performance and high bimodality. The paper also provides a use case of transfer learning in asset pricing, which allows emerging markets to adopt a machine learning strategy even when they have insufficient data to train a model.

Gender and Diversity in Finance

The Gender Information Gap: Evidence from Corporate Site Visits

Hsin-I Chou, RMIT University
Xiaolu Hu, RMIT University
Jing Yu, University of Sydney

While private investor communication channels have brought substantial informational benefits, an important question emerges: do these benefits extend equally across genders? Our study addresses this issue using the mandatory disclosures of site visits in China, which involve face-to-face interactions between financial analysts and corporate managers. In a Difference-in-Differences framework, we document a striking gender information gap: female analysts experience a significant decline in earnings forecast accuracy following site visits, compared to their male counterparts. Further analysis shows that this underperformance is most pronounced for female analysts located farther away from company headquarters and when hosting companies anticipate negative news typically shared privately. However, the presence of other female analysts and female corporate managers helps mitigate this disadvantage. Overall, the findings support the notion that female analysts are excluded from private interactions, particularly in male-dominated settings and underscore the need for policies that promote greater female representation.

Mind the Gap: Gender Discrimination in Loan Pricing Around the World

Christoph Domnick, University of Münster

We examine how international cross-cultural variations in attitudes towards female executives affect the pricing of large, mostly syndicated business loans. In countries where skepticism and negative stereotypes about women's managerial abilities prevail, firms led by female CFOs face significantly higher loan spreads than firms led by male CFOs. In these countries, female-led firms also receive loans of significantly smaller size than male-led firms. Our results provide first

evidence of discrimination against women in the international, mostly syndicated business loan market. These results are robust to using different measures of cultural attitudes towards women in the labor market.

Strategic Responses to Preemptive Motherhood Penalty: Evidence from China's Two-Child Policy and Female Fund Managers

Di Cui, Shenzhen Technology University
Mingfa Ding, Central University of Finance and Economics
Yikai Han, Central University of Finance and Economics
Mi Shen, Central University of Finance and Economics
Sandy Suardi, University of Wollongong

This study examines the impact of China's 2016 universal two-child policy on the performance of mutual fund managers. Using a Difference-in-Differences approach, we find that female managers of childbearing age significantly outperform their male counterparts in fund returns and abnormal returns after the policy change. These performance gains reflect a strategic response to intensified gender discrimination, as the policy raises expectations of future maternity and leads to reduced hiring opportunities, greater job insecurity, and increased investor scrutiny for women. In response, affected female managers proactively adopt more aggressive investment strategies to signal professional dedication and offset biases rooted in anticipated motherhood. The effects are especially pronounced among actively managed funds and among less experienced or internationally inexperienced managers. Our findings suggest that fertility-related policy shocks amplify labor market discrimination and induce performance-enhancing responses from affected women.

The Plight of Women in Finance Journals

Kym Brown, Monash University
John Watson, Monash University
Justine Wood, Loughborough University

This paper uses a unique hand collected dataset based of 37 journals (ranked A or above on the Australian Deans Council 2016 ABDC journal ranking list) to examine the plight of women in publishing, and as journal editors, in academic finance journals. We investigate women publish in academic finance journals as per their representation in the workforce. Also, we examine the level of women on finance journal editorial boards and consider if this is again commensurate with the size of the workforce. We find there are 3.58% women-only authored articles compared to 64.46% male only authored articles. Given female representation is closer to 16% within the Finance discipline, these numbers do not demonstrate women are being provided the opportunity to publish as freely as male counterparts. Overall females are publishing at a fair rate but their representation on editorial boards is short of expectations.

PhD Student Symposium Session I

Discipline or Dysfunction? Revisiting the Role of Self-Imposed Constraints in Mutual Funds

Luis Goncalves-Pinto, UNSW
Qiliang Xiong, UNSW

While mutual fund mandates have become more permissive, managers have imposed tighter constraints on themselves, a puzzling choice given its association with weaker performance. We show this reflects declining managerial skill: a shrinking group of skilled managers avoids constraints to pursue alpha, while less skilled managers adopt them defensively to mask limitations and avoid scrutiny. Thus, underperformance stems from adverse selection, not constraints per se. Consistent with their lower skill, constrained managers exhibit a greater tendency toward risk-shifting and window dressing. Exploiting the 2003 trading scandal as a quasi-natural experiment, we find that constraints curb managerial misconduct only when accompanied by enhanced external oversight, indicating that constraints and governance act as complements rather than substitutes.

Agency Costs and the Impact of Green Bonds on Firms' Green Investment in China

Asma Khan, Lincoln University, Lincoln New Zealand
Christopher Gan, Lincoln University, Lincoln New Zealand
Yuqian Zhang, Lincoln University, Lincoln New Zealand

This paper empirically analyses the relationship between green bond issuance, agency costs, and green investment in Chinese A-listed firms using data from 2016 to 2023. By employing a Multiperiod Difference in Differences model, the

study investigates whether green bonds effectively promote firms' green investment and the role of agency costs in this process. The findings indicate that green bond issuance positively affects firms" green investments, highlighting the role of green bonds in promoting corporate environmentally friendly practices. However, due to the potential for firms' greenwashing activities and divergent interests among stakeholders, green bond issuance comes with extensive monitoring and reporting requirements that increase the issuer's agency costs. Furthermore, the mechanism analysis shows that an increase in the agency costs weakens the effectiveness of green bonds in promoting firms' green investment. One of the key policy implications of this study is that policymakers should consider measures to enhance the monitoring mechanism of green bond proceedings by taking into account the operational and administrative costs burden on the issuers that can undermine the effectiveness of green bonds in promoting firms' green investment due to the financial crowding effects.

Mutual Funds' Preemptive Response to Major Cyber Attacks
Zhibo Zhang, The University of Melbourne

This paper examines U.S. actively managed equity mutual funds' trading behavior around cyberattack announcements. It documents that active funds preemptively trim high–cyber-risk holdings and tilt into low–cyber-risk stocks, particularly among funds that disclose cyber risk in their prospectuses. It shows that firms with stronger data-privacy safeguards exhibit smaller tilts. It further demonstrates that these anticipatory reallocations generate significant subsequent net inflows driven by institutional investors. These findings extend the literatures on cyber-risk spillovers, pre-announcement trading, and mutual-fund skill, and highlight active managers' informational advantage in responding to emerging cybersecurity threats.

Financial Intermediation, Treasury Supply, and Shadow Banks
Fabian Wassmann, Nova School of Business and Economics

U.S. data shows that domestic financial intermediaries, especially shadow banks, are major holders of Treasuries. Do the Treasury holdings of these intermediaries provide a new transmission channel of expansionary fiscal policy? Empirical evidence based on well-defined Treasury supply shocks documents differential responses by commercial and shadow banks. Using a quantitative dynamic general equilibrium model including two types of financial intermediaries issuing money-like claims and providing capital, I find that an increased Treasury supply reallocates productive capital from commercial to shadow banks. This reallocation is caused by shadow banks reducing their Treasury holdings to absorb claims in productive capital sold by commercial banks. An expanding supply of government debt increases the convenience yield on intermediary debt, also incentivizing leverage expansion. This mechanism is stronger for shadow banks, allowing them to expand. In addition, it also erodes the net worth of intermediaries, with a more persistent impact on commercial banks. The liquidity provision falls immediately, and lending follows in the medium run.

Banking and Financial Intermediation

Hiding in Plain Sight: How Central Bank Governor Turnovers Affect Cross-Border Lending
Kristle Cortes, UNSW Sydney
Mandeep Singh, University of Sydney

This paper examines how transitions in central bank leadership influence cross-border lending. Exploiting the institutional timing of governor turnovers following fixed-term appointments, determined in advance and unrelated to prevailing macroeconomic conditions, we show that cross-border lending increases by 11.9 percent in the year preceding a turnover, consistent with heightened policy uncertainty. Lending reverses once a new governor assumes office, indicating the resolution of uncertainty. Turnovers in other countries, where neither the lender nor borrower is located, also depress lending and prompt risk adjustments, highlighting the systemic reach of global policy uncertainty. These findings reveal how even anticipated changes in monetary leadership shape the international allocation of credit.

Financial Intermediary Default Risk and Economic Activity
Gillian Kimundi, Deakin University
Mike Mao, Deakin University
Vincent Xiang, Deakin University

We propose a new measure of aggregate intermediary default risk using credit default swap (CDS) spreads of U.S. financial firms and demonstrate its predictive power for future production and labour market outcomes. We find that our measure

contains incremental information not captured by other macroeconomic predictors. In addition, we show that it serves as a leading signal for future market performance, risk, and financial uncertainty, and predicts conditions of funding costs in different credit markets. Overall, the evidence highlights the channel through which risk shifts in the financial intermediary sector transmit to the real economy.

Law Firm Expertise in the Private Debt Market

Minh Viet Do, Monash University
Tram Vu, Monash University

We document that top-tier law firms have a material impact on the pricing and structure of syndicated loan contracts. When lead banks engage a top-tier law firm, loan interest rates increase by 13.6 basis points, but this spread premium disappears if the borrower also uses a top-tier law firm. Our results are robust to alternative proxies for top-tier law firms and endogeneity treatment. Top-tier law firms' ability to increase loan spreads to benefit lenders is more pronounced when borrowers have relatively weak bargaining power, when the law firm has a strong prior relationship with the lender, and when the syndicate involves fewer lead banks. We also find lenders who engage top-tier law firms often charge higher fees and are more likely to require collateral and stricter covenants in their loan contracts. Overall, our evidence suggests top-tier law firms act in the best interest of lender clients, enabling them to negotiate more favorable pricing and terms in private debt agreements.

An In-depth Analysis of the Effects of Digital Transformation on the Competitive Edge of Commercial Banks in China

Ning Ding, Dongbei University of Finance and Economics
Bing Wang, Dongbei University of Finance and Economics
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Digital transformation is crucial to the competitiveness and sustainability of Chinese commercial banks in the Fintech era. The paper mainly focuses on the multifaceted effects of digital transformation on the competitive edge of commercial banks in China. We first construct competitiveness index and then employ two-way fixed effects model, mediating model as well as system GMM to empirically analyze the multi-dimension effects of digital transformation on the competitive edge based on 83 commercial banks in China during the period of 2010 to 2021. And the findings reveal that digital transformation significantly improves the competitive edge of commercial banks from the dimensions of strategy, business and management primarily by reducing the information gaps with businesses and increasing the operational efficiency. Furthermore, the heterogeneity analysis demonstrates that digital transformation enhances large commercial banks but is crucial for medium and small banks. It helps these City Commercial Banks to reduce their operational efficiency gap and broaden their financial services.

Personal Finance and Financial Inclusion

From Health to Wealth: The Impact of Uninsurance Rates on Financial Risks

Mike Mao, Deakin University
Ming Fan, Deakin University
Ang Tze Chuan, Deakin University

We study how health insurance coverage affects loan outcomes in the U.S. peer-to-peer lending market. Exploring regional differences in insurance coverage, we find that borrowers from areas with higher uninsured rates are associated with higher loan default probabilities and interest rates. The incremental increase in interest rates suggests only partial pricing of the health-related default risk. We address endogeneity issues using instrumental variable approach and quasi-natural experiment. Our findings imply that government health policy has direct spillover effects on household financial resilience.

Smile, Cultural Distance, and Altruistic Behaviors

Runtong Lin, The University of Hong Kong
Tse-Chun Lin, The University of Hong Kong

Do smiles unambiguously promote altruistic behaviors? Using a novel large-scale dataset of altruistic behaviors, we establish the smile effect as a baseline: smiling fundraisers are less likely to fail in their fundraising campaigns and, conditional on fundraising success, they meet their fundraising targets faster. But both the intensive and extensive margin effects of smiles are non-linearly moderated by the cultural distances between the country of the recipient and the

countries of the senders. There is a "cultural valley": The smile effects are the strongest when cultural distances are intermediate; they weaken when the cultures of the recipients and the senders become too similar or too distinct. We conclude that prosocial cues such as smiles promote altruistic behaviors on average, and are most effective when sender-recipient cultural distances are moderately high.

Labor Market Shocks and Wealth Accumulation

Kaveh Majlesi, Monash University
Petter Lundborg, Lund University
Sara Mikkelsen, Region Skåne

Separately exploiting exposure to plant closures and trade import competition in Sweden, we investigate how labor market shocks affect wealth accumulation and consumption in the short and long run. We find that: 1) exposure to acute labor market shocks leads to a significant decline in the value of total wealth that persists for a long time and is not explained by changes in earnings, 2) a large part of this decline is explained by the drop in (prospective) housing wealth as non-homeowners become less likely to enter the housing market and homeowners experience a decline in their housing wealth, 3) drop in financial assets contributes significantly, but to a lesser degree, to the decline in total wealth as those exposed substantially reduce their savings rate and decumulate both risky and safe financial assets, and 4) households significantly reduce their consumption in the aftermath of exposure. The effects are proportional to the size of the labor market shock. Our findings suggest that transitory labor market shocks could have long lasting effects on the wealth accumulation of those exposed.

Doom Scrolling Your Way to Better Savings? The Role of Social Media in Young Adults' Savings Behaviour.

Aaron Gilbert, Auckland University of Technology
Pitou Bun, Auckland University of Technology

Social media has often been associated with harming young adults' financial well-being. But Gen Zers are increasingly using social media for financial information, aided by financial influencers. We investigate whether consuming financial content on social media is associated with better saving behaviour. Using a survey of 707 18-29 year olds in New Zealand, we find 1) a positive association with financial content consumption and saving behaviour, 2) that there are platform differences in outcomes with algorithm-based platforms, such as Instagram and TikTok, are associated with higher saving behaviour, and 3) that actively engaging with financial content, such as commenting on, sharing or even following, appears to add little over simple passive consumption, such as watching videos. The last finding is both surprising and offers interesting implications. If passive consumption drives better saving behaviour, then inserting financial content, such as via paid content, into a person's feed/algorithm could improve financial outcomes. This is aided by the fact that it is influence not trust in social media that appears to drive improved saving behaviour. This could overcome many of the difficulties currently limiting the success of improving young adults' financial capability and well-being.

PhD Student Symposium Session II

When Greed Meets Bias: Its Dual Impact on the Disposition Effect

Haoyang (Damon) Yu, Auckland University of Technology
Aaron Gilbert, Auckland University of Technology
Sommer Kapitan, Auckland University of Technology
Nhut H. Nguyen, Auckland University of Technology

Greed is a significant motivator for economic behaviour, influencing various financial decisions. This study investigates the impact of investors' level of greed on the disposition effect – a phenomenon where investors are reluctant to realise losses but sell winning stocks prematurely. We find that investors with higher levels of greed exhibit a significantly stronger disposition effect than less greedy investors, though this relationship reveals an intriguing complexity. While greedy investors show an increased tendency to realise gains quickly, which substantially lowers their investment performance, they paradoxically demonstrate more rational behaviour in loss realization. This unexpected finding suggests that greedy investors, in their pursuit of new opportunities, are better able to overcome psychological barriers to realising losses rather than dwelling on them. Our analysis is robust across different measures of the disposition effect and consider various personality characteristic of participants. We also demonstrate that if participants had delayed the realisation of gains by four periods, they could have increased their portfolio performance by 7.46%. These findings contribute to the limited literature on the effects of greed on individual financial behaviour and provide a more nuanced understanding of how greed influences trading decisions. Our study therefore offers practical implications for investors and financial advisors

aiming to improve investment outcomes by considering both the benefits and drawbacks of greed-driven trading behaviour.

The Value of a Politically Connected Board Member: Evidence from Determinants and Influence of Revolving Door Lobbyist Hires

Shuliu Hu, University of Nebraska-Lincoln
Xiaoli Ma, Washington State University
Ye (Brandon) Moe, University of Nebraska-Lincoln

As the political system and the corporate world become increasingly interconnected, the demand for—and the value of—individuals who possess experience and knowledge of both the political process and corporate activities is bound to rise. Using a hand-collected data set of Revolving Door Lobbyists (RDLs), we hypothesize that RDLs are well-suited to guide firms in their lobbying activities and in managing litigation risks, two major pieces of corporate management that affect shareholder value and firm performance. Using a battery of empirical tests, we document that firms report lower lobbying expenditures and experience fewer litigation cases in the years following the appointment of RDLs. Exploring the channel, we find that institutional investors respond to firms hiring RDLs by increasing their holdings, suggesting that their elevated monitoring may outweigh the negative agency issues commonly associated with politically connected individuals. Lastly, we demonstrate that RDLs—unique in terms of their experience with and relationship to both politicians and corporations—get a higher remuneration relative to their counterparts, highlighting the essential value of services and expertise they bring to boards.

When Peers Get Punished: Director Effort and Spillover Effects

Yaoyi Tao, Monash University

This paper employs a difference-in-differences framework in examining the spillover effect of the China Securities Regulatory Commission (CSRC) sanctions on directors' efforts in firms connected to sanctioned firms through a shared, but non-penalised independent director, referred to as 'threatened firms' and 'threatened directors'. Firm-level evidence shows that overall board meeting attendance declines in threatened firms following the sanctions. Director-level analysis attributes this decline to the increased busyness of threatened directors due to their increased busyness at the sanctioned firm. At the individual level, threatened directors do not exhibit improved attendance or more frequent dissent. However, other board members in the same firms become significantly less likely to dissent against management proposals. This suggests they may be freeriding on the presence of the threatened director, expecting them to absorb external scrutiny and take on the role of monitoring, while reducing their own involvement.

Household Finance and Real Estate Investment

Immigration and Credit in America

Benedict Guttman-Kenney, Rice University
J Anthony Cookson, University of Colorado at Boulder
William Mullins, University of California San Diego

We study the assimilation of immigrants into U.S. consumer credit markets. Although immigrants arrive without an American credit history, we find that they are positively selected: immigrants' average credit scores at age thirty are 27 points higher than non-immigrants, and this gap widens with age. Despite immigrants' greater creditworthiness, they - especially those who arrive later in life - have lower average credit card limits for a decade after immigrating. Moreover, immigrants are less likely than non-immigrants to have ever had an auto loan or a mortgage by age 37, the end of our sample window.

Mind the Cost of Disturbance: Firm-level Supply Chain Risk and the Bank Loan Cost

Daxuan Cheng, Macquarie University
Yin Liao, Macquarie University
Zheyao Pan, Macquarie University
Lei Gao, George Manson University

We investigate how the credit market evaluates firm-level supply chain risk. We reveal that supply chain risk is associated with unfavorable loan condition changes, including a significant increase in the loan interest spread and collateralization requirement. The relationship with loan spread is more significant when global supply chain pressure or geopolitical risk

is high. We further find that the influence of such risk on borrower firms can be delivered from their supply chain stakeholders, especially suppliers. Additionally, we observe that the relationship with bank creditors decreases by amount but not length after the supply chain risk information is renewed at a higher level. Overall, our results show that bank creditors learn from borrowers earnings call about this risk exposure information and treat it as an unfavourable factor by incorporating it in the loan contracts, which emphasizes the importance of supply chain risk management.

Cultural Anchors and the Heterogeneous Impact of Economic Uncertainty on Housing Returns

Ama Samarasinghe, RMIT University
Ruchith Dissanayake, Queensland University of Technology
Benno Torgler, Queensland University of Technology
Yanhui Wu, Queensland University of Technology

We examine how economic uncertainty affects housing returns across countries and how cultural factors moderate this relationship. Drawing on theories of ambiguity aversion and intertemporal decision-making, we argue that heightened uncertainty depresses housing returns as investors delay or reduce long-term housing investments. However, cultural traits—specifically, levels of individualism, long-term orientation, and work ethic—can alter how households discount future utility and assess risk, thereby buffering or amplifying the impact of uncertainty. Using a cross-country panel dataset spanning multiple decades, our empirical strategy explores housing returns over various time horizons and employs fixed-effects regressions, instrumental variables using executive-election timing, and difference-indifferences analyses around exogenous shocks. Our findings indicate that economic uncertainty significantly reduces housing returns in a robust and economically meaningful way. However, our findings reveal that the impact of uncertainty is not uniform: in countries with higher levels of individualism and a strong long-term orientation, uncertainty exerts a more pronounced negative effect on housing returns—suggesting that in these environments, weaker informal risk-sharing and a disruption of long-term investment commitments amplify the downturn. In contrast, a robust work ethic appears to mitigate the adverse effects of uncertainty by bolstering confidence in stable earnings and promoting disciplined savings. These insights have important implications for policymakers, highlighting the need to tailor macroprudential interventions to the cultural context of each economy.

Extrapolative Beliefs in Residential Real Estate Investments

Yang Shi, Deakin University
Garry Twite, The University of Melbourne
Wayne Xinwei Wan, Monash University
Liuming Yang, The Chinese University of Hong Kong

Measuring extrapolative beliefs at the transaction level in real estate investments is challenging due to the lack of survey data at the transaction time. We propose a novel measurement of the extrapolative beliefs of residential property buyers using a unique presale option model. Presale homebuyers are considered holders of call options, so the implied volatility of the call options is a proxy for investors' beliefs in the underlying property's future growth. We find that presale homebuyers hold more positive beliefs when past returns are higher, which results in a higher chance that the contracts are out of the money at settlement time. Also, extrapolative buyers are more likely to be loss-averse and hold out-of-the-money contracts longer after settlement until the market recovers, but their realized capital gains are substantially lower than those directly purchased from the spot new-sale market. Finally, we find market cooling policies are effective in discouraging extrapolative beliefs if the policies are expected to be enacted for the long term.

Policy risk and Climate disclosure

Heterogeneous Institutional Investor Response to Firm Environmental Regulatory Risk

Chunxiao Lu, University of Canterbury
Linxiang Ma, University of Strathclyde
Yuyang Zhang, University of Sydney

This paper investigates whether institutional investors incorporate firm-level environmental regulatory risk into their portfolio decisions. We document substantial heterogeneity across investor types in their responses to changes in firm-level environmental regulatory risk. Long-horizon investors, such as banks, insurance companies, and pension funds, tend to tilt their portfolios toward stocks with higher environmental regulatory risk. In contrast, short-horizon investors, including investment advisors and mutual funds, reduce their holdings of these firms. These opposing portfolio adjustments offset each other, attenuating the aggregate impact on stock returns. We further find that these risk-induced demand shifts vary systematically around federal elections. Following Democratic victories, the resolution of regulatory

uncertainty induces long-horizon investors to decrease their exposure to environmentally risky firms, while short-horizon investors increase their holdings. By comparison, portfolio adjustments are substantially less pronounced after Republican victories. Overall, our findings highlight the role of investment horizons and heterogeneous environmental preferences in driving institutional portfolio allocation.

Government Subsidies and Analyst Directional Inconsistency

Harminder Singh, Deakin University
Amanjot Singh, University of New Brunswick
Venura Welagedara, University of Moratuwa

Our study examines whether government subsidies influence analysts' directional inconsistency between revisions to earnings and target price forecasts. We show that higher subsidy amounts are associated with higher directional inconsistency. This increased analyst inconsistency intensifies when firms announce earnings immediately before analyst revisions. Higher subsidy amounts are also associated with lower earnings informativeness. The sensitivity between subsidies and inconsistency is pronounced mainly for firms operating in asymmetric information environments, weak governance, or facing intense product market competition. Subsidy-driven analyst inconsistency is associated with lower target price accuracy and higher implied volatility, indicating that investors perceive these analyst updates as less reliable. Moreover, subsidies amplify the analyst directional inconsistency between target prices and stock recommendation revisions. Overall, our findings highlight the consequences of government subsidies for capital market participants, demonstrating how shifts in earnings informativeness can affect analyst assessments of firm-level short- and long-term prospects.

Do investors hedge against all types of uncertainty? Evidence from political ambiguity

Ji (George) Wu, Massey University
Gilbert Nartea, University of Canterbury
Hengyu Bai, Massey University
Xiaopeng Wei, University of Adelaide

This study investigates how political ambiguity affects stock returns. We measure political ambiguity through the quality of political signals and define Q-beta as a stock's sensitivity to it. Surprisingly, stocks with high Q-beta, which should hedge against political uncertainty, outperform low Q-beta stocks. This "positive Q-beta effect" only appears after periods of improving political information and high investor sentiment. This suggests investors become overly optimistic when political ambiguity decreases, extrapolating positive trends and selling these stocks. Conversely, we observe the opposite for EPU-beta. Our findings indicate investors selectively price risk, often overlooking political ambiguity.

Climate Risk Disclosures: Risk Exposure or Enhanced Transparency

Dong Ding, Hefei University of Technology
Rui Shen, Chinese University of Hong Kong, Shenzhen
Bohui Zhang, Chinese University of Hong Kong, Shenzhen

Using over 200,000 annual reports from 26 countries/regions between 2008 and 2022, this study develops a measure of climate change disclosure based on alignment with Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Results indicate that higher disclosure levels are associated with lower future risk-adjusted returns, increased liquidity, reduced uncertainty, and a lower implied cost of equity. We do not find significant association between climate change disclosure and future earnings announcement returns, but a positive relationship between climate change disclosure and abnormal returns around events reinforcing environmental policy. Overall, enhanced climate disclosures appear to reduce firms' exposure to climate-related risks

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PhD Student Symposium Session III

From Incidents to Actions: The Dynamics of ESG Engagement in Asset Management

Hao Liang, Singapore Management University
Yongheng Sun, Singapore Management University
Mandy Tham, Singapore Management University

We examine when and why institutional investors engage portfolio firms on ESG issues using proprietary engagement records from a European asset manager. Salient negative incidents emerge as a powerful trigger—second only to firm

size—because they heighten reputational accountability for investors and reveal new information about hidden ESG weaknesses, particularly at firms perceived as ESG leaders. Monitoring also extends along the supply chain: incidents at key suppliers prompt investor engagement with focal firms. Finally, engagement is associated with higher firm value, stronger ESG performance, and increased cash flows. Together, the findings illuminate the drivers and mechanisms of ESG engagement and underscore its role as an effective channel of external corporate governance.

Directional Beliefs and the Idiosyncratic Volatility Puzzle
Usama Malik, University of Alberta

I present an explanation for the puzzling empirical finding that idiosyncratic volatility (IVOL) and expected return are negatively related. I propose that a stock's IVOL will have a negative (positive) relationship with its expected return if irrational investors believe that the stock will beat (fall short of) expectations, and, consequently, the average IVOL-expected return relationship will be negative if irrational investors believe that a greater number of stocks will beat expectations than fall short of expectations. To support this explanation, I first present a theoretical model that shows how irrational investors' belief that a stock will beat (fall short of) expectations gives rise to a negative (positive) relationship between the stock's IVOL and expected return. I then empirically support my explanation by showing that stocks believed to beat (fall short of) expectations have negative (positive) time-series alphas — with the magnitude of these alphas increasing in IVOL — and that IVOL carries a statistically and economically significant negative (positive) premium for stocks believed to beat (fall short of) expectations

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Stability Through Sustainability: The Role of ESG in Curbing Fund Style Drift
Yuruo Feng, Massey University
Jiali Fang, Massey University
Wei Hao, Massey University
Martin Young, Massey University

Using over 40,000 quarter-fund observations from more than 3,000 Chinese mutual funds, we find a significant negative relationship between fund ESG investing and style drift. Further analysis shows that the effect is more pronounced during periods with elevated economic policy uncertainty, high investor sentiment, and non-COVID19 pandemic conditions. ESG investing is also associated with other key fund metrics, including tracking error, risk-adjusted return, and fund flow. By fostering long-term alignment between fund managers and investors, ESG commitments not only promote sustainability but also curb excessive risk-taking. Our findings are particularly timely, given the China Securities Regulatory Commission's (CSRC) 2018 mandate requiring ESG disclosures for listed companies. However, evidence at the fund level remains scarce.

Cultural Celebrations and Investor Gambling Behavior: The Performance of Lotter-Like Stocks During the Chinese Lunar New Year Period
Xinyu Wang, Griffith University
John Fan, Griffith University
Mingyi Li, Deakin University

This paper investigates the impact of return predictability on portfolio performance using mean-variance optimization and various timing strategies. Our approach captures predictability and performs well in conventional timing exercises, showing how predictability leads to substantial improvements in Sharpe ratios. However, for MVO, the relationship between predictability and performance is more complex. While higher predictability leads to increased mean returns, it also introduces significant volatility and dispersion in predicted values, resulting in extreme weights and poor risk-adjusted performance. These counter-intuitive results suggests that mean-variance optimization, may not always yield superior risk-adjusted returns when predictability is increased hinting at a nuanced relationship between predictability and performance in portfolio optimization.

Corporate Governance: Boards of Directors

Board Ethnic Diversity and Excess Corporate Payouts
Daniel Orlovsky, University of Adelaide
Yulin Li, University of Adelaide
Xiaohui Liu, University of Adelaide
Jean Canil, University of Adelaide
Chee Cheong, University of Adelaide

This paper investigates the impact of board ethnic diversity on excessive corporate payouts. Using a dataset of 8,333 U.S. firm-year observations from 2007 to 2023, the study finds a significant negative association between board ethnic diversity and the likelihood of excessive payouts. The results suggest ethnically diverse boards provide more effective oversight, especially in contexts of CEO entrenchment, overconfidence, weak internal and external governance, and high financial flexibility. These boards constrain opportunistic managerial behavior by enhancing board independence and bringing diverse perspectives that counterbalance entrenched power structures. Cross-sectional analyses further demonstrate the disciplinary role of diverse boards is most critical in firms facing heightened governance risks. The study employs a range of robustness checks, including instrumental variable estimation, entropy balancing, and falsification tests, confirming the causal link between ethnic diversity and reduced excess payouts. Overall, the findings underscore the governance value of board ethnic diversity and support policies promoting diversity as a mechanism to strengthen payout discipline and protect stakeholder interests.

Capital Allocation Under Overboarded Directors

Shahram Amini, University of Denver
Katherine Wood, Oklahoma State University

This paper examines how board busyness affects abnormal investment, defined as deviations from investment predicted by a Q-theory model. Firms with busier boards exhibit significantly lower abnormal investment, driven by a reduction in underinvestment, suggesting that busy directors are more effective in identifying and pursuing projects with positive NPV. The effect strengthens when busy directors possess industry-specific expertise, indicating the board's increased advisory capacity as the key channel. Our identification strategy exploits variation in local firm density and the appointment of female directors as instruments to establish a causal effect. The relation is nonlinear, with benefits tapering off and reversing beyond five busy directors per board.

The Value of Anti-Hedging Policy

Mengdie Deng, Sun Yat-sen University (Lingnan College)

This study explores how the adoption of Anti-Hedging Policies (AHP) by firms impacts firm value. Using hand-collected textual data from proxy statements filed between 2005 and 2023, I document a rising trend in the adoption of AHP, which explicitly prohibits managers from hedging their equity exposure. The adoption of AHP sends a positive signal to the capital market, demonstrating management's accountability for firm performance and restoring the alignment of interests between managers and shareholders, thereby increasing firm value. Consistently, I find that the adoption of AHP leads to higher cumulative abnormal returns. Additionally, AHPs are associated with higher long-term firm value as measured by Tobin's Q. The cross-sectional tests show that the positive value of AHP is stronger when managers have engaged in more opportunistic selling, in firms with higher information asymmetry, less information noise, and better board supervision. The positive relationship of AHP on firm value is likely causal based on the difference-in-difference design of the SEC's mandate. Additional analyses show that the adoption of AHP decreases insiders' usage of derivatives and increases managers' stock-based compensation

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Corporate Bond Pricing and Credit Risk

Structured Issuance and Bond Overpricing: The Role of Shadow Investors

Feiyang Cheng, Beijing Jiaotong University

This study reveals how structured issuance through shadow investors distorts bond issuance prices in China's exchange bond market. We developed a novel metric to detect the presence of shadow investors in bond issuance. By exploiting different extent of shadow investors' participation in public- and private-placed bond issuance and exogenous policy shocks targeting structured issuance, we identify a significant causal relationship between shadow investors' involvement and bond overpricing. Additionally, we find that tightened regulations on structured issuance in the public bond market inadvertently increased overpricing in the private-placed bond market by pushing shadow investors there. Cross-sectional analyses further demonstrate that shadow investors have a more pronounced impact on bonds issued by local state-owned enterprises (including LGFVs) and firms with lower credit ratings. Overall, we document structured issuance as an important mechanism in understanding the unique overpricing phenomenon for China's corporate bond issuance.

Firm-level Political Risk and Cost of Debt

Shengyu Wang, City University of Hong Kong

Ruixiang Jiang, PolyU HK
Junbo Wang, City University of Hong Kong

This study examines how firm-level political risk (PRisk) affects corporate bond issuance costs. Combining Hassan et al. (2019) 's novel firm-level political risk measure with US corporate bond issuance data, we demonstrate that political risk significantly increases yield spreads. Addressing endogeneity concerns through the construction of the instrumental variable, the firm-level political polarization, we establish a causal relationship between political risk and higher debt financing costs. Our results show that investment and financing covenants partially offset this effect. Heterogeneity analysis reveals that financially vulnerable firms, those with high effective tax rates, and those in heavily regulated industries exhibit greater sensitivity to political risk. Importantly, we find that political risk operates primarily through default risk premiums rather than bond risk premiums. These findings contribute to our understanding of nonfinancial risk pricing in debt markets and provide valuable insights for corporate financial management and investment strategies in politically uncertain environments.

Bond Short Selling and Climate Risk: Evidence from The CDS Market

Madhu Kalimipalli, Wilfrid Laurier University
Manisha Thapa, Wilfrid Laurier University
Aadhar Verma, Wilfrid Laurier University

Does climate risk influence bond short selling? We address this question by studying how climate risk influences the relationship between corporate bond short selling and subsequent credit default swap (CDS) spreads. We find that future CDS spreads are strongly related to current bond short selling for the high climate risk firms. In particular, our quarterly fixed effects triple difference-indifferences (DiD) regressions show that sensitivity of subsequent CDS spreads to lagged bond short selling is significantly higher for firms with high regulatory and physical risks in the eight quarters following the post-Paris Accord of December, 2015. Our results are robust to (a) Placebo test, (b) alternate short selling measure (i.e. utilization ratio), (c) alternate exogeneous events involving Trump election 2016 and US withdrawal from the Paris Accord 2017, (d) the staggered DiD regressions involving sequential implementation of US state climate adaptation plans. (e) alternate climate risk proxies i.e., CDP scores, emission intensity and textual physical risk measures (source: Li et. al., 2024, RFS), (f) alternate CDS maturities and CDS slope, and (g) inclusion of lagged CDS spreads and equity short selling. Further tests show that the relationship for bond short selling and subsequent CDS spreads mainly holds for long-term maturity and noninvestment grade bonds and firms with high equity short selling. Our results imply strong evidence of attention hypothesis where the sensitivity of short selling to subsequent CDS spreads is evident post Paris agreement or state climate adaptation plans, and possible market underreaction hypotheses given the strength of results for non-investment grade issues. Overall, our findings inform the climate finance literature about the role of regulatory and physical climate risks in influencing the relationship between bond short selling and subsequent CDS spreads when attention to climate risk increases.

Corporate Decarbonisation and Sustainability

Green Public Procurement: International Evidence

Ole-Kristian Hope, University of Toronto
Muhammad Azim, University of Waterloo
Sasan Saiy, University of Waterloo
Giulia Sargiacomo, University of Toronto

Markets often fail to incentivize corporations to invest in environmentally responsible practices at socially optimal levels. Green public procurement has emerged as a key policy tool for encouraging government suppliers to adopt green innovations. This study presents a large-scale, multi-country analysis of supplier firms engaged in green procurement contracts, examining their characteristics and environmental outcomes. We find that politically connected firms, those with higher CO_2 emissions, and firms with prior procurement experience are more likely to secure green contracts (and obtain higher-value contracts). Participation in such contracts is associated with subsequent CO_2 reductions, some improvement in product sustainability awareness, and greater disengagement from non-compliant suppliers. A difference-in-differences analysis around a relevant regulatory reform corroborates these findings. In contrast, we find limited evidence of changes in firm financial performance. Overall, the study highlights green procurement's potential as an effective environmental policy tool that promotes sustainability without harming firm profitability.

Green Technological Innovations and Mergers and Acquisitions: Evidence from a Quasi-Experiment

Xiangpei Zhang, Monash University

We examine whether and how green technological innovations affect firms' long-run environmental, social, and governance (ESG) performance. We conduct a quasi-experiment involving withdrawn mergers and acquisitions (M&As) with green patents that fail due to reasons exogenous to technological reasons. By employing a Difference-in-Differences (DiD) estimation, we find that the Refinitiv ESG score for treated firms (i.e., acquirers in successful M&As with target green patents) increases by 25% after the M&A success. The spillover effects of target green patents on the social and governance pillars contribute 52% to this improvement in the overall ESG score.

Reducing Carbon using Regulatory and Financial Market Tools
Adelina Barbalau, University of Alberta

We study when securities whose payoff is contingent on the issuer's carbon emissions can substitute for politically determined carbon regulation. Carbon-contingent securities provide incentives to reduce emissions and can fully substitute a carbon tax if they are sufficiently large, but also reduce political support for regulation. When support for taxation is absent, markets improve outcomes by enabling abatement that regulation cannot deliver; when some support exists, they can backfire by crowding out a welfare-enhancing tax. Market-based climate solutions thus can act as substitutes and obstacles to regulation. Our analysis highlights both the promise and the risks of market-based climate solutions.

Quantitative Methods

Variance-Reduced Monte Carlo Pricing of Arithmetic Asian Options
Mesias Alfeus, Stellenbosch University
Erica Zhang, Stanford University
Yinuo Shan, University College London
Zoë Arendsee, University of Cape Town
Damian Sparks, University of Cape Town

This study investigates Monte Carlo–based numerical methods for pricing path-dependent arithmetic Asian options. In particular, we assess the Diffusion Operator Integral (DOI) variance-reduction technique originally proposed by Heath and Platen (2002), benchmarking its performance against three classical schemes—control variates, antithetic variates, and endpoint stratification. To provide a comprehensive theoretical and empirical evaluation, each variance-reduction method is implemented within a simulation framework under four stochastic-volatility models: the classical Heston model, the rough Heston model, the SABR model, and the rough SABR model.

ConvHAR: A Convolutional Surface HAR Model for VIX Implied Volatility Forecasting
Zihao Gong, Zhehijang University of Finance & Economics
Xinfeng Ruan, Xi'an Jiataotong-Liverpool University
Chen Yang, The Chinese University of Hong Kong
Wenli Huang, Zhehijang University of Finance & Economics

This paper proposes a novel framework for forecasting the implied volatility surface of VIX options by extending the traditional Heterogeneous Autoregressive (HAR) model into a convolution-based surface forecasting approach, termed ConvHAR. Unlike conventional HAR models that generate forecasts at isolated points, ConvHAR captures spatial-temporal dependencies across moneyness and time-to-maturity dimensions through convolutional architectures. To further enhance predictive power, we incorporate the implied volatility surface of SPX options as an auxiliary input, motivated by the theoretical and empirical linkages between SPX and VIX markets. Empirical results show that ConvHAR outperforms benchmark univariate and pointwise models in forecasting accuracy, particularly over medium to long horizons. Moreover, incorporating cross-market volatility information from SPX leads to further gains in performance. These findings underscore the importance of modeling surface-level dynamics and market interdependencies in volatility forecasting, with practical implications for derivative pricing and risk management.

Valuation of variable annuities in a general stochastic environment
Jose Da Fonseca, Auckland University of Technology
Patrick Wong, Monash University, Faculty of Business & Economics, Department of Econometrics and Business Statistics

This paper develops an advanced analytical framework for pricing variable annuity products, specifically Guaranteed Minimum Maturity Benefits (GMMB), Guaranteed Minimum Death Benefits (GMDB), and Guaranteed Minimum Income

Benefits (GMIB), within a stochastic environment featuring general dependencies. The model assumes stochastic dynamics for jump intensity, interest rates, and volatility, explicitly incorporating interdependencies among these risks. A significant contribution of this research is the derivation of analytical, closed-form solutions, facilitating efficient and accurate pricing. We demonstrate that dependencies between various risks substantially influence product prices, particularly for longer-dated options. In particular, our framework generalizes and enhances the recent approximation approaches of Zhong et al. (2023) [Scandinavian Actuarial Journal] which necessitates an approximation due to model limitation. To obtain our result, we extend the methodology of Kirkby and Nguyen (2021) [Insurance: Mathematics and Economics] to multidimensional densities. Despite the highly flexible model, our method allows us to efficiently price and manage risk for these products

Corporate Bonds and Local Government Debt

On The Drivers of Corporate Bond Lending

Yancheng Qiu, The University of Sydney
Amit Goyal, Swiss Finance Institute at the University of Lausanne
Yoshio Nozawa, University of Toronto

In the corporate bond market, short sellers are primarily dealers rather than speculative customers. On days when bond lending increases, dealer sales, the half spread of customer buy trades, and bond returns all rise, indicating that bond lending is driven by buying pressure. Using a novel empirical framework that decomposes the variance of securities lending, we find that dealer market making activities account for 66% of lending variation. The role of customer speculation intensifies in a small segment of special bonds, but its share never exceeds 50%. Our findings caution against extending the insights from the equity short selling literature to the corporate bond market.

News Linkage and corporate bond returns

Junbo Wang, City University of Hong Kong
Ruixiang Jiang, PolyU HK
Mengjuan Mengjuan, City University of Hong Kong
Yanchu Wang, Shanghai University of Finance and Economics

We document strong momentum spillover effect in the cross-section of corporate bonds based on news linkage. The bond peer momentum constructed from news linkage (NCR) significantly and positively predicts future 1-month bond returns, and this finding is robust to various controls. A long-short strategy realizes significant profits of 0.22% per month, which cannot be explained by various bond and stock factors. The return predictive ability of NCR is stronger for bonds with higher credit risk, smaller issue size and longer maturity. Slow information diffusion is the underlying reason for such predictive effect of NCR on bond returns.

From Bricks to Brains: How Local Government Debt Marketization Reshapes Resource Allocation, Evidenced by R&D Subsidies

Shouyu Yao, Tianjin University
Ruijiang Li, Massey University
Jing Liao, Massey University; David Smith, Massey University; Zhenming Fang, Tianjin University

Local government debt is a key instrument for economic stimulus and has drawn significant academic attention. However few studies explore how local government debt influences resource allocation. We address the gap by examining how the institutional evolution of local government debt affects the allocation of R&D subsidies in China. Using a unique, manually collected datasets of R&D subsidies for listed firms and exploiting the staggered implementation of debt marketization across cities as a quasi-natural experiment, we find that such an event increased R&D subsidies' allocation. The results are robust to various checks. Mechanism analysis shows the effect operates through reduced government myopia and enhanced fiscal transparency. Heterogeneity analysis further reveals stronger effects in cities with greater governor's promotion pressure, lower fiscal discretion, and higher fiscal decentralization. We extends principal-agent theory into the lens of government debt and resource allocation, exploring grant mechanism behind R&D subsidy, and offering strong policy implications.

Fintech Innovation

Fintech business and shadow banking practices

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Chenchen Shi, School of Management, Shandong University
Bin Li, School of Management, Shandong University
Ruiqing Cao, School of Management, Shandong University
Rongzhi Wang, School of Management, Shandong University

Through a proprietary dataset of listed non-financial firms on the Shanghai and Shenzhen Stock Exchanges, we establish a negative link between financial technology (Fintech) business and shadow banking practices (SBPs). Such a link is more pronounced among firms with better access to financial resources, or higher participation in financial activities, and those in regions of higher level of intelligent transformation. We also find that enhanced information transparency, investment efficiency, and internal control underlie the link. In addition, Fintech business may help lower firms' stock price crash risk and improve their total factor productivity (TFP). Our findings remain robust after various tests.

Bank Culture Meets FinTech: Measuring Innovation with Large Language Models

Na Dai, SUNY at Albany
Luca Bellardini, University of Milano-Bicocca
Daniele Previtali, University of Naples at Parthenope
Kinsun Tam, University at Albany

This paper investigates how innovation culture influences banks' strategic responses to FinTech disruption. We develop a novel, data-driven measure of innovation culture using large language models (LLMs) applied to the MD&A sections of 10-K filings for U.S. banks (2013–2023). This LLM-based textual analysis captures latent cultural signals and enables consistent, firm-year-level measurement across a large panel. We link this measure to banks' investments in FinTech startups, risk-taking, capital adequacy, and stock performance. Results show that banks with stronger innovation cultures are significantly more likely to invest in FinTech, do so more intensively, maintain capital discipline and do not expose to excessive risk. Innovation culture also predicts stock returns as a key driver of strategic adaptability.

Mobile Payment Platform Competition: Evidence from a Bank in China

Guodong Chen, New York University Shanghai
Tse-Chun Lin, University of Hong Kong

This paper studies the effect of mobile payment platform competition on customer's spending patterns. Using a unique proprietary data from a large commercial bank in China, we investigate how an additional mobile payment access changes the bank clients' spending patterns via both mobile platforms, online and offline. Using a propensity score matching in difference-in-differences, we find that naïve users, who had never had any mobile payment transaction via AliPay before the introduction of the additional mobile payment access WeChat Pay, consume 3.75 more transactions and 7.55 percent more amount in total consumptions than those of sophisticated users, the ones with at least one transaction using AliPay before WeChat Pay is introduced. The increase in consumption mainly occurs in low-value durables goods. Moreover, we show that the introduction of the access to a new mobile payment platform does not crowd out the consumption from its competitor mobile payment platform but rather offline payment. In other words, the newly added WeChat Pay serves as a substitute to physical cards and a complement to other mobile payment methods.

Executive Compensation and Corporate Strategy

Competitive Pressure and Relative Performance Evaluation: Evidence from Mergers and Acquisitions

Xiaohui Liu, University of Adelaide
Jane Luo, University of Adelaide
Alfred Yawson, University of Adelaide

We examine the spillover effects of an acquisition on the industry peer firms of the acquirer. We treat an acquisition as a shock that increases competitive pressure in the product market. Our findings reveal that, with the intent of defending their competitive positions in the product market, peer firms exhibit an increased propensity of adopting relative performance evaluation (RPE, hereafter) in their CEO compensation as a strategic response to an acquisition. This effect is more pronounced when the peer firm exhibits a close co-movement with the acquirer prior to the acquisition announcement and when the acquisition is driven by competitive motives. The effect is also varied with peer firms' characteristics, we find a stronger effect when peer firms are market follower, operating in competitive industries, producing products that are hard to replicate, and have efficient boards. In addition, we provide evidence showing that peer firms that adjust RPE compensation exhibit a higher level of aggressiveness than peer firms that do not adjust RPE.

Collectively, our findings are consistent with the theory that incorporating RPE into CEO compensation incentivize firms to aggressively improve their relative competitive positions.

Aligning CEO Incentives with Employee-related ESG Goals: Implications for ESG and Financial Performance Abstract

Lijuan Zhang, The Australian National University
Ruixue Sun, The Australian National University
Yi Gong, The Australian National University

We examine whether linking CEO compensation to employee-related environmental, social, and governance (ESG) metrics enhances employee outcomes and firm performance. Using data from S&P 1500 firms (2009–2023), we find that the inclusion of employee-related ESG targets, covering dimensions such as workplace safety, employee satisfaction, and human rights, is associated with significant improvements in employee-related ESG performance and higher return on assets. Performance gains are particularly pronounced in areas tied to workplace safety and employee satisfaction, while improvements in flexible work arrangements and certain human rights indicators show weaker or more mixed financial implications. The effects are stronger in firms with more independent boards, but not with CSR committees. Additional tests show that the presence of employee-related incentives, rather than their weight, drives ESG gains, and these gains do not correlate with increases in short-term CEO pay. Overall, our findings suggest that incorporating employee-related ESG incentives into executive pay can contribute to both social and financial value creation, provided governance structures are sufficiently robust to ensure effective design and enforcement.

Designing Compensation Contracts to Moderate the Effect of CEOs' Behavioral Attributes on Corporate Outcomes

Lubna Rahman, Monash University
Mark Humphery-Jenner, UNSW Sydney
Emdad Islam, Monash University
Jo-Ann Suchard, UNSW Sydney

We examine how firms strategically design CEO compensation to mitigate behavioral biases rooted in early life experience. We focus on CEOs' early life disaster exposure, which can shape their risk aversion. We find that firms mitigate risk aversion by offering a 5.24 percent higher compensation delta and a 6.44 percent higher compensation vega, thereby incentivizing risk-taking. These adjustments are more pronounced in firms with stronger governance and distinct corporate characteristics. Our findings highlight that compensation contracts serve not only as incentive mechanisms but also as behavioral moderators, significantly mitigating the impact of CEO risk aversion on corporate innovation and risk-taking.

Volatility Smile

No Smiles – Volatility Patterns when Trading is Continuous

Usman Arief, The University of Western Australia
Dirk Baur, The University of Western Australia
Lee Smales, The University of Western Australia

This study examines the volatility patterns in a continuous trading environment. Using high-frequency transaction data from cryptocurrencies, major currency pairs, and stock market indices, we investigate how volatility behaves across asset classes. Unlike stock markets with restricted trading hours that exhibit a U-shaped "smile" volatility curve, continuously traded assets display a flat volatility profile. Simulation results further illustrate that the smile structure is generated during restricted trading hours due to the accumulation of unprocessed information during non-trading hours.

How do different sources of underlying return variation influence the implied volatility smile? Evidence from Indian options market

Shubhankar Mishra, Indian Institute of Management, Ahmedabad
Sobhesh Kumar Agarwalla, Indian Institute of Management, Ahmedabad

This paper examines how the composition of stock return variation driven by market-wide information, firm-specific information (public and private), or noise influences investor perceptions of volatility and tail risk, as reflected in the single-stock options (SSO) market. Using a structural VAR-based decomposition on Indian stocks from 2010–2024, we find that informed return variation is associated with lower implied volatility and tail risk, while noisy return variation increases

both. Within the information component, market-wide information share increases perceived volatility and tail risks, while firm-specific information reduces both risks. Private firm-specific information plays a particularly important role in dampening perceived volatility and tail risk, while public information helps alleviate perceived left-tail risk, especially during crisis. These results highlight an unexplored aspect of rational pricing of risk in the SSO market, wherein market participants take into account the informational structure of underlying returns while pricing stock options.

The implied volatility smirk, informed option trading, and the cross-section of stock returns

Jianhui Li, Auckland University of Technology
Xinfeng Ruan, Xi'an Jiaotong-Liverpool University
Jin E. Zhang, University of Otago

This paper investigates the relationship between implied volatility (IV) smirks and future returns on individual stock options. We utilize a quadratic function to decompose IV into its constitutive elements: level (LEVEL), slope (SLOPE), and curvature (CURV). Changes in these elements reflect shifts in investor demand. Our empirical analysis reveals a negative cross-sectional correlation between LEVEL, SLOPE, and CURV and subsequent one-month stock returns, spanning from January 1996 to December 2019. This suggests that when investors anticipate lower (higher) future stock returns, speculative demand rises (falls), hedging demand increases (decreases), and aggressive speculative demand intensifies (weakens).

Shareholder Rights and Governance

Shareholder Participation and Wealth Transfer in Rights Offerings

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Qinqin Xia, Macquarie University
Sean Foley, Macquarie University

Since 2009, Australian firms have conducted over 4,000 rights offerings, providing a substantial dataset for analyzing shareholder participation and associated wealth transfers. Our study reveals that the average shareholder participation is only 45%. Non-participation from existing shareholders results in significant wealth transfers, averaging 33% of the offering value, with higher wealth transfers observed in larger offer discount, larger offer size, renounceable offers and offers with attached options. Surprisingly, the stock market does not react negatively to these larger wealth transfers. This absence of negative market reactions to wealth transfers helps explain the prevalence of rights offerings in Australia.

Whistleblowing Allegations and Payout Policy

Timothy Estreich, University of Queensland
Abu Amin, Central Michigan University
Hasibul Chowdhury, University of Queensland
Nicolas Eugster, University of Queensland

This paper examines the impact of whistleblowing allegations on a firm's payout policy decisions. Using 1,329 whistleblowing incidents reported to the Occupational Safety and Health Administration from 2002-2023, we observe a significant 19.2% reduction in dividend payments following such allegations. This decline is attributed to higher litigation risk and greater financial uncertainty suggesting that firms prioritise payout flexibility. Moreover, our study reveals that better corporate governance can mitigate these effects by improving fraud detection and response. Additionally, we find that repurchases increase following allegations as firms seek greater payout flexibility. Finally, using the 2011 Dodd-Frank whistleblower provisions as a quasi-natural experiment, our findings corroborate that heightened whistleblowing risks lead to reduced dividend payouts, particularly impacting firms previously unprotected by whistleblower laws.

Oracles of the Vote: Predicting the Outcomes of Proxy Contests

Ting Yu, University of Cambridge
Scott Hirst, Boston University
Oğuzhan Karakaş, University of Cambridge

This paper examines proxy contests and the value of shareholder voting rights (i.e., the voting premium) estimated using option prices. Our sample consists of 1,074 proxy contests for board seats at U.S. publicly listed firms from 1994 to 2020. We find that voting premium can help to predict the outcomes of proxy contests. Specifically, increased voting premiums around campaign announcements are associated with higher likelihood of the contest being subsequently settled or going

to a vote, and to a lower likelihood of the contest being withdrawn. Further, the likelihood of the dissidents being elected if the contest goes to a vote increases with the voting premium around the record date.

Information Advantage in Institutional Trading

Informed Trading under the Microscope: Evidence from 30 Years of Daily Hedge Fund Trades

JinGi Ha, Soongsil University
Jianfeng Hu, Singapore Management University
Yuehua Tang, University of Florida

We develop a new measure of daily aggregate hedge fund trades in individual U.S. stocks from 1993 to 2022. Using this measure, we find that hedge fund pre-announcement trading significantly predicts abnormal returns around corporate events and public news arrivals. We do not find similar results using non-hedge fund or aggregate institutional trading. We uncover that hedge funds increasingly utilize alternative data, such as satellite images, to generate alpha. Furthermore, hedge fund trading positively predicts future stock returns in the cross-section, both in-sample and out-of-sample. Finally, hedge fund trading enhances price efficiency, reducing stock variance ratios and post-earnings announcement drift.

Backyard Brilliance: Local Star Inventors' Influence on Institutional Investments

Lei Zhang, City University of Hong Kong
Will Shuo Liu, City University of Hong Kong
Zheng Qiao, Xi'an Jiaotong University
Zhiyu Zhang, City University of Hong Kong

We document that institutional investors overweight stocks associated with geographically close star inventors ("local star inventor holdings") compared to a market-cap based benchmark. This preference, distinct from traditional local bias, likely arises from information and knowledge spillovers through local inventors regarding firms' technological innovations. Moreover, local star inventor holdings outperform other holdings in the same investor's portfolio, and a firm's institutional ownership under local star inventor holdings is positively related to its risk-adjusted return and can strongly predict the value of its future patents. Our results shed new light on how institutional investors develop informational advantages in their portfolio decisions.

What Do Fund Employees Know? Evidence from Their 401(k) Trades

Pramod Kumar Yadav, University of Sydney

Using hand-collected data on mutual fund family employees' 401(k) investment choices, I examine whether employees' allocation decisions predict mutual fund performance. I find that employee-directed flows predict fund returns for up to two years, indicating that these flows reflect valuable information. Employee flows also lead flows of external investors, but not the other way around, indicating that employees are not simply reacting to public signals. The predictive power is strongest when employees are geographically close to fund managers, consistent with proximity facilitating learning about manager skill or effort. These findings align with the theoretical framework of Farboodi and Veldkamp (2020), which posits that informed agents can extract value by both learning about fundamental asset values and forecasting other investors' demand. My results suggest that fund employees exploit both channels of information. These results are not driven by portfolio manager ownership, cross-subsidization within fund families, plan design, or differences in employee sophistication.

Regulatory Factors and Corporate Outcomes

Political Pressure or Regulatory Expertise? The Role of Political Directors in Shaping Bank CSR

Ning Ding, University of Auckland
Dimitris Margaritis, University of Auckland
Lina El-Jahel, University of Auckland

This study investigates how political connections at the director level affect corporate social responsibility (CSR) performance in Chinese banks. While prior research generally treats political directors as a homogeneous group, we adopt a governance-based typology separating politically connected directors into independent and non-independent roles. Leveraging a rich panel dataset of all A-share listed Chinese banks from 2009 to 2019 and a multidimensional CSR rating system that captures stakeholder-specific engagement, we show that only politically independent directors, particularly those with prior regulatory experience, drive meaningful improvements in CSR. These findings underscore the importance

of governance structure and policy expertise in shaping CSR outcomes. To strengthen causal identification, we exploit the 2013 anti-corruption regulation (Rule No. 18), which restricted government officials from serving on corporate boards. Post-regulation analyses reveal a diminished effect of political directors on CSR, affirming that the observed impacts stem from directors' regulatory knowledge rather than symbolic political compliance. Our results refine the understanding of political capital's role in corporate governance and offer actionable implications for promoting sustainable banking practices.

Law Firms: Do They Matter for Patent Value?
Pengfei Liu, University of Auckland
Heng Geng, Victoria University of Wellington
Hai Lin, Victoria University of Wellington

This paper investigates whether patent law firms exhibit the capability to enhance the value of patents they prosecute. Using the market share to measure a law firm's legal expertise in the patent application, we find that larger law firms in a technology field are associated with a higher patent value perceived by stock market investors. The legal expertise of larger law firms manifests through a shorter patent grant lag, greater due diligence in searching patent prior art, better writing quality for patent claims, and a broader patent scope. Our paper finds support that law firm expertise plays an important role in determining patent value.

The Cost of Regulatory Fragmentation: Evidence from Product Quality Failures
Suman Neupane, The University of Queensland
Md Imran Hossain, The University of Queensland
Dewan Rahman, The University of Queensland

This paper investigates whether and how regulatory fragmentation leads to product quality failures, proxied by product recalls. Exploiting a hand-collected comprehensive product recall dataset of the US public firms from 1996 to 2023 and a firm-specific measure of regulatory fragmentation, we provide novel empirical evidence that firms facing fragmented regulations are more likely to experience product quality failures. Specifically, our results show that a one standard deviation increase in regulatory fragmentation results in about 516 additional recalls. Our results remain robust after addressing endogeneity concerns, conducting robustness checks, and ruling out alternative explanations. Additionally, the impact of regulatory fragmentation is more pronounced for firms with larger scopes, weaker corporate quality culture, greater competitive product markets and higher policy uncertainty. We find that fragmented regulation affects product quality failures through increased operating costs and employment, and reduced input quality and investment.

Option Markets

Option Return Co-movements
Van Quoc Thinh Nguyen, University of Sydney
Quan Gan, University of Sydney

We show that option returns co-move among firms linked by production complementarity, industry and shared analyst coverage. The co-movements in delta-neutral option returns can be explained by the option common factors, especially the factors based on the implied-historical volatility difference and volatility-of-volatility. The stock market common factors, especially the market risk premium, can explain the co-movements in raw option returns but cannot explain the co-movements in delta-neutral returns. The co-movements in raw call returns intensify in bull markets, whereas the co-movements in raw put returns intensify in bear markets. There are also peer option momentum effects among economically linked firms.

Short-term market reversals and the S&P 500 index option returns
Matti Suominen, Aalto University School of Business
Akseli Kajander, Aalto University

We provide new evidence for the demand based-option pricing theory and limits of arbitrage in option pricing. We document that since the financial crisis, the S&P 500 index futures have exhibited short-term return reversal at a daily frequency and that the return reversals are larger at times of futures market illiquidity and high put-call ratio in the options' market. Return reversals create a sizable transaction cost to those writers of S&P 500 index options, who hedge their exposures in the futures market and rebalance their hedges frequently. Due to a positive gamma in options, in case of

return reversals in the underlying, the option writers who frequently rebalance their hedging portfolios end up continuously buying high and selling low, losing money in this activity. In line with the demand based-option pricing theory, and limits of arbitrage, the returns to writing unhedged straddles are more positive, and the returns to straddle replicating portfolios (hedging portfolios) are more negative, when futures markets are illiquid. We show that less than perfect hedging, or rebalancing the hedges only weekly, generate higher risk-adjusted returns for option writers, than hedging fully and rebalancing the hedges daily. Hedging strategies that make use of the futures return predictability, due to return reversals, generate even higher risk-adjusted returns. We show also that index options' implied volatility and the put-call ratio predict positively the returns to writing unhedged straddles and the futures market illiquidity, and negatively the returns to straddle replicating portfolios.

Investors' Risk Preferences and Option Prices

David Brown, University of Wisconsin-Madison
Matthew Carl, Dimensional Fund Advisors

We ask if prudence (aversion to downside risk), temperance (aversion to outside risk), and higherorder risk attitudes are determinants of option prices. A simple model of investment portfolios in incomplete markets identifies lower and upper bounds for option prices. The range between bounds narrows as (i) investors become averse to increasingly higher-order risks, and/or (ii) investors become increasingly risk averse. Numerical analysis shows how commonly-observed profiles of implied volatility, like smiles and smirks, emerge endogenously from the interplay between risk-attitudes and the distribution of returns of the underlying asset. After accounting for prudence, other risk attitudes have only a modest impact on values of short-dated options.

Behavioural Biases, Geopolitics, and Mispricing

Tracking noise trading through numbers: Is noise trading systematic?

Haomiao Wang, Dongbei University of Finance and Economics
Yongdong Shi, Dongbei University of Finance and Economics
Bohui Zhang, Dongbei University of Finance and Economics
Hongxian Zhen, Dongbei University of Finance and Economics

We examine the impact of noise trading on stock market returns by exploiting Chinese numerological superstition, where certain numbers in asset prices are perceived as being lucky or unlucky by uninformed traders. The noise trading (NT) measure, measured by the difference between the frequencies of lucky and unlucky numbers in stock prices directly captures noise trading activity and negatively predicts China's stock market returns. The results also hold out of sample and are stronger when arbitrage costs are high and information availability is low than in other situations. Collectively, our findings support the notion that noise trading contributes to systematic mispricing in the stock market.

Trading on Tension: Geopolitical Motives and Market Distortions

Claire Liu, University of Sydney
Ben Hines, Harvard University
Yancheng Qiu, University of Sydney
Joakim Westerholm, University of Sydney

Using hand-collected data on public short-selling campaigns targeting U.S.-listed Chinese firms, we examine whether geopolitical tensions impair market efficiency. We find strong evidence that activist short sellers strategically time the release of their reports by targeting Chinese firms during periods of heightened U.S.-China tensions. In contrast to those released during stable periods, reports issued during high-tension periods contain more negative sentiment, trigger sharper immediate declines in targeted stock prices, but also exhibit substantial price reversals. Furthermore, financial fraud allegations made during high U.S.-China tension periods are significantly less accurate. These patterns suggest that geopolitically salient short selling may distort market perceptions, as short sellers appear to exploit anti-China sentiment primarily for trading profits rather than to enhance informational efficiency.

A Battle of Wills: The Joint Impact of Sentiment and Benchmarking on Volatility and Mispricing

Luis Goncalves-Pinto, UNSW
Herve Roche, Universidad de Chile
Juan Sotes-Paladino, Universidad de los Andes

Standard models predict a positive relationship between investor sentiment and volatility, yet the empirical evidence suggests otherwise. We reconcile this discrepancy in a model with retail sentiment and institutional benchmarking. The interaction of these features reshapes how fundamental risk translates into return volatility, creating an asymmetric relationship with sentiment. It also explains why institutions can reduce mispricing under heightened sentiment. Using exogenous variation in institutions' benchmarking intensity, we provide causal evidence on the predicted impact of institutions on volatility for different sentiment levels. We also offer evidence on the predicted effect of sentiment and institutions on mispricing.

Cryptocurrency and Decentralised Finance

DLT meets ESG: Does Blockchain Spur Sustainability Outcomes?
Zhige Yu, Xiamen University

This study investigates whether US public firms can achieve better Environmental, Social, and Governance (ESG) ratings by considering and adopting blockchain technology. Utilizing a firmlevel measure to capture management interest in adopting blockchain technologies, we find that firms with blockchain exposure exhibit an average increase of around three points in their ESG ratings. Cross-sectional tests indicate a positive association between blockchain exposure and ESG ratings is more pronounced for firms with lower energy consumption, non-toxic production, and more opaque information environments. Additionally, firms with real blockchain adoption receive higher ESG ratings than speculative (i.e., just considering the technology) and non-disclosure firms. The results remain robust when using exogenous shocks to firms' blockchain adoption or increased market interest on blockchain technologies. Overall, the findings suggest that disruptive technologies, such as blockchain, can positively affect firms' sustainability landscape by enhancing supply chain transparency and mitigating information inefficiencies.

Insider trading in cryptocurrency markets
Ester Felez Vinas, University of Technology Sydney

We find evidence of systematic insider trading in cryptocurrency markets, where individuals use private information to buy coins prior to exchange listing announcements. Leveraging blockchain data, we identify the specific transactions and wallets (individuals) that consistently trade before announcements, ruling out alternative explanations. We estimate that insider trading occurs in 28-48% of cryptocurrency listings, yielding at least $30 million in trading profits. Unlike insider trading in stocks, scrutiny by authorities does not significantly reduce the level of insider trading, but pushes it underground via cryptocurrency concealment methods. These findings highlight the substantial challenges in policing cryptocurrency markets.

Centralising Forces in Decentralised Exchanges: Can Liquidity Provision Be Democratised?
Sean Foley, Macquarie University
Matteo Aquilina, Bank of International Settlements
Leonardo Gambacorta, Bank of International Settlements
William Krekel, Macquarie University

Decentralised exchanges allow participants to buy and sell assets without the need for intermediaries, in theory democratising liquidity provision. However, using data from the largest decentralised exchange, we show that liquidity provision – rather than being the purview of a diffused set of market participants – is instead confined predominantly to a small group of sophisticated ones. These participants submit orders that mimic bids and asks and are able to extract significantly higher profits (both in absolute and relative terms) compared to their unsophisticated counterparts. They also exhibit considerable skill, extracting higher profits during periods of high volatility by capturing a higher share of trading without incurring additional adverse selection.

Corporate Disclosure and Information Asymmetry

To benefit or Signal? Insider trading and contract redactions
Lixin (Nancy) Su, The Hong Kong Polytechnic University
Dichu Bao, Lingnan University
Zhaoran (Jason) Gong, Xi'an JiaoTong - Liverpool University

Using redacted and non-redacted material contracts filed between July 2008 and December 2018, we show that insiders trade on the redacted private information and that insider sales appear to be more pronounced and last longer than insider purchases. Insider purchases are likely to happen only when firms experience widened bid-ask spreads and lower abnormal returns around the filings of redacted contracts, and these purchases on average are not profitable, suggesting that insider purchases are to signal firm prospects rather than to exploit information advantage for personal gains. By contrast, insider sales following the filings of redacted contracts are associated with higher profits over the subsequent six months, particularly when the redacted contracts relate to R&D, license and royalty, or when redacting firms possess private bad news or trade secrets. Overall, we offer interesting evidence on the interplay between strategic (non)disclosure and insider trading in a mandatory disclosure setting.

Inside Access: The Role of In-Person Communication in Insider Trading

Yixuan Rui, Curtin University
Pouyan Foroughi, York University

This paper investigates how corporate insiders acquire material information, focusing on the role of in-person interactions. We find that non-executive officers engage in significantly less informative trading-measured by trade profitability-compared to top executives and directors. The disparity suggests that low-tier insiders may rely on face-to-face interactions with senior insiders as a key channel for accessing operational insights. To identify this mechanism, we exploit the exogenous shock to in-person communication caused by U.S. stayat-home orders during the COVID-19 pandemic. The decline in trading informativeness among non-executive officers is most pronounced for stocks with improved liquidity, reducing concerns about confounding changes in information asymmetry. These findings underscore the importance of informal interpersonal communication in insider information flow.

Disclosure of Rank-and-File Employee Pay Gap and Crash Risk

Yulin Li, The University of Adelaide
Chee Seng Cheong, The University of Adelaide
Jean Canil, The University of Adelaide

This study investigates the relationship between CEO-employee pay ratios and stock price crash risk by developing a novel theoretical framework that explores the organizational psychological mechanisms driving information suppression. We argue that large pay disparities create complex incentive structures that motivate CEOs to withhold negative information. Specifically, high pay ratios generate reputational pressures, psychological distancing, and organizational communication barriers that increase the likelihood of catastrophic information revelations. Using panel regression analysis, we find significant evidence that larger pay gaps are associated with increased stock price crash risk, suggesting that pay ratio disclosures reveal more than mere corporate governance metrics—they illuminate potential systemic information management risks.

Option Trading

Impact of Embedded Leverage on Trading Activity in Spot, Options, and Futures Markets

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Sobhesh Kumar Agarwalla, Indian Institute of Management Ahmedabad
Jayanth R. Varma, Indian Institute of Management Ahmedabad

Embedded leverage is an important consideration when leverage-constrained investors decide whether to trade in the options, futures, or spot markets. Using option/stock, option/future, and future/stock volume ratios as measures of relative trading activity, we empirically find that trading is high in securities offering higher embedded leverage in general and especially during earnings announcements. We further corroborate our results through an examination of the exogenous shock to embedded leverage induced by the COVID-19 pandemic. Additionally, we find that embedded leverage incentivizes information generation that reduces future price uncertainty.

Animal Spirits on Steroids: Evidence from Retail Options Trading in India

Vikas Agarwal, Georgia State University
Pulak Ghosh, Georgia State University
Nagpurnanand Prabhala, Johns Hopkins University
Haibei Zhao, Lehigh University

We analyze a market-wide panel dataset on retail option trading from India, which has an 80% share in option contracts traded worldwide. Retail participation is concentrated in and dominates index options trading. Traders exhibit short-term speculative behavior with significant day trading, short-duration directional bets, especially as options converge to 0DTE, and make significant losses. Three natural experiments show that financial constraints and lottery-like preferences shape investor behavior. An exogenous increase in the supply of short-maturity options induces trading. Lot-size increases and delivery margins trying to curb speculation are offset by speculative shifts to small ticket-size, riskier options. While stock market participation increases welfare in canonical household finance models, it can also entrench speculative behavior that is difficult to undo.

A little chaos is good? How exchange jitter shapes high frequency trading and market quality Danmo Lin, Vito Mollica, Macquarie University

Financial markets process vast amounts of data in real time, resulting in variability in exchange processing speed—known as jitter. Because exchange speed is rarely transparent, traders must learn about jitter through repeated market interaction. We develop a model in which high-frequency traders (HFTs) form expectations about jitter by participating more actively, influencing both their strategies and overall market quality. The model makes three key predictions: (1) improving latency transparency reduces the concentration of HFT activity in short bursts, (2) higher jitter narrows bid-ask spreads by limiting stale quote sniping, and (3) jitter raises execution costs for algorithmic traders. We empirically test and find support for these predictions using a unique dataset from the India International Exchange, where latency statistics are publicly reported. Our findings suggest that latency transparency can promote fairer and more efficient markets, while exchange-level jitter may improve liquidity for market orders at the cost of higher transaction costs for algorithmic traders. These insights offer practical guidance for exchanges and regulators considering the design of modern trading infrastructure.

Entrepreneurial Finance and Venture Capital

The Information Value of Labor Market Sorting in the Entrepreneurial World: The Case of Serial Venture Employees

Xiao Ren, The Chinese University of Hong Kong Shenzhen
Sean Cao, University of Maryland
Jie He, University of Georgia
Zhilu Lin, University of Tampa

We examine an emerging phenomenon that talented employees leave successful entrepreneurial firms to join less mature private firms. Using proprietary data from the U.S. Census Bureau, we find that the presence of these "serial venture employees" positively predicts their new employers' future success in terms of exit likelihoods, size growth, venture capital financing, and innovation productivity. Such predictive power is more likely driven by a two-way screening/matching channel rather than venture labor's nurturing role, and is stronger than the predictive power of other high-talent labor such as employees top-paid by their previous employers or those having prior VC-backing/public-firm experience. We further demonstrate the usefulness of this labor-based signal to job seekers on the entrepreneurial market, especially when alternative information sources are limited. Finally, the departure of serial venture employees contributes to the well-documented long-run Initial Public Offering (IPO) underperformance. Our paper sheds light on an underexplored form of labor market sorting in the entrepreneurial community, which provides a nonfinancial yet value-relevant signal about private firms for stakeholders.

Security Issuance, Going Public Decision, Bayesian Learning

Yuchi Yao, University of Oregon

This paper studies the impact of the SEC's new rule, which makes the PSLRA's safe harbor for forward-looking statements unavailable for SPACs, on private firms. I build a dynamic model of a private firm's optimal timing for going public, featuring two public offering markets: SPACs, which produce more information but are more costly, and IPOs. I simulate the effect of the SEC's new rule on firms that are currently private. Excluding the safe harbor for SPACs causes the option value of private firms to decline and eliminates half the benefit of information production in the SPAC process.

The Dynamics of Venture Capital Syndicates: The Effect of Prior Collaboration among VCs on Value Addition to Entrepreneurial Firms

Jingxuan Zhang, University of Alberta

Thomas Chemmanur, Boston College
Jiajie Xu, University of Iowa
Xiang Zheng, University of Connecticut

We analyze the effect of the composition of venture capital (VC) syndicates on value creation for the entrepreneurial firms they invest in. We hypothesize that VCs may learn about each other's skills at value creation when they co-invest together in entrepreneurial firms, allowing for more efficient value creation when they co-invest in subsequent syndicates. Further, if VCs view syndication as a repeated game, this may generate incentives to co-operate to a greater extent with each other when investing together in a syndicate, reducing the probability of conflicts among VCs. We empirically analyze the implications of these hypotheses and find the following. First, prior collaboration between a lead VC and any of the VCs in a syndicate leads to greater short-term value creation, as evidenced by greater sales growth, employment growth, probability of patented innovation, and the quality of innovations generated during the three years subsequent to VC syndicate investment. Second, prior collaboration between the lead VC and at least one of the syndicate members leads to greater long-term value creation, as evidenced by the higher probability of a successful exit (IPO or acquisition). Third, if the prior collaboration is very successful (leading to an IPO exit resulting from the previous collaboration), then there is even greater value creation by the VC syndicate compared to the case where the prior collaboration was less successful. Finally, consistent with prior collaboration allowing VCs to learn about each other's value creation skills and reducing potential conflicts among the VCs forming a syndicate, syndicates with prior collaboration between the lead VC and at least one syndicate member are characterized by more uniform syndicate compositions across financing rounds.

Climate Risk and Financial System Vulnerability

How Exposed Are Banks to Physical Climate Risk?

Mandeep Singh, University of Sydney
Kristle Romero Cortés, University of New South Wales
Konark Saxena, ESCP Business School

This paper develops a factor-based framework to measure US banks' exposure to physical climate risk. Using monthly temperature data, we estimate that the US banking sector's systemic physical climate risk is approximately 500 billion dollars, equivalent to roughly one-quarter of the sector's reported equity, by the late 2010s. Exposed banks also reduce lending to small businesses, especially in counties without branches. The framework offers a scalable, disclosure-free measure of physical climate risk, illustrating how climate vulnerabilities are transmitted into credit markets and have direct implications for supervision and stress testing.

Sea Level Rise and Portfolio Choice

Emirhan Ilhan, National University of Singapore

Many households face uninsurable background risks due to future sea level rise (SLR). Using detailed local variation in SLR exposure and disaggregated geographic information on households in the United States, I show that SLR exposed households participate less in the stock market compared to their unexposed counterparts within the same neighborhood. This effect is driven by long-run SLR risks as opposed to short-run flood risks. I use the occurence of nearby hurricanes and the staggered adoption of state-led climate change adaptation plans to provide causal evidence for this relationship. Additional tests isolate the effect of SLR exposure as a background risk from alternative explanations, including changes in house prices, past flooding experiences, endogenous location choices, political beliefs, or differences in risk preferences.

Climate Risk and the Mortgage Market: Impacts on House Prices, Default Rates, and Policy Implications

Sagarika Mishra, Deakin University
Santosh Mishra, Key Bank
Feng Yao, West Virginia University

The housing market faces increasing vulnerability to climate-related risks, with significant implications for mortgage performance, house price stability, and overall financial stability. This paper examines how climate risk affects housing markets and mortgage default rates by developing a comprehensive framework integrating FEMA climate risk classifications, house price modeling, extreme value theory for tail-event simulations, and mortgage default prediction models. Using house price data (2000–2022) and Freddie Mac loan-level data (2001–2018), our analysis demonstrates that heightened climate risk exposure significantly increases the probability of mortgage default—up to threefold in high-risk areas compared to low-risk zones. We further stratify simulated default probabilities by credit score (FICO) and leverage (LTV) and find that climate-adjusted stress raises three-year default risk across all borrower bands. Percentage-

point increases are similar across bands, while relative increases are larger for higher-FICO and lower-LTV segments, due to lower baselines. These findings suggest that current mortgage guarantee fee structures inadequately reflect climate-related risks. To address this gap, we propose adjusted, climate risk-sensitive guarantee fees by Government Sponsored Enterprises (GSEs), incorporating geographic variations in risk exposure. This research provides empirical insights for developing climate-informed mortgage policy.

Volatility Forecasting

Historical and Implied Volatilities: Co-integration and Volatility-of-Volatility Dynamics

Leon Li, University of Waikato
Carl Chen, University of Dayton

This study investigates the direction and degree of the co-integration relationship between historical and implied volatilities in the state-dependent volatility-of-volatility dynamics. Moreover, we hypothesize how the deviation from the relationship triggers trading in options and empirically test its shock impact on market risk using the time-varying transition probability approach. We select the volatility indexes of three major U.S. stock indexes, including DAX 30, S&P 500, and NAS 100 for our empirical tests. Our findings are: First, implied volatility plays a role in volatility discovery. Second, the historical and implied volatilities move jointly, particularly during the conditions of economic distress. Third, the practice of using implied volatility to forecast future volatility may increase the market volatility-of-volatility risk, which indicates both wins and woes from introducing implied volatility indexes.

It Takes Two To Tango: Relative Valuation and Volatility Forecasting in Precious Metals Markets

Neda Todorova, Griffith University
Stefan Lyocsa, Griffith University

Market participants are valuing assets in terms of relative prices, like gold-to-silver ratio. We argue that rational and behavioral asset pricing models imply that such ratios should be informative about the value of underlying assets. In this study, we decompose the gold–to-silver ratio (GSR) into its predictable and unexpected component (shock) to model future volatility of futures of both gold and silver. Using high-frequency data from September 2009 to June 2025, we estimate impulse response functions within a local projection framework. Our results show that exogenous shocks to GSR and especially their magnitude, have a persistent effect on future gold and silver volatility. An unexpected appreciation of gold relative to silver has a dampening effect on gold volatility, but amplifies the volatility of silver. The magnitude of the shocks increases the volatility in both markets. The results hold after we control for gold-to-equity (GER) and silver-to-equity (SER) ratios, which are found to have even larger effects on the future levels of volatility of gold and silver. In an out-of-sample setting we provide further evidence that components of not only the GSR but also GER and SER ratios provide improvements in the accuracy of volatility forecasts for both gold and silver with the benefit of these components being stronger for the silver market. Our results suggest that the different impact of shocks on the volatility of the two precious metals might be related to the gold's role as a safe-haven asset and silver's greater sensitivity to industrial demand. Our findings also highlight that valuation ratios might serve as forward-looking indicators of risk.

Tail spillovers and systemic risk in energy, gold, and financial markets

Katja Ignatieva, UNSW Sydney
Jean-François Bégin, Simon Fraser University
Fabio Gómez, EAFIT University

This article examines volatility spillovers and systemic risk transmission across traditional brown energy commodities, renewable green energy assets, gold, and equity markets. Using the forecast error variance decomposition (FEVD) and quantile-based connectedness measures, we capture both average and tail-specific dynamics of cross-market linkages. The FEVD results reveal persistent roles under typical conditions: brown energy commodities act as consistent net transmitters of volatility, equities as net receivers, gold alternates between transmitter and receiver roles, and green energy assets remain largely absorbers until more recently. The quantile connectedness framework highlights that these roles intensify or even reverse in the tails, aligning closely with systemic episodes, such as the global financial crisis and the COVID-19 pandemic. Brown energy commodities amplify contagion during downturns, equities absorb shocks more strongly in the left tail, gold switches into a transmitter role under crisisinduced price dislocations, and green energy assets emerge as more active transmitters after 2015, reflecting their growing integration into financial markets. We also apply these insights to portfolio risk management, showing how connectedness-aware portfolios deliver systemic risk-adjusted measures of the value at risk and the expected shortfall that better capture contagion during stress. Our findings

underscore the importance of tail-specific and factor-augmented approaches for understanding systemic dynamics and designing more resilient risk management strategies.

Supply Chain and Corporate Strategy

Philanthropy Along the Supply Chain

Emdad Islam, Monash University
Huu Duoong, Monash University
Lubna Rahman, Monash University
Cara Vansteenkiste, University of Sydney

Firms strategically use donations to trade partners' affiliated charities to achieve better trade outcomes. Exploiting exogenous changes in trading relations and supplier manager turnover, we document a systematic relation between donation patterns and trading dynamics. Affiliated donations increase with relationship importance, relationship-specific investment, and market power. Moreover, they are associated with greater relationship-specific trade credit, technological alignment, and joint investment, supporting an exchange-of-benefits mechanism. These findings also hold for downstream customer-affiliated donations, which increase with product market competition and relationship importance. Our findings highlight charitable giving as a non-market tool through which firms influence trading relationships and outcomes.

Customer city digitalization as a catalyst for supplier digital transformation: Evidence from supply chain dynamics

Bowen Wang, Massey University
Jing Liao, Massey University
Jing Chi, Massey University

This study examines how digitalization of customer cities influences the digital transformation of suppliers within the supply chain. We manually construct paired dataset, comprising China A-share listed corporations as suppliers and their disclosed major customers, covering the period from 2011 to 2020. Our results indicate that suppliers' digital transformation is significantly enhanced when their major customers are in more digitally advanced cities. Further analysis reveals three key channels. First, regional clustered cities and cities with strong economic influence can exert its influence on suppliers beyond boundaries and push suppliers' digital transformation forward. Second, overlapping institutional investors between suppliers and customers facilitate knowledge sharing along the supply chain, thereby promoting the suppliers' digital transformation. Third, major customers with strong bargaining power compel suppliers to enhance their digital transformation in order to align with the customers' interests. Moreover, inventory turnover is significantly improved following digital transformation in suppliers. Our findings remain robust after addressing potential endogeneity concerns and controlling for customer's firm-level digitalization. This study highlights the important channel through which regional digital transformation can spillover through the supply chain, providing valuable insights to policymakers.

Arm's Length or Arm-in-arm? Multibusiness firms' Institutional Arbitrage in Medical Monitoring Claims

Xiaoyang Li, Deakin University
Mingmei Liu, Jinan University
Maggie Zhou, University of Michigan

We study how firms respond to heightened environmental liability using the staggered adoption of Medical Monitoring Claims (MMCs) across U.S. states. MMCs allow plaintiffs exposed to hazardous substances to seek compensation for the cost of periodic medical testing, even in the absence of present physical injury. We find that MMC adoption leads to a significant decline in facility-level toxic emissions, particularly carcinogenic and airborne pollutants. These effects are driven by single-unit and single-state firms, while multi-unit, multi-state firms arbitrage and readjust emissions strategically. The emission reduction is more pronounced in counties with stronger social activism and among facilities with greater environmental capability. We provide some of the first empirical evidence that multibusiness firms arbitrage to internalize external shocks.

CEOs and Corporate Outcomes

Predicting CEO dismissals using Artificial Intelligence

Helen Lu, Vlerick Business School

Henk Berkman, The University of Auckland
Juebin Zeng, The University of Auckland

This study employs Artificial Intelligence (AI) to predict performance-induced CEO dismissals. In out-of-sample tests, our AI-based approach consistently outperforms classic benchmark models (Bushman, Dai and Wang, 2010; Jenter and Kanaan, 2015) across multiple metrics. Using over 70 candidate predictors, we find that firm-specific performance and risk measures account for a large portion of the model's predictive power, while industry-peer returns and risk measures make a limited contribution to the prediction. Dismissals deemed unexpected by the AI model are followed by significant negative stock price reactions, whereas those anticipated by the model do not trigger such responses. In contrast, the predictions of classic models do not align with market responses. CEOs that the AI predicts should be removed often remain in position and continue to deliver subpar performance. Firms led by CEOs with high AI-predicted dismissal probabilities experience significantly lower industry-adjusted return-on-assets over the following year. A trading strategy based on AI-generated signals earns abnormal returns exceeding 0.75% per month. These effects are concentrated in wellgoverned firms, suggesting that investors in such firms may underestimate frictions in the CEO labour market.

Impression Management by CEOs Under Time Pressure: Initial Contract Duration, ESG Initiatives, and Contract Renewal

Shunji Mei, University of Adelaide
Guoli Chen, INSEAD Singapore
Jamie Tong, Shanghai University
Feida (Frank) Zhang, China Europe International Business School

Drawing on impression management theory, this study examines how time pressure—induced by short CEO initial contract durations—shapes CEO strategic decisions and career outcomes. Analyzing a sample of U.S. firms with new CEO appointments from 1990 to 2023, we find that new CEOs with shorter initial contracts are significantly more likely to engage in symbolic, image-enhancing ESG activities. Moreover, symbolic ESG engagement generally enhances the probability of the CEO's contract renewal. In particular, short initial contracts are more likely to be renewed through symbolic rather than substantive ESG actions. In addition, the association between initial contract duration and symbolic ESG engagement is more pronounced when boards are busy and when CEOs are hired externally, suggesting that limited board oversight and CEO unfamiliarity amplify the preference for symbolic ESG actions. Our results are robust to a series of additional analyses, including using the U.K.'s Corporate Governance Code reform as an exogenous shock to address potential endogeneity issues. This study contributes to the literature on ESG, impression management, CEO employment contracts, and corporate governance by highlighting how contract-induced time pressure influences executive behavior and firm-level outcomes.

Cultural Imprints on CEO Attitudes toward Uncertainty: Evidence from Private Loans and Public Bonds

Hasibul Chowdhury, The University of Queensland
Wenbin Hu, The University of Queensland
Showaib Sarker, The University of Wisconsin-Whitewater

This study investigates the effect of CEOs' cultural heritage on debt contracting. We find that CEOs with higher levels of uncertainty avoidance, shaped by cultural heritage, enjoy lower loan spreads. Our results remain robust after accounting for potential endogeneity. We also identify reduced default and information risks as two key mechanisms through which CEO uncertainty avoidance cultural heritage affects a firm's cost of borrowing. The effects are more pronounced for first-generation CEO immigrants, under higher levels of political and climate uncertainty, and among CEOs with inherently risk-averse personal attributes and weaker equity-based incentives. Furthermore, we find that bank lenders also relax restrictive covenants for CEOs with higher levels of uncertainty avoidance rooted in cultural heritage. From the perspectives of corporate bondholders and credit rating agencies, we observe a similar pattern of response. Overall, our findings suggest that bank lenders, corporate bondholders, and credit rating agencies all perceive CEOs with higher levels of uncertainty avoidance rooted in cultural heritage as less risky and, consequently, reward the focal firms with more favorable financing terms and credit assessments.

Green Innovation and Regulation

Transparency or Hypocrisy? The Coevolution of Environmental Governance Reform and Corporate Greenwashing in China

Jing Chi, Massey University
Ziwen Peng, Massey University

Hamish Anderson, Massey University
Jing Liao, Massey University

We explore how firm-level greenwashing responds to the coevolution of business ethics, technological innovation, and institutional reform in the context of pilot cities under China's National Ambient Air Quality Monitoring Network reform. While the non-punitive reform promotes environmental regulation and the transparency of macro-environmental information, we find it unintentionally induces corporate greenwashing, especially among firms that are located farther from the closest air monitoring stations and in areas with higher firm density. Mechanism analysis shows that greater green attention from both local government and the public can mitigate the negative effect, indicating the supplementary role of formal and informal institutions in shaping positive business ethics frontier. In addition, firms operating in higher social trust and mandatory disclosure environment are less likely to engage in greenwashing, suggesting different institutional settings at play after the reform. Finally, over the medium term, faced with the reform, firms use greenwashing as an adaptive-strategy to enhance profitability; although investors appear to see through this strategy, as market values do not change. Overall, this study provide insight into how business ethics coevolve with the changing institutions and underscores the challenging, nonlinear path toward ethical business practices in emerging markets.

From calamity to creativity: Extreme weather, climate awareness, and green innovation
Ran Duan, City University of Hong Kong

Inventors with heightened climate awareness produce more green innovation. We establish this by instrumenting climate awareness with the extreme weather event that impacts an inventor's neighboring towns but misses the inventor's residence. This serves as a plausible instrumental variable, as extreme weather events nearby raise city-level climate awareness, measured by the Google Search Index for climate change, but these neighboring disasters are unlikely to directly affect an inventor's productivity and career choices. Inventors produce more green innovation after experiencing near-miss extreme weather events and shocks to climate awareness. The impact of these shocks is greater when they occur at a firm's R&D hub and affect most of its inventors simultaneously.

Green Innovation, ESG, and Merger & Acquisition: Evidence from China
Yufeng Wu, Jiangxi University of Finance and Economics
Jun Chen, Auckland University of Technology
Liang Ding, Guangdong University of Foreign Studies
Xin Yu, Jiangxi University of Finance and Economics

This paper examines the actual impact of green innovation on ESG performance and merger & acquisition events, using a sample of Chinese A-share firms. The prior literature has proposed two potential motivations for firms to undertake more green innovation activities, including (1) enhancing ESG scores to enjoy more benefits and (2) strengthening their negotiating powers during merger and acquisition events. On the one hand, our results suggest that adopting more green innovation reduces a firm's ESG ranking due to the additional costs associated with implementing green innovation, such as higher R&D expenses. On the other hand, we find that green innovation can increase the likelihood of a firm participating in a merger and acquisition event, implying that firms may use green innovation to enhance the probability of a successful takeover.

Cryptocurrency

What Do Crypto Options Tell Us? Risk Premia Implied by BTC Option Prices
Christina Atanasova, Simon Fraser University
Terrel Miao, Simon Fraser University
Ignacio Segarra, Simon Fraser University
Frederick Willeboordse, Simon Fraser University

As the dominant crypto asset by market capitalization, liquidity, and institutional attention, BTC options embed investor beliefs and risk premia associated not only with BTC but also with macro-level risks that influence the broader cross-section of crypto assets. Using high-frequency data from Deribit—the largest crypto options exchange—we calibrate a generalized version of several state-of-the-art empirical option pricing models. Expanding the state vector significantly improves the accuracy and robustness of our model estimates. The implied pricing kernels in the periods leading up to major negative shocks are irregular and non-monotonic, reflecting speculative trading behavior. In contrast, the post-crash pricing kernels exhibit a U-shape, consistent with investor demand for downside protection and a preference for rare upside outcomes. We estimate the variance risk premium (VRP) and show that both the VRP and volatility-of-volatility

significantly and nonlinearly predict BTC option returns, both in and out of sample. Our results shed light on how derivatives markets incorporate investors' beliefs and risk preferences for crypto assets.

Return and Volatility Forecasting Using On-Chain Flows in Cryptocurrency Markets

Yeguang Chi, University of Auckland
Qionghua (Ruihua) Chu, Nanyang Technological University, Nanyang Business School
Wenyan Hao, University of Leicester, Department of Mathematics

Inventors with heightened climate awareness produce more green innovation. We establish this by instrumenting climate awareness with the extreme weather event that impacts an inventor's neighboring towns but misses the inventor's residence. This serves as a plausible instrumental variable, as extreme weather events nearby raise city-level climate awareness, measured by the Google Search Index for climate change, but these neighboring disasters are unlikely to directly affect an inventor's productivity and career choices. Inventors produce more green innovation after experiencing near-miss extreme weather events and shocks to climate awareness. The impact of these shocks is greater when they occur at a firm's R&D hub and affect most of its inventors simultaneously.

Call the zookeeper - Dissecting commodity pricing theories

John Fan, Griffith University
Xihang Li, City University of Hong Kong
Xiao Qiao, City University of Hong Kong
Tingxi Zhang, Curtin University

We propose an empirical framework to jointly evaluate competing explanations of commodity futures premiums. Using 81 predictors across commodity-specific, macroeconomic, and sentiment variables, we find that macroeconomic factors best predict aggregate commodity returns, while commodity-specific variables are the strongest in the cross-section. Theory of Normal Backwardation and liquidity provision are more consistent with the time-series behavior, while Theory of Storage better explains cross-sectional variation. A "zookeeper" factor, which optimally combines all commodity-specific predictors, effectively summarizes the cross-section of commodity returns. Our findings suggest that a combination of complementary explanations offers a more complete understanding of commodity risk premiums.

Corporate Environmental Strategy

The Double-Edged Role of Artificial Intelligence in Corporate Decarbonization

Shu-Cing Peng, National Central University
Sheng-Syan Chen, National Taiwan University
Yan-Shing Chen, National Taiwan University

Firms with greater AI adoption, measured by the proportion of AI specialists among employees, exhibit lower carbon emissions. A difference-in-differences analysis around Google's 2015 TensorFlow release supports a causal link. AI enables firms to improve climate-related innovation, management practices, and disclosure quality. AI also helps reduce climate-related environmental violations and mitigate negative capital market outcomes faced by highemission firms, including valuation discounts, reduced green institutional ownership, and lower analyst forecast accuracy. However, firms that have poor ESG performance or use AI for operational expansion exhibit increased emissions. These findings highlight the dual roles of AI in corporate decarbonization.

Climate Regulatory Risks, Green-Skilled Labor, and Corporate Employment Decisions

Jiayi Zheng, Macquarie University
Hasibul Chowdhury, University of Queensland
Anamul Haque, University of Chittagong

Using the staggered implementation of state climate adaptation plans (SCAPs) as a quasi-natural experiment, we investigate how firms incorporate climate regulatory risks into their employment decisions. We find that firms headquartered in the states that finalized SCAP are more likely to invest inefficiently in labor resources. We offer two explanations for this finding. First, affected firms direct greater resources toward green innovations to meet climate regulations, limiting their ability to invest efficiently in labor resources. Second, affected firms face inefficiencies during the green transition, either overestimating the demand for green-skilled labor, leading to overinvestment, or struggling with a shortage of such labor, causing underinvestment. We show that local government financial support and clear

climate adaptation guidelines are crucial in facilitating firms' green transitions required by climate regulations while mitigating the unintended negative impacts on labor allocation.

The (Under-) Disclosure of Environmental Innovation
Elvira Sojli, UNSW Sydney
Leo Liu, UTS
Wing Wah Tham, UNSW Sydney
Cara Vansteenkiste, University of Sydney

Despite major advances in clean technology, broad diffusion and adoption of firms' environmental innovation remains constrained. We document a persistent wedge between firms' private costs and the societal benefits of disclosing clean innovation, reflecting firms' internalization of competitive risks, but not the societal gains from clean knowledge spillovers. Using OECD-classified environmental patents and an instrumental variable based on regulatory shocks by the U.S. Environmental Protection Agency, we estimate the causal effects of clean knowledge diffusion. A 10% increase in publicly disclosed clean innovation by technology peers increases firm value by 2.36%, while similar disclosure by product market rivals causes only modest losses. These results underscore a neglected channel in climate policy: disclosure incentives may be critical to unlocking the full societal value of clean innovation.

Macro Policy and International Finance

Effects of Monetary Policy on the Wealth Inequality
Yeongwoong Do, Seoul National University

This paper examines the impact of monetary policy on wealth inequality in the United States using quarterly data from the Distributional Financial Accounts. I estimate the Gini coefficient across five wealth groups and analyze its dynamic response to high-frequency-identified monetary shocks. Results show that contractionary policy modestly reduces wealth inequality, primarily by lowering the value of equity-related assets concentrated among the wealthy. However, portfolio rebalancing toward interest-bearing assets limits this effect, highlighting the role of asset composition in mediating distributional outcomes.

Institutional Investment and International Risk-sharing
Lucie Lu, University of Melbourne

I develop a new asset pricing model where global institutional investors and local retail investors have non-overlapping investment opportunities. Institutional investors facilitate international risk-sharing between home-biased retail investors, which depends on their mandate, risk-bearing capacity, and substitutability of securities across countries. Securities earn a world market risk premium and an institutional local risk premium based on institutional risk aversion. Securities not held by institutions earn a retail local risk premium determined by retail investors' risk aversion. The model is estimated using equity returns in 38 markets. The average annual institutional local risk premium is 2.76% in developed markets and 6.27% in emerging markets, while the retail local risk premium is 1.71% and 2.65%, respectively. Higher global institutional ownership lowers the cost of capital in emerging markets.

Key Talents in Asset Valuation: Measurement through Procurement Competition
Di Tian, Hong Kong University of Science and Technology
Winston Dou, University of Pennsylvania - The Wharton School
Yan Ji, Hong Kong University of Science and Technology

A sizable amount of U.S. federal government spending is made via procurement through full and open competition. To understand what factors determine the winner of such competition, this paper develops and structurally estimates an auction game. Firms with hidden efficiency types and multi-dimensional characteristics participate in an auction designed by the government. We analytically characterize the optimal mechanism design to reveal the role of price and non-price factors in winner selection. By structurally estimating the model in different U.S. industries, we show that non-price factors play significant roles in government procurement.

Machine Learning in Forecasting Risk and Return

Subjective Expectations for Variance and Skewness: Evidence from Analyst Forecasts

Shuaiqi Li, City University of Hong Kong

We propose novel firm-level measures for subjective expectations on variance and skewness derived from analysts' price forecast ranges in their research reports. We find that analyst expectations positively predict future variance and skewness of stock return, even after controlling for corresponding option-implied moments and past realized moments. Moreover, analyst variance (skewness) expectation positively predicts returns on straddle (skewness asset) and generates a profitable option strategy with an annualized Sharpe ratio of 0.93 (1.27). Using the same analyst's expectations for return, variance, and skewness, we uncover a positive subjective risk-return trade-off and a negative skewness-return trade-off that are consistent with classical finance theories. To examine the formation of analyst expectations, we employ large language models to identify key topics from analysts' discussions and apply machine learning techniques to quantify their impacts. Bankruptcy, government debt, and commodities play a crucial role in shaping analysts' variance expectations, while earnings losses, bank loans, and business cycles are the dominant drivers of their skewness expectations. We find strong interaction effects between narratives and option-implied and realized moments in shaping analysts' risk perceptions.

More than investor sentiment: A semantic machine learning approach to S&P 500 return predictions with social media

Ruipei Sun, University of Glasgow
Chi-Hsiou Hung

Extensive research considers the impact of investor sentiment on investment decisions, while ignoring the effects of other emotion dimensions on financial markets, leading to limited understandings in the investors' decision-making process. We study the effects of three fundamental emotion dimensions on the stock market return using textual content in StockTwits posts. We introduce daily investor emotion dimension indices with the lexiconbased textual analysis. To enable our textual analysis, we apply semantic machine learning to construct a comprehensive lexicon. With high accuracy rate for mapping words, our machine learning approach provides an efficient method to construct a lexicon tailored for financial studies with social media content. We find that all the three emotion dimensions strongly predict S&P 500 returns, indicating that not only investor sentiment but also the other two emotion dimensions play important roles in investment decision-making. We further conduct an extensive empirical analysis by dissecting basic emotion types into emotion dimensions, demonstrating the effectiveness and robustness of our approach. The findings from both in-sample and out-of-sample tests show the significance of our approach relative to those only consider investor sentiment.

Stock Market Volatility and Business News

Justin Case, University of Auckland
Adam Clements, Queensland University of Technology

We analyze over 1.1 million news articles from The Wall Street Journal to identify the exogenous factors influencing stock market volatility. Using a two-step topic modeling and term frequency approach, we find that news narratives explain a substantial part of the stock market's time variation in volatility. Moreover, incorporating news-based measures into volatility models yields superior out-of-sample forecasts, reducing forecast errors by over 40% at the monthly horizon relative to benchmarks. These improvements translate into significant economic gains through increased realized utility and Sharpe ratios in volatility-targeted strategies. Our approach outperforms ChatGPT-derived predictors and benchmark economic indicators in volatility forecasts.

Derivative Markets

Integrating Credit and Equity Markets: A Novel Benefit of Convertible Bonds

Rex Wang Renjie, Vrije Universiteit (VU) Amsterdam
Alexey Ivashchenko, Vrije Universiteit (VU) Amsterdam

We show empirically that convertible bonds act as a bridging mechanism, facilitating integration between credit and equity markets at the firm level. We find that the issuance of new convertibles significantly improves cross-market integration, while the anticipated maturity of non-callable convertibles—despite carrying no new information—leads to re-segmentation. These patterns cannot be explained by changes in default risk or other observable firm characteristics.

Consistent with the idea that convertibles attract investors seeking exposure to both markets, we show that convertible bond investors are more likely to simultaneously hold other securities from the same issuer. This suggests an increased presence of cross-market arbitrageurs and supports the limits-to-arbitrage explanation for the observed segmentation between credit and equity markets.

Getting more for less by widening your spreads

David Shkel, University of Hagen

This paper investigates the cost-efficiency of trading complex option strategies in the S&P 500 options market. We show that simple price comparisons can identify dominating strategies, i.e. strategies with identical or superior payoffs at lower cost, without requiring precise option valuation. Focusing on bull and bear spreads constructed from liquid, short-dated near-the-money options, we find that at least 20% of all observed strategies on a given day can be improved this way. These improvements persist over time and reduce trading costs by approximately 30%, with potential payoff enhancements of up to 1.6%. Using a gradient boosting model, we identify key drivers of such opportunities, including bid-ask spreads, moneyness, and implied volatility patterns. Our results highlight structural inefficiencies even in highly liquid markets and suggest practical avenues for improving option trading performance.

Skewness, Betas, and Commodity Futures Returns

Robert Webb, University of Virginia
Huan Yang, Sichuan Normal University
Jun Cai, City University of Hong Kong
Jie Zhu, Shanghai University

Among twelve characteristics extracted from commodity futures contracts, skewness emerges as the strongest predictor of significant long–short hedge portfolio returns. We regress skewness on two sets of factor betas: (i) betas from a seven-factor model in which betas are fixed across contracts, and (ii) betas from the same model allowing betas to vary with contract characteristics. The fitted values from these regressions are referred to as the beta components, while the residuals represent the alpha components. Standard Fama-MacBeth regressions and portfolio-sorting analyses show that the predictive power of skewness is exclusively driven by its beta components, suggesting that skewness primarily captures systematic risk rather than mispricing in returns of commodity futures.

Asset Pricing: The Factor Zoo

Lottery Preference and Factor MAX

Liyao Wang, Hong Kong Baptist University

Using a comprehensive factor zoo, we document a notable factor MAX premium in the US market. Factors with high maximum daily returns consistently outperform those with low maximum returns by 0.70% per month in the future, on a risk-adjusted basis. This premium remains robust controlling for various factor characteristics, and is not sensitive to the selection of factors. It concentrates in high-eigenvalue principal component factors, and remains statistically significant over long period after formation. The factor MAX anomaly stands apart from lottery-type stock anomalies and contributes to elucidate most of these anomalies. We also find a significant factor MAX premium in the Chinese market.

A Simple Bayesian Solution to Reducing the Factor Zoo

Robert Webb, University of Virginia--McIntire School of Commerce
Hankil Kang, Dankook University
Doojin Ryu, Sungkyunkwan University

We utilize Zellner and Palm’s (1974) consistency constraints on linear structural econometric models to test whether various factors result in misspecified models of asset pricing. Given the widely accepted empirical finding that changes in speculative prices follow very simple time-series processes, potential factors (or combinations of them) in linear asset pricing models should follow simple time series processes as well. This simple Bayesian solution substantially reduces the relevant size of the “factor zoo” as most proposed factors are rejected. Unlike Bryzgalova et al. (2023), who demonstrate how Bayesian solutions can sharply reduce the size of the factor zoo in an impressive examination of over 2.25 quadrillion (=251) potential linear asset pricing models, we identify factors that don’t result in misspecified models rather than testing for pricing performance. We show that only 5 out of 51 factors examined in Bryzgalova et al. (2023), and 6 out of 153

factors examined by Jensen et al. (2023) meet the Zellner-Palm consistency constraints, respectively, when potential factors are required to meet the constraints for the entire sample period (as well as for each half).

Breaking Bad: Parameter Uncertainty Caused by Structural Breaks in Stocks

Sebastian Stöckl, University of Liechtenstein
Lukas Salcher, University of Liechtenstein

Estimating parameter inputs for portfolio optimization has been shown to be notoriously difficult and gets further complicated by structural breaks and regime shifts in financial data. We argue that these structural breaks ultimately result in parameter uncertainty, to which investors are averse. On an aggregate market level, this ambiguity-aversion gives rise to a premium for parameter uncertainty as stocks with high (low) parameter uncertainty are avoided/sold (more attractive/bought). We propose a novel measure called break-(adjusted stock-) age that proxies for parameter uncertainty and is based on detecting structural breaks in stock returns using unsupervised machine learning techniques. Our measure reveals (i) that break-age is priced significantly in the cross-section of stock returns and (ii) that break-age is a powerful proxy for parameter uncertainty.

ESG Investing

Do Public ESG Concerns Affect Firm Performance?

Bart Frijns, Auckland University of Technology
Kenneth De Beckker, Open Universiteit
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This paper explores the impact of rising public concerns about ESG issues on firm performance. To quantify these concerns, we construct an ESG Concerns Index using Google search volume data. Our analysis reveals that as public ESG concerns rise, firms with higher ESG scores experience a significant increase in profitability, driven by improved profit margins. These effects are more pronounced for firms operating in industries with greater differentiation opportunities, highly competitive markets, and those with higher investments in R&D and Advertising.

Misvaluing Sustainability: The case for Resource Efficiency

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ESG scores are common in investment analysis, yet ratings differ sharply across providers and their link to returns is still unclear. This paper introduces resource efficiency (RE), an objective measure of how effectively a firm turns environmental and operational inputs (i.e. electricity, water, labour, SGA, COGS, PPE) into economically and environmentally sustainable outputs that matter, like net income, lower emissions and lower waste. Input-oriented variable-to-scale Data Envelopment Analysis scores are computed for all S&P 1’500 constituents between 2010 and 2024 on an annual basis. An equally weighted portfolio is constructed utilising the respective annual top thirty firms and rebalanced each July. Over the full sample, the RE portfolio (i) outperforms the S&P 1’500 Composite on raw and risk-adjusted returns, (ii) outperforms a like-for-like ESG-ranked strategy, and (iii) earns a monthly 50 basis points of alpha after controlling for Carhart-4, Fama-French-3, and Fama-French-5 factors. The evidence suggests that resource efficiency is a distinct, priced firm characteristic, advancing environmental goals while enhancing risk-adjusted returns, and offers investors a better tool than ESG ratings.

The Hidden Hand against Sustainability: Evidence from Separately Managed Accounts

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Unlike mutual funds, separately managed accounts (SMAs) allow investors to customize portfolios with greater flexibility and without disclosure requirements. Using previously unexplored SMA holdings data covering $6 trillion in assets under management, we find that this flexibility leads SMAs to tilt more willingly toward brown stocks compared to mutual funds. In particular, the mutual funds’ greento-brown tilt escalates after the Paris Agreement, consistent with the heightened reputational concerns for mutual fund clients. The fact that SMA twins of co-managed funds, whose holdings are effectively

disclosed through their mutual-fund counterparts, tilt green after the Paris Agreement further reinforces the channel. Finally, we document the heterogeneity in sustainability tilts across SMA characteristics, showing consistent dispersion between green and brown preferences.

Market Microstructure

Toward a Theory of Intermediary Asset Pricing

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This paper contributes to the theory of intermediary asset pricing by developing an equilibrium model in which liquidity providers, who are exposed to market risk, become the marginal investors despite their small relative net worth. These intermediaries must operate with leverage, and their stock holdings and the stock market's conditional risk premium should have a strong positive relation. The latter feedback effect leads to significantly longer average stock allocations by the liquidity providers, which incites them to demand a substantial decline in stock prices. This causes a multiple increase in the volatility and the risk premium of the rates of stock returns. Furthermore, the feedback effect between the liquidity providers' stock allocations and the conditional risk premium leads to a short-term reversal of stock returns and a positive comovement between daily changes of liquidity providers' inventory and daily stock returns. The model also explains the conditional covariance between the aggregate consumption and the stock returns, the volatility of the stock returns, and the conditional Sharpe ratio.

Microstructure of Automated Market Makers: Optimal Liquidation and Speculative Arbitrag

Jun Liu, University of Tasmania

This paper presents a comprehensive study of the microstructure of Automated Market Makers (AMMs) and their implications for optimal execution and speculative arbitrage strategies. As a foundational infrastructure in decentralized finance (DeFi), AMMs operate under a pricing mechanism fundamentally different from traditional limit order book (LOB) systems, exhibiting a distinctive nonlinear unitary cost structure and price response behavior. We first construct a mathematical framework that characterizes the functional relationship between unitary execution cost, trade size,
pool depth, and asset prices within AMMs. Based on this, we analyze the dynamic evolution of liquidation and arbitrage strategies when discrepancies arise between decentralized exchange (DEX) prices and those on centralized exchanges (CEXs). Building upon this structure, we derive closed-form solutions for the optimal execution path and estimate key structural parameters, such as liquidity depth and execution cost coefficients, using real on-chain trading data. Through empirical backtesting across various market conditions, our proposed strategies consistently outperform benchmark approaches such as time-weighted average price (TWAP), while also revealing persistent cross-platform arbitrage opportunities. This work offers a theoretical foundation for understanding the mechanics of AMM-based trading environments and provides practical guidance for the design of on-chain asset management and automated execution systems.

Fixing the Fix: Assessing the Effects of Rigging and Reform

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We examine the design and effectiveness of the WMR 4:00 pm Fix, the most important benchmark in foreign exchange markets, using unique trader identified data from a major inter-dealer trading venue. We propose and examine new measures of benchmark quality and examine changes to market liquidity and trader behavior around two events: (i) the revelations of benchmark rigging in June 2013, and (ii) the reform of the benchmark calculation methodology in February 2015. We find that benchmark quality, measured as price efficiency and robustness, improves after the 2015 reform, but comes at the cost of a significant increase in tracking error for users of the benchmark. We also find that quoted spreads and price impact increase following the reform, with HFTs trading more aggressively during the Fix.

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