

TIM DE SILVA

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EDUCATION

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| 2024* | Ph.D. in Management (Economics, Finance, & Accounting Area) (* = expected) MASSACHUSETTS INSTITUTE OF TECHNOLOGY, SLOAN SCHOOL OF MANAGEMENT <i>Dissertation Committee:</i> David Thesmar, Jonathan A. Parker, Lawrence D.W. Schmidt, Taha Choukhmane, Eric C. So |
| 2021 | M.S. in Management MASSACHUSETTS INSTITUTE OF TECHNOLOGY, SLOAN SCHOOL OF MANAGEMENT |
| 2018 | B.A. in Financial Economics and Applied Mathematics (Dual Major), <i>magna cum laude</i> CLAREMONT MCKENNA COLLEGE <i>Thesis Advisor:</i> Fan Yu |
| 2015 | Summer Program in Economic Statistics THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE |

RESEARCH INTERESTS

Household Finance, Macro-Finance, Asset Pricing, Behavioral Economics, Public Finance

OTHER AFFILIATIONS

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| 2022-2023 | Visiting Researcher, Australian National University <i>Sponsors:</i> Nicholas Biddle, Andrew Norton |
| 2022-2023 | Honorary Appointment, University of Technology Sydney <i>Sponsor:</i> Anna Bedford |

JOB MARKET PAPER

1. "Financing Risky Higher Education: Insurance vs. Incentives in Income-Contingent Loans"

Abstract: Risky payoffs to investments in higher education generate an insurance-incentive trade-off from the perspective of contract design: income-contingent repayments provide insurance, but provide labor supply disincentives. I study how labor supply responds to income-contingent loans in the context of the Australian student loan system. Using the universe of tax returns and debt balances, I estimate short-run labor supply responses by exploiting discontinuities in repayment rates as a function of income. To isolate the mechanisms of these responses, I leverage a one-time policy change in repayment rates. I then use this variation to estimate a dynamic life cycle model with endogenous consumption-savings and labor supply decisions. In ongoing work, I use the model to study the welfare and fiscal impacts of alternative financing contracts.

WORKING PAPERS

2. “Noise in Expectations: Evidence from Analyst Forecasts” with David Thesmar

Revise and Resubmit at the *Review of Financial Studies* (2nd Round)

Abstract: Analyst forecasts outperform statistical forecasts in the short run, but underperform in the long run. We develop a framework to decompose these differences in forecasting accuracy into differences in information, forecast bias, and forecast noise. Noise and bias strongly increase with the horizon, while analyst information advantage decreases very fast. Quantitatively, this generates a reversal in the sign of the Coibion and Gorodnichenko (2015) regression coefficient at long horizons, independently of overreaction/underreaction. Finally, we show a parsimonious model with bounded rationality and a noisy cognitive default à la Patton and Timmermann (2010) jointly matches the term structures of noise and bias.

3. “What Drives Investors’ Portfolio Choices? Separating Risk Preferences from Frictions” with Taha Choukhmane

Revise and Resubmit at the *Journal of Finance*

Abstract: We study the role of risk preferences and frictions in portfolio choice using variation in 401(k) default investment options. Patterns of active choice in response to different default funds imply that, absent participation frictions, 94% of investors prefer holding stocks, with an equity share of retirement wealth declining with age—patterns markedly different from their observed allocations. We use this quasi-experiment to estimate a lifecycle model and find relative risk aversion of 2, EIS of 0.4, and a \$200 portfolio adjustment cost. Our results suggest low stock-market participation is due to participation frictions rather than non-standard preferences such as loss-aversion.

4. “Losing is Optional: Retail Option Trading and Earnings Announcement Volatility” with Eric C. So and Kevin C. Smith

Abstract: We document the growth of retail options trading over time and provide evidence that retail investors are drawn to options by anticipated spikes in volatility. Using data on options trades by clientele groups, we show retail investors purchase options in a concentrated fashion before firms’ earnings announcements, particularly those expected to trigger greater abnormal volatility. In doing so, retail investors engage in a trio of wealth-depleting behaviors: they overpay for options relative to realized volatility, incur enormous bid-ask spreads, and are slow to respond to predictable post-announcement declines in volatility. This combination of behaviors translates to retail losses of 5-to-9% around earnings announcements on average, and 10-to-14% for high expected volatility announcements. Market makers are the primary beneficiaries of these patterns, particularly in recent years coinciding with the COVID pandemic, resulting in large capital flows from retail to market makers.

WORK IN PROGRESS

5. “Selective Inattention” with Pierfrancesco Mei

Abstract: We study how households form macro expectations around major decisions, such as purchasing a house. Using a comprehensive set of household surveys from the US and Europe, including recently released micro data from the ECB and the European Commission, we analyze households’ attention to macro variables using their (i) forecast errors and (ii) forecast deviations from professional forecasters. We find households’ attention to macro variables significantly improves around big decisions, especially those of lower-income and less-educated households. We conclude by discussing possible implications of this wedge between average and aggregate inattention.

6. “DGP-Agnostic Dynamic Programming via Reinforcement Learning” with Marc de la Barrera

7. “Optimal Default Asset Allocations with Choice Frictions” with Taha Choukhmane

PUBLICATIONS

8. "Are Volatility Expectations in Different Countries Interdependent? A Data-Driven Solution to Structural VAR Identification for Implied Equity Volatility Indices" *Undergraduate Economic Review*, Vol. 14(1), 2017.
 - Winner of Claremont McKenna College *Best Senior Thesis in Financial Economics*
9. "Is Google Search Behavior Related to Volatility? Incorporating Google Trends Data into a GARCH Model for Equity Volatility" *Undergraduate Economic Review*, Vol. 13(1), 2016.

SOFTWARE PACKAGES

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| nndp | Dynamic Programming with Neural Networks (joint with Marc de la Barrera) Source code: GitHub , PyPi |
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INDUSTRY EXPERIENCE

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| 2017 | Institutional Equity Derivatives Trading and Research, Morgan Stanley |
| 2016 | Quantitative Investment Researcher, Analytic Investors |
| 2016-2018 | Director, Claremont Consulting Group |
| 2015-2016 | Lead Consultant, Claremont Consulting Group |

RESEARCH EXPERIENCE

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| 2021-2022 | Research Assistant for Professor Taha Choukhmane |
| 2020 | Research Assistant for Professor Eric C. So |
| 2018-2019 | Research Assistant for Professor Eben Lazarus |
| 2016 | Research Assistant at the Lowe Institute of Political Economy |

TEACHING EXPERIENCE

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| Fall 2022 | TA for 15.425: Corporate Finance (MFin) Professor David Thesmar, MIT Sloan Rating: Mean = 5.3/7, Median = 6/7 |
| Spring 2022 | TA for 15.453: Finance Lab (MFin) Professors Gita Rao and Bhushan Vartak, MIT Sloan Rating: Mean = 6.7/7, Median = 7/7 |
| Spring 2022 | TA for 15.539: PhD Seminar in Empirical Methods (PhD) Professors Eric C. So and Charles C.Y. Wang, MIT Sloan Rating: Mean = 7/7, Median = 7/7 |
| Summer 2020 | TA for 15.511: Financial Accounting (Sloan Fellows MBA) Professor Bala Dharan, MIT Sloan Rating: Mean = 6.3/7, Median = 7/7 |
| Summer 2019 | TA for 15.511: Financial Accounting (Sloan Fellows MBA) Professor Joe Weber, MIT Sloan Rating: Mean = 5.9/7, Median = 6/7 |
| Spring 2018 | TA for ECON101: Intermediate Microeconomics (undergraduate) Professor Saman Olfati, Claremont McKenna College Rating: N/A |

CONFERENCE PRESENTATIONS

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| 2023 | American Finance Association Annual Meeting* |
| 2022 | NBER Behavioral Finance Spring Working Group Meeting*, CEPR Seventh European Workshop on Household Finance*, Western Finance Association Meeting, Society for Economic Dynamics Annual Meeting*, European Finance Association Annual Meeting*, Northern Finance Association Annual Meeting*, Texas Finance Festival*, BSE PhD Workshop on Expectations in Macroeconomics, Miami Behavioral Finance Conference* |
| 2021 | Transatlantic Doctoral Conference, SoFiE Annual Conference |
| 2020 | Stanford GSB Rising Scholars Conference |
| | (includes scheduled, * = presentation by co-author) |

SEMINAR PRESENTATIONS

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| 2023 | Australian National University, MIT Sloan (x2), MIT Economics, Inter-Finance PhD Seminar |
| 2022 | MIT Sloan (x4), MIT Economics, Quantbot Technologies, Inter-Finance PhD Seminar |
| 2021 | MIT Sloan (x2) , MIT Economics (x2) |
| 2020 | MIT Sloan (x2) |
| 2019 | MIT Sloan |
| | (includes scheduled) |

INVITED PARTICIPATION

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| 2022 | NBER Behavioral Macroeconomics Research Bootcamp (Berkeley Haas), Yale Summer School in Behavioral Finance (Yale SOM), MFR Summer Session for Young Scholars (Chicago), MFR Workshop on the Financial Economics of Insurance (Chicago) |
| 2021 | Mitsui Summer School on Structural Estimation in Corporate Finance (Michigan Ross) |
| 2019 | Big Data Analytics for Accounting Research (MIT Sloan) |

FELLOWSHIPS, AWARDS, AND GRANTS

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| 2023 | NBER Household Finance Grant, Mark Kritzman and Elizabeth Gorman Finance PhD Research Fund, Stone Finance PhD Fund, Thomas Anthony Pappas Endowed Scholarship Fund |
| 2022 | Mark Kritzman and Elizabeth Gorman Research Fund (joint with Taha Choukhmane) |
| 2020 | FARS Excellence in Reviewing Award |
| 2018-2024 | MIT Sloan PhD Fellowship |
| 2018 | Phi Beta Kappa, Robert Day School BA Scholar, International Honor Society of Economics (Omicron Delta Epsilon), Best Senior in Economics, Best Senior Thesis in Financial Economics, Dean's List (Top 15%) |
| 2016 | Best Sophomore in Economics, Athletic Director's Honor Roll |
| 2015 | Athletic Director's Honor Roll |

PROFESSIONAL ACTIVITIES

Referee *Quarterly Journal of Economics, Review of Economics and Statistics, Management Science, Journal of Financial Econometrics, Journal of Accounting and Economics*

SKILLS

Software PYTHON, FORTRAN, OPENMP, MPI, GIT, BASH, SLURM, R, SAS, STATA, BLOOMBERG TERMINAL, GOOGLE ANALYTICS, L^AT_EX

Languages English (native), Spanish (beginner)

OTHER ACTIVITIES

Auto Racing *Team USA Scholarship* Nominee (2015), *Team USA Scholarship* Finalist (2016), 5x Formula 2000 Track Record Holder (2016-2017), Pacific F2000 Pro Series Champion (2016), *Mazda Road to Indy \$250,000 Shootout* Competitor (2016), *Motorsports Magazine* Silverstone Classic Driver of the Weekend (2022)

Golf Ocean League Conference Individual Champion (2012, 2014), NCAA Division III National Team Champion (2016)

PERSONAL INFORMATION

Born: June 21st, 1996. Ethnicity: Sri Lankan, White. Citizenship: USA.