TIM DE SILVA

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EDUCATION

2024*	Ph.D. in Finance (* = expected)
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY, SLOAN SCHOOL OF MANAGEMENT
2021	M.S. in Management
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY, SLOAN SCHOOL OF MANAGEMENT
2018	B.A. in Financial Economics and Applied Mathematics (Dual Major), *magna cum laude*
	CLAREMONT MCKENNA COLLEGE
	Thesis Supervisor: Fan Yu

RESEARCH INTERESTS

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

REFERENCES

Taha Choukhmane
Class of 1947 Career Development
Assistant Professor of Finance
MIT Sloan School of Management
(203) 823 8346
tahac@mit.edu

Jonathan A. Parker (co-chair)
Robert C. Merton (1970)
Professor of Financial Economics
MIT Sloan School of Management
(617) 253 7218
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Lawrence D.W. Schmidt
Victor J. Menezes (1972)
Assistant Professor of Finance
MIT Sloan School of Management
(617) 258 8617
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Eric C. So
Professor of Global
Economics and Finance
MIT Sloan School of Management
(617) 253 6470
eso@mit.edu

David Thesmar (co-chair)
Franco Modigliani
Professor of Financial Economics
MIT Sloan School of Management
(617) 225 9767
thesmar@mit.edu

JOB MARKET PAPER

1. Insurance versus Moral Hazard in Income-Contingent Student Loan Repayment

   Abstract: Student loans with income-contingent repayment insure borrowers against income risk but can also reduce their incentives to earn more. Using a change in Australia's income-contingent repayment schedule, I show that borrowers reduce their labor supply to lower repayments. These responses are larger among borrowers with more hourly flexibility, a lower probability of repayment, and that are more liquidity-constrained. I use these responses to estimate borrowers' labor supply elasticity and labor supply adjustment frictions in a structural model. My estimates imply that labor supply responses to income-contingent repayment raise the cost of providing insurance, but they are too small to justify fixed repayment contracts. Moving from a fixed repayment contract to a constrained-optimal income-contingent loan increases welfare by the equivalent of a 1.3% increase in lifetime consumption at no additional fiscal cost.

WORKING PAPERS

2. Noise in Expectations: Evidence from Analyst Forecasts, with David Thesmar
Accepted for Publication at the *Review of Financial Studies*.

3. What Drives Investors' Portfolio Choices? Separating Risk Preferences from Frictions, with Taha Choukhmane
Revise and Resubmit at the *Journal of Finance*.

4. Losing is Optional: Retail Option Trading and Expected Announcement Volatility, with Eric C. So and Kevin C. Smith.

PUBLICATIONS

5. 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*

6. 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.

WORK IN PROGRESS

7. Selective Inattention, with Pierfrancesco Mei

   Abstract: We introduce the concept of selective inattention, which refers to the idea that agents in the economy selectively update their expectations about aggregate variables only during the short windows in which they make individual decisions for which these aggregate variables are relevant. Using a comprehensive set of new and existing household surveys from the US and Europe, we show households form expectations that are both significantly different and more accurate around periods in which they make large decisions, such as taking out a mortgage. This improvement in forecast accuracy is larger for individuals with lower income and education, suggesting the strength of the selective inattention channel varies cross-sectionally. We then highlight the importance of selective inattention in a model with durable and non-durable consumption and costly observation of aggregate states. We show this economy can exhibit two features that have been difficult to reconcile jointly: a high level of macro-inattention, which refers to the sluggishness with which average expectations respond to shocks, and large responses of macro aggregates to shocks, in particular volatile durable goods spending.

8. DGP-Agnostic Dynamic Programming via Reinforcement Learning, with Marc de la Barrera

   Abstract: Traditional dynamic programming requires a mathematical model of the state transition function. Using reinforcement learning techniques, we develop a framework that allows more general transition functions. The modeler does not need to know the transition function as long as it can simulate realizations of it or observe realizations from data. We apply it to the income fluctuations problem and show that our solution technique is able to learn the underlying data-generating process, achieving the same value as traditional methods. We then quantify the welfare loss of assuming the income process is an AR1 instead of using real income realizations.

9. Optimal Default Asset Allocations with Choice Frictions, with Taha Choukhmane

SOFTWARE PACKAGES

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

INDUSTRY EXPERIENCE

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

2022-2024	Visiting Researcher, Australian National University *Sponsors*: Nicholas Biddle, Andrew Norton
2022-2024	Honorary Appointment, University of Technology Sydney *Sponsor*: Anna Bedford
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

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

FELLOWSHIPS, AWARDS, AND GRANTS

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)
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

CONFERENCE PRESENTATIONS

2023	American Finance Association Annual Meeting*, Olin Finance Conference (PhD Poster Session), Financial Research Association (FRA) Conference
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

2023	MIT Sloan (x2), MIT Economics (x2), 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

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)

PROFESSIONAL ACTIVITIES

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

SKILLS

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

Ethnicity: Sri Lankan, White. Citizenship: USA.