The Impact of Price Comparison Tools in Consumer Credit Markets

Erik Berwart (Comisión para el Mercado Financiero), Sean Higgins (Northwestern – Kellogg), Sheisha Kulkarni (University of Virginia), Santiago Truffa (Universidad de los Andes)

Motivation. Consumer credit markets feature large amounts of price dispersion in loan costs, even conditional on loan and borrower characteristics (Zinman, 2015). If consumers are unaware of the extent of this price dispersion, they may shop less and take out loans at higher interest rates than they would otherwise. Nearly half of US households do not shop before taking out a mortgage (Alexandrov and Koulayev, 2018), even though shopping among one additional mortgage broker would save about $1,000 per $100,000 of mortgage (Woodward and Hall, 2012). In the US auto loan market, the average borrower obtains a car loan that is 1.3 percentage points more expensive than the best rate she could obtain in the market (Argyle, Nadauld, and Palmer, 2020). This price dispersion cannot be explained by unobservables: for example, the same borrower receives substantially different interest rate offers from different credit card lenders, and on average ends up paying 31% more in interest payments due to borrowing on a higher-APR card (Ponce, Seira, and Zamarripa, 2017; also see Gathergood, Mahoney, Stewart, and Weber, 2019).

Lack of consumer search could be explained by hard-to-determine prices, high search costs, or inaccurate expectations about price dispersion. Prices are often difficult to determine in consumer credit markets due to price shrouding and hidden fees (Campbell, Jackson, Madrian, and Tufano, 2011; Agarwal, Chomsisengphet, Mahoney, and Stroebel, 2015; Alan, Cemalcilar, Karlan, and Zinman, 2018) or due to complicated financial products that are cognitively costly to understand (Célérier and Vallée, 2017; Truffa, Iberti, and Kulkarni, 2019). Search costs may be high due to physical search costs across bank branches (Argyle, Nadauld, and Palmer, 2020), difficulty in comparing options (Kulkarni, Truffa, and Iberti, 2020), or high rejection rates leading to higher search costs for less creditworthy households (Agarwal, Grigsby, Hortaçsu, Matvos, Seru, and Yao, 2020). In addition, the lack of search could be explained in part by inaccurate expectations about price dispersion and the potential benefits of search, which is the constraint we focus on.

Project description. We are conducting a randomized controlled trial (RCT) of a personalized and interactive loan price comparison tool that we developed in collaboration with the Comisión para el Mercado Financiero (CMF), Chile's financial regulator. The tool was built using data on loan and borrower characteristics for the universe of consumer and mortgage loans in Chile, i.e., data from over 7 million loans from approximately 3 million borrowers. The tool is personalized in the sense that it shows potential borrowers the distribution of interest rates that similar borrowers have received for similar loans within the last six months. Figure 1 shows a screenshot of the tool. Compared to existing price comparison tools, a key feature is that it is based on actual originated loans rather than the interest rates that banks report they would (but are not required to) offer to different customer segments. We also create a simplified treatment arm where borrowers are informed of their estimated savings of searching at additional banks (based on simulated searches using the administrative loan data). Figure 2 shows a screenshot of the simplified treatment. We will then measure the impacts of these treatments on priors about the distribution of prices, on search, and on eventual loan terms such as the APR.

One advantage of the tool and our RCT is their "just-in-time" nature: Chilean borrowers who are searching for keywords related to loans on Google will see a Google ad from the financial regulator; clicking on the ad will lead them to our tool (if they are assigned to the treatment arm

rather than control). Prior to and after treatment, we ask survey questions on participants' expectations about the interest rate and how much they will search. We also obtain the national ID number of each participant in our RCT. These national ID numbers are commonly used in Chile for everyday activities (unlike in the US) and allow us to merge treatment assignment and online survey responses to administrative data on eventual loan origination, loan terms, and repayment for those individuals.

Research questions. We aim to answer multiple related research questions. Does access to just-in-time, personalized information about the distribution of interest rates affect expectations about loan price dispersion and expectations about search (e.g., how many banks the consumers will search across and how much time they will spend searching)? Does it affect their actual search? Does it affect their eventual loan terms such as the APR?

RCT design and data collection. After participants in our RCT are randomly assigned to use the loan price comparison tool (Figure 1), view the simplified treatment (Figure 2), or view a control video without any useful information for search, we will measure:

- Expectations about price dispersion and about how much they will search, using online survey questions asked to participants immediately before and after treatment. The online survey also includes data on demographic characteristics, as well as behavioral biases (e.g., financial procrastination) and IQ measures, which are related to search and the formation of beliefs (D'Acunto, Hoang, Paloviita, and Weber, 2021). We will randomly exclude the expectations questions for 25% of participants, which will allow us to test whether these questions themselves have a treatment effect (Zwane et al., 2011).
- Actual search behavior using questions in a short follow-up phone survey. We do not currently have funding for the phone survey and would use funding from NBER for this. Our aim in the survey is to capture search and other information about mechanisms that cannot be measured in the administrative data. In particular, we will ask questions about how many banks people visited, how many banks they applied for loans from, how much time they spent searching for a loan, and how much they bargained with each bank about loan terms.
- Which participants obtained loans and the terms of those loans such as the APR, using administrative data from the CMF linked to study participants using their national ID numbers.

Prior to launching the RCT, we conducted a randomized pilot of the loan price comparison tool. The pilot helped to optimize our online ads campaign, survey, and interactive tool. To assess the external validity of our study, we used administrative data from CMF to compare the characteristics of participants in our pilot who eventually received loans with those of the general population of borrowers in Chile. We found that the two groups were similar in terms of most personal characteristics—gender, income, and geographic location—and loan characteristics—loan type, interest rate, and loan amount. Participants did skew younger than the general population of loan-takers, which is to be expected considering the online nature of our recruitment strategy. These similarities speak to the external validity of our study.

In November 2021, we launched the RCT. Since then, the RCT has been ongoing and we have been recruiting participants through our Google ads campaign. Currently, our trial has been running for three months, and we have recruited about 50% of the total participants expected to be recruited and assigned to a treatment or control group (19,200 participants). We expect to finish

the RCT by May 2022.

Power calculations and sample size. In our power calculations, we used data from the pilot on the cost per click in the Google ads campaign, percent of those who clicked that participated in the study, and percent of those who participated in the study who got loans in the next six months. We determined that with our available budget we could recruit a sample of 19,200 study participants which will result from approximately 115,000 ad clicks (since 16.7% of people who clicked the ads chose to participate in the study). Given that 17.3% of pilot participants received loans in the next six months, for the outcomes on originated loans such as the APR, we will have a sample size of 0.173 * 19,200 = 3,320. With this sample size, for consumer and mortgage interest rates—our main outcome—we will be powered to detect a minimum treatment effect of 0.10 standard deviations at the usual 95% confidence level with 80% power.

Use of funds. NBER funding would be used to collect data through a follow-up phone survey of the study participants. The anonymized survey data will be made publicly available.

Currently, we are able to study the effect of the tool on (i) expectations about price dispersion and intended search using our initial online survey data collected before and after participants use the tool, and (ii) loan terms of participants' originated loans using administrative data. However, these data sources lack a measure of how much participants *actually* search. Search data is poorly captured in most administrative data sets: in many administrative data sets including the CMF data, only originated loans are recorded; even if all applications are recorded, true search behavior also involves informal quote requests, or even inquiring about the probability of approval at a particular lender (Agarwal, Grigsby, Hortaçsu, Matvos, Seru, and Yao, 2020). Implementing this follow-up survey will be extremely valuable to understand the effect of our treatment on search behavior, as well as explore mechanisms behind our results. We would ask about how many banks participants get quotes from, duration of time spent searching, whether consumers bargained with banks, and whether they would recommend the tool to other people. In addition, we would include questions to understand the mechanism behind the potential effect on search, as well as other measures of financial well-being, such as total debt, total savings, ability to cope with shocks, and the standardized metrics on financial health developed by Innovations for Poverty Action.

Our ongoing work to design and launch the RCT has been funded by the Think Forward Initiative, Northwestern University Guthrie Center for Real Estate Research, the University of Virginia, Universidad de los Andes, and Fondecyt. We do not have funding for a phone survey; with NBER funding, we would plan to hire J-PAL Chile to conduct the survey. Participants' phone numbers are a mandatory field in our initial online survey, so we have contact information for all participants in our study. Study participants will be contacted by phone approximately six months after treatment. Based on phone surveys they have conducted with similar populations, J-PAL Chile estimates that we will achieve a 30% response rate; with this response rate, we will be powered to detect a minimum detectable effect of 0.09 standard deviations in the search outcomes measured in the survey.

Itemized Budget and Budget Justification

Budget Item	Description	Cost (CLP)	**Cost (USD)**
Survey data collection	Costs to collect phone survey data, including salary for a survey coordinator and four enumerators based in Chile and phone system	10,260,902	**$ 12,826**
Survey incentives	Survey incentives for respondents	1,000,000	**$ 1,250**
Software	Three months of subscription to SurveyCTO, to run the survey and store data, and Asana, for project management within the survey team.	592,875	**$ 741**
TOTAL		11,853,777	**$ 14,817**

Figure 1: Full loan price comparison tool

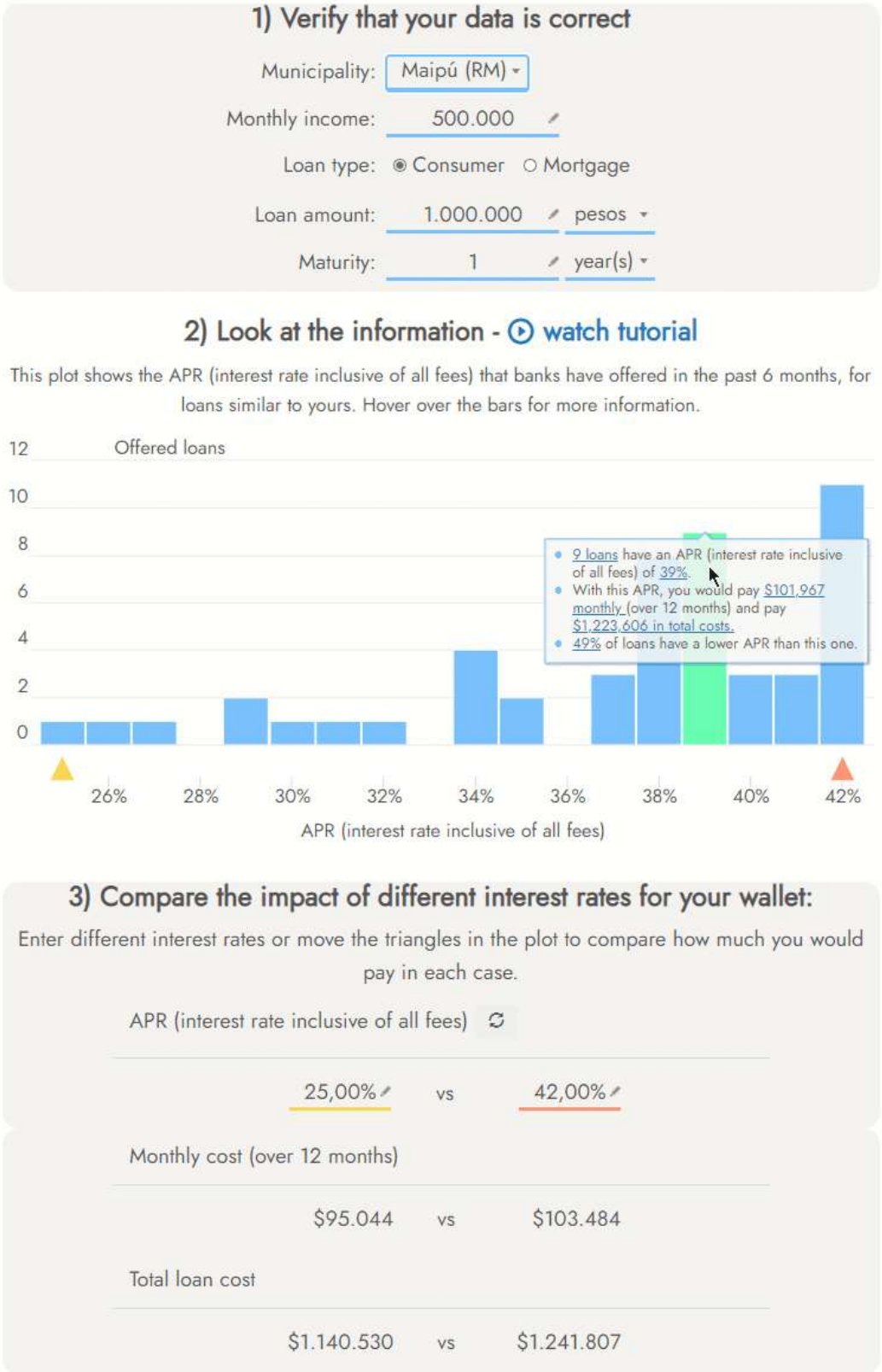
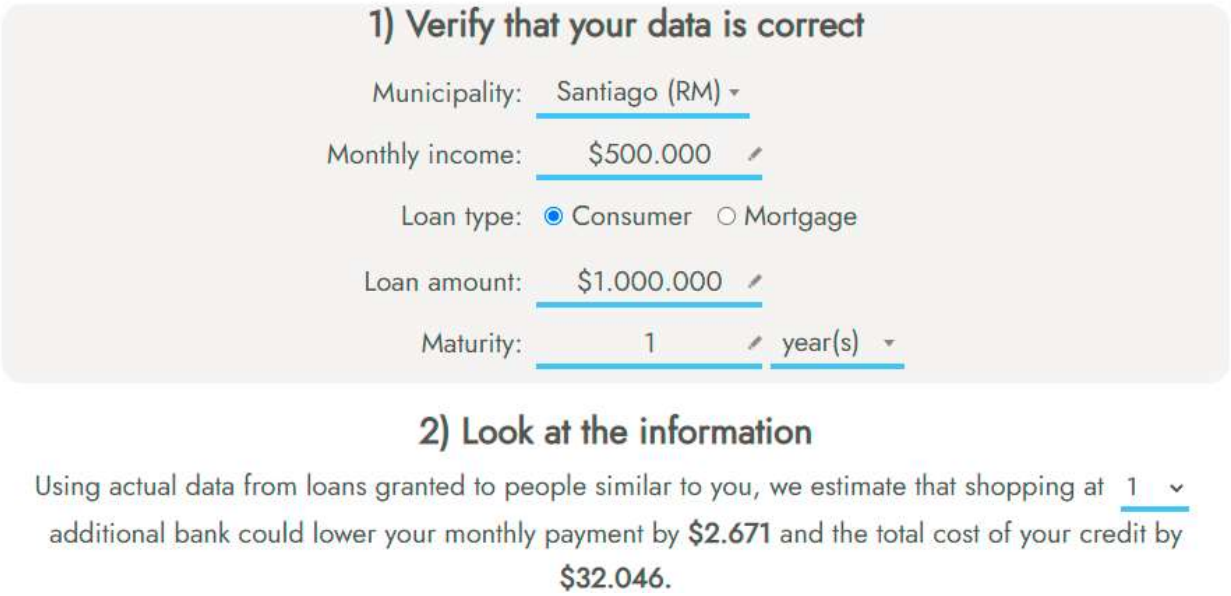


Figure 2: Simplified message on search benefits



References

Agarwal, Sumit, Souphala Chomsisengphet, Neale Mahoney, and Johannes Stroebel. 2015. "Regulating Consumer Financial Products: Evidence from Credit Cards." *The Quarterly Journal of Economics* 130 (1): 111–64.

Agarwal, Sumit, John Grigsby, Ali Hortaçsu, Gregor Matvos, Amit Seru, and Vincent Yao. 2020. "Searching for Approval." National Bureau of Economic Research Working Paper No. 27341. https://doi.org/10.3386/w27341.

Alan, Sule, Mehmet Cemalcilar, Dean Karlan, and Jonathan Zinman. 2018. "Unshrouding: Evidence from Bank Overdrafts in Turkey." *The Journal of Finance* 73 (2): 481–522.

Alexandrov, Alexei, and Sergei Koulayev. 2018. "No Shopping in the U.S. Mortgage Market: Direct and Strategic Effects of Providing Information." Consumer Financial Protection Bureau Office of Research Working Paper No. 2017-01. https://doi.org/10.2139/ssrn.2948491.

Argyle, Bronson, Taylor Nadauld, and Christopher Palmer. 2020. "Real Effects of Search Frictions in Consumer Credit Markets." National Bureau of Economic Research Working Paper No. 26645. https://doi.org/10.3386/w26645.

Campbell, John Y., Howell E. Jackson, Brigitte C. Madrian, and Peter Tufano. 2011. "Consumer Financial Protection." *Journal of Economic Perspectives* 25 (1): 91–114.

Célérier, Claire, and Boris Vallée. 2017. "Catering to Investors Through Security Design: Headline Rate and Complexity." *The Quarterly Journal of Economics* 132 (3): 1469–1508.

D'Acunto, Francesco, Daniel Hoang, Maritta Paloviita, and Michael Weber. 2021. "IQ, Expectations, and Choice." https://doi.org/10.2139/ssrn.3451486.

Gathergood, John, Neale Mahoney, Neil Stewart, and Jörg Weber. 2019. "How Do Individuals Repay Their Debt? The Balance-Matching Heuristic." *American Economic Review* 109 (3): 844–75.

Kulkarni, Sheisha, Santiago Truffa, and Gonzalo Iberti. 2020. "Removing the Fine Print: Standardization, Disclosure, and Consumer Loan Outcomes." Unpublished manuscript. https://www.sheishakulkarni.com/s/DisclosureandDefault-August.pdf.

Ponce, Alejandro, Enrique Seira, and Guillermo Zamarripa. 2017. "Borrowing on the Wrong Credit Card? Evidence from Mexico." *American Economic Review* 107 (4): 1335–61.

Truffa, Santiago, Sheisha Kulkarni, and Gonzalo Iberti. 2019. "Estimating The Information Component in Switching Costs: A Structural Approach." Unpublished manuscript. https://santiagotruffa.cl/wp-content/uploads/2019/09/informational_frictions_chile.pdf.

Woodward, Susan E, and Robert E Hall. 2012. "Diagnosing Consumer Confusion and Sub-Optimal Shopping Effort: Theory and Mortgage-Market Evidence." *American Economic Review* 102 (7): 3249–76.

Zinman, Jonathan. 2015. "Household Debt: Facts, Puzzles, Theories, and Policies." *Annual Review of Economics* 7 (1): 251–76.

Zwane, Alix Peterson, Jonathan Zinman, Eric Van Dusen, William Pariente, Clair Null, Edward Miguel, Michael Kremer, et al. 2011. "Being Surveyed Can Change Later Behavior and Related Parameter Estimates." *Proceedings of the National Academy of Sciences* 108 (5): 1821–26.

Erik Berwart

Curriculum Vitae

Julia Bernstein 0853
La Reina, Santiago, Chile
RUN: 13.096.709-4
☎ +562 2887 9513
+569 6355 0455
eberwart@mac.com

Education

2009-2014 **Ph.D. in Finance**, The University of Manchester, Manchester, United Kingdom. Economic value of credit ratings.

1999-2000 **MBA**, Universidad Gabriela Mistral, Santiago, Chile. Magna cum laude.

1994-1998 **Ingeniero Comercial**, Universidad Gabriela Mistral, Santiago, Chile. Bachelor in business.

1981-1993 **Primary and secondary school**, The Kent School, Santiago, Chile.

Working Experience

Dec – 2016
Up to date **Commission for Financial Markets (CMF)**, Market Conduct Supervision, Santiago, Chile.
Head of Financial Education Department. I was hired to create this new Department with the task of generating the program and policies of the CMF regarding financial literacy and financial inclusion.
I participate in the generation of the National Strategy of Financial Education (NEFE) and have been leading the month of financial education the last 5 years.
Additionally, I have been researching with different universities around the world the best way to change financial habits to improve CMF's policies.
Finally, I have been leading the creation and adoption of CMF's market conduct dashboards that allows you to have a quick picture of what is happening in the market on regards to complaints, indebtedness, delinquency, ATM's, web pages and apps uptimes, etc. Thins tools have been of great help to financial supervision teams.

Ago- 2014
Nov - 2016 **Superintendency of Banks and Financial Institutions,** Research Division, Financial Stability Unit, Santiago, Chile.
Researcher in charge of financial stability analysis, Scenario and Stress testing and how they affect the Chilean banking system.

Abr – 2003
Ago - 2009

Banco Central de Chile, Performance & Risk Department, Santiago, Chile.
Senior Financial Analyst with the task of improving and developing credit and liquidity risk measures of the foreign reserves portfolio. Additionally, I contribute to the annual benchmark definition, which implies an ALM focus of the Whole Bank. I lead the implementation of Wilshire Abacus into all middle office services.

Dic – 2002
Mar - 2003

Banco de Chile, Performance & Risk Department, Santiago, Chile.
Financial Analyst in charge of risk analysis of the foreign branches of the bank (var, mvs and duration) and to develop a system to evaluate the hedge strategies of the bank. Banco de Chile is the second largest private bank in Chile.

Academic Experience

2014 – to date **Economic Finance II (Postgraduate),** Universidad de Santiago, Santiago, Chile.

2015 - 2016 **Risk Management (Civil Eng.),** Universidad de los Andes, Santiago, Chile.

2013 **Introduction to work psychology (Postgraduate),** The University of Manchester, Manchester, United Kingdom.

2011 - 2013 **Essentials of finance, Introduction to quantitative methods (Postgraduate),** The University of Manchester, Manchester, United Kingdom.

Papers

2018 Berwart and Fuentes. SBIF's Working paper. The effect of SERCOTEC's Advisory Services in the banking behaviour of MSME's.

2017 Berwart and Medina. SBIF's Working paper. Relationship between financial capabilities and delinquency rates in the Chilean financial market: The case of Concepción University Students.

2016 Berwart and Birón. SBIF's Working paper, Stress test dissemination through liquidity risk.

2016 Berwart, Guidolin y Milidonis. Journal of Corporate Finance. An empirical analysis of changes in the relative timeliness of issuer-paid vs. investor-paid ratings.

Courses, Seminaries and Conferences

Mar - 2018	Panel of Experts on Economic and Financial Education, Bundesbank, Frankfurt, Germany.
Jun - 2015	5th International Conference of the Financial Engineering and Banking Society, Manuscript accepted, Nantes, Francia.
Jun - 2013	5th International IFABS Conference, International Finance and Banking Society, Nottingham, United Kingdom.
Jul - 2008	Credit Derivatives, CEMLA, Ciudad de Mexico, Mexico.

Softwares

Financial	Bloomberg, Reuters Xtra, Wilshire Abacus & Axiom, Riskmanager.
Programming	VBA, Visual Basic.NET
Scientific	SAS, Stata, R, Python, EViews, Octave
Databases	SQL Server, MS Access

Languages

Spanish	Native
English	Advanced

References

Massimo Guidolin	**Full Professor**, Department of Finance, Boccony University, Milan, Italy. Ph.D. in Economics from University of California, San Diego.
Andreas Milidonis	**Associate Professor** in Finance at the Department of Accounting & Finance at the University of Cyprus.
Carolina del Río	**Director of Market Conduct Regulation**, Commission of Financial Markets (CMF), Chile. Lawyer, Master in Business and Law, UAI, Chile.

KELLOGG SCHOOL OF MANAGEMENT
NORTHWESTERN UNIVERSITY

SEAN HIGGINS

sean.higgins@kellogg.northwestern.edu
https://seankhiggins.com

BUSINESS ADDRESS:
Department of Finance
Kellogg School of Management
Northwestern University
2211 Campus Drive
Evanston, IL 60208

ACADEMIC POSITIONS:

Assistant Professor of Finance, Kellogg School of Management, Northwestern University (2020-)
Post-Doctoral Fellow in Household Finance, National Bureau of Economic Research (2019-2020)

EDUCATION:	**DEGREE**	**DATE**	**DEPARTMENT**
University of California, Berkeley	Post-Doc	2016-2019	Haas School of Business
Tulane University	Ph.D.	2011-2016	Economics
Tulane University	B.S.	2007-2011	Economics

PUBLICATIONS:

- How Debit Cards Enable the Poor to Save More (with Pierre Bachas, Paul Gertler, and Enrique Seira). *Journal of Finance* 76: 1913-1957, 2021.
- Digital Financial Services Go a Long Way: Transaction Costs and Financial Inclusion (with Pierre Bachas, Paul Gertler, and Enrique Seira). *American Economic Association Papers & Proceedings* 108: 444-448, 2018.
- Can a Poverty-Reducing and Progressive Tax and Transfer System Hurt the Poor? (with Nora Lustig). *Journal of Development Economics* 122, 63-75, 2016.

WORKING PAPERS:

- Financial Technology Adoption. Revise and resubmit, *American Economic Review*.
- Using Lotteries to Attract Savings (with Paul Gertler, Aisling Scott, and Enrique Seira).
- Towards a Cashless Economy? Evidence from the Elasticity of Cash Deposits of Mexican Firms (with Pierre Bachas and Anders Jensen).

WORK IN PROGRESS:

- Why Are Firms Slow to Adopt Profitable Opportunities? (with Paul Gertler, Ulrike Malmendier, and Waldo Ojeda).
- Price Comparison Tools in Consumer Credit Markets (with Erik Berwart, Sheisha Kulkarni, and Santiago Truffa).

PROFESSIONAL EXPERIENCE:

RESEARCH:

Visiting Scholar, Consumer Finance Institute, Philadelphia Federal Reserve (2020)
Visiting Researcher, Payment Systems Division, Banco de México (Central Bank of Mexico) (Fall 2017)
Visiting Scholar, Haas School of Business, UC Berkeley (2014-2015)
Visiting Scholar, Center for Economic Studies, El Colegio de México (2013-2014)

TEACHING:

Kellogg School of Management, Northwestern University (2021-)
  Entrepreneurial Finance and Venture Capital (MBA course)
  Household Finance (PhD independent study)
Harvard Kennedy School, Harvard University (2022)
  FinTech and Financial Inclusion (part of Executive Education course on Migratory Remittances and Financial Services)
Princeton University (2021)
  Economic Analysis of Development (MPA course) – guest lecturer
Harvard University (2020)
  Development Economics (PhD course) – guest lecturer
Haas School of Business, UC Berkeley (2018-2019)
  Big Data and Better Decisions (MBA course) – guest lecturer
  Applied Impact Evaluation (MBA course) – guest lecturer
  Undergraduate Research Apprenticeship Program
World Bank (2015-2018)

Stata Instructor (short courses)
Tulane University (2012-2013)
Intermediate Microeconomics – teaching assistant
Economics of Poverty – teaching assistant

AWARDS AND FELLOWSHIPS:

2022	Best Paper Award, GSU-RFS FinTech Conference
2020	PBCSF Award for the Best Paper in Fintech, WFA
2020	Best Paper in Corporate Finance, SFS Cavalcade North America
2014, 2015	School of Liberal Arts Summer Fellowship
2014	Schloss Prize for Excellence in Economic Research
2013	Fulbright Scholar to Mexico

GRANTS: (* = Co-PI; otherwise PI)

2021	Financial Institutions and Markets Research Center ($35,000)
2021	Berkeley Lab for Inclusive Fintech (LIFT) grants ($149,960)
2021	Women Entrepreneurs for Latin America and the Caribbean (WeForLAC) grant ($99,583)
2020, 2021	Inter-American Development Bank grants* ($290,000)
2020	IDB Invest grant* ($100,000)
2020	Facebook Economic Impact of Digital Technologies grant ($99,058)
2020	J-PAL Jobs and Opportunities Initiative grant* ($49,779)
2019	Think Forward Initiative (€81,920)
2019	Guthrie Center for Real Estate Research ($7,500)
2018	National Science Foundation standard grant* ($241,814)
2018	USAID grant* ($100,000)
2017	Digital Credit Observatory grant* ($268,253)
2017	UN Foundation grant* ($50,000)
2017	World Bank grant* ($154,000)
2016	Innovations for Poverty Action grant* ($345,000)
2016	CEGA-Visa Financial Inclusion Lab grant* ($160,000)
2015	National Science Foundation Doctoral Dissertation Research Improvement Grant ($16,481)
2014	Bill & Melinda Gates Foundation grant* ($581,162)

PRESENTATIONS: (* = discussant)

2022	AEA; Duke (Labor/Development); GSU-RFS FinTech Conference; GSU Robinson (Risk & Insurance); Penn Wharton (Development); SFS Cavalcade; UChicago (Joint Initiative for Latin American Experimental Economics); University of Edinburgh Economics of Financial Technology Conference
2021	AEA; AFA*; Boulder Summer Conference on Consumer Financial Decision Making; CEPR European Conference on Household Finance*; Chicago Booth Household Finance Conference; Columbia Business School (Finance); Development Day at Notre Dame; European Bank for Reconstruction and Development (Research); Insper; IPA SME Working Group Meeting; Junior Household Finance Seminar; MWIEDC; NBER Inequality, Discrimination, and the Financial System Conference*; NBER Summer Institute (Household Finance)*; NuBank; São Paulo School of Economics (Applied); Stanford GSB (Finance); UC San Diego (Finance); UChicago Becker-Friedman Institute (Development Faculty Meetup); UChicago Conference on Network Economics
2020	AEA; AFA*; Bank of Canada Future of Money and Payments Conference; Bank of Canada New Technologies and Network Effects Conference; Bocconi (Finance); Cambridge (Finance); CEPR Workshop on Household Finance; Junior Household Finance Seminar; MFA; MoFiR Workshop on Banking*; Princeton (Finance); SFS Cavalcade; UC San Diego (International/Development); U Illinois Urbana-Champaign Gies (Finance); U Sussex (Finance); Webinar in Finance and Development; WFA; WVU (Economics)
2019	ABFER Special Session on Digitization and FinTech; Atlanta Fed (Research); Dartmouth (Household Finance); EAFIT; FIRS*; Harvard Business School (Entrepreneurial Management); Harvard Business School (Finance); Inter-American Development Bank (Research); Inter-American Development Bank (Social Protection); London School of Economics (Finance); NBER Summer Institute (Development); Northwestern Kellogg (Finance); Northwestern Development Rookiefest; NYU Household Finance Conference; NYU Stern (Finance); Penn Wharton (Finance); Philadelphia Fed (New Perspectives on Consumer Behavior in Credit and Payments Markets Conference); UCLA Anderson (Finance); UNC Kenan-Flagler (Finance); Universidad del Rosario (Economics); UT Austin McCombs (Finance)
2018	AEA (session organizer); IDEAS; NEUDC; PacDev; Paris School of Economics; Stanford/IGC Conference on Firms, Trade, and Development; Stanford IO Fest; UC Berkeley (Finance; Development; IO Lunch); University of San Francisco; World Bank Development Economics Research Group (Applied Micro); Yale Y-RISE
2017	ITAM (Business); LACEA; NBER Summer Institute Household Finance (coauthor presented and I answered questions); NEUDC; PacDev; World Bank Poverty Global Practice

2016	Arizona State University (Economics); ITAM (Economics); NEUDC; Universidad Iberoamericana
pre-2016	AEA; Tulane (Economics); UC Berkeley (Development); University of San Francisco (Economics); World Bank Poverty Global Practice; SEA

OTHER ACTIVITIES:

Instructor, Harvard Kennedy School Executive Education course on Migratory Remittances and Financial Services

OTHER INFORMATION:

Languages:	English (native), Spanish (fluent), Portuguese (advanced), and French (advanced)
Citizenship:	United States

Sheisha Kulkarni
sk7nn@comm.virginia.edu
sheishakulkarni.com

BUSINESS ADDRESS

McIntire School of Commerce
Rouss & Robertson Halls 125 Ruppel Drive, Charlottesville VA, 22903
(510) 423-1764

EMPLOYMENT

University of Virginia		
Assistant Professor	McIntire School of Commerce	2020-
NBER		
Postdoctoral Fellow	Household Finance	(2019–2020)
University of Virginia		
Postdoctoral Researcher	Department of Economics	(2018–2019)

EDUCATION

PhD, UC Berkeley (2018)
Dissertation: *Essays in Household Finance*
B.A, McGill University (2010), First Class Honours

FIELDS

Primary: Household Finance Secondary: Labour Economics (Education)

PAPERS

- Removing the Fine Print: Standardization, Disclosure, and Consumer Outcomes (*with G. Iberti and S. Truffa*)
- Information Frictions in Consumer Credit Markets: A Structural Empirical Approach (*with G. Iberti and S. Truffa*)
- Don't Lend So Close to Me: Payday Lending Spillover Effects on Formal Credit (*with A. Ho, S. Raina, and B. Scholnick*)
- Price Comparison Tools in Consumer Credit Markets (*with E. Berwat, S. K. Higgins, and S. Truffa*)
- Randomizing Bankruptcy Costs (*with S. Ben-Ishai*)
- Private Loan Securitization and Education (*with N. Blascak*)
- The Effect of Competition on University Tuition

PRESENTATIONS

2020 ARC for Financial Planning, FIRS (cancelled), CEPR Fifth European Workshop on Household Finance, European Finance Association 2020 (discussant), Wesleyan, Brookings Institute, CFPB, University of Delaware

2019 Quantitative Society for Pensions and Savings, 27th Finance Forum (Madrid), University of Alberta Summer Finance Conference, CU Boulder Summer Conference on Consumer Financial Decision Making, University of Western Ontario, Bank of Canada

2018	University of Virginia McIntire School of Commerce, UC Berkeley (Finance; Finance Lunch, IO Lunch), University of Virginia Economics Department, Wharton Women in Business Academia Conference, CFPB Research Conference, CU Boulder Summer Conference on Consumer Financial Decision Making
2017	UC Berkeley (Finance; Real Estate Lunch)
2012-2016	Bank of Canada; Canadian Economics Association; UC Berkeley (Finance; Real Estate Lunch; Gardener Seminar in Education; Women in Economics Lunch)

TEACHING

Professor, McIntire School of Commerce
Financial Management (Fall 2020)
Professor, University of Virginia Economics Department
Everyday Economics (Spring 2019)

GRANTS

2019	Think Forward Initiative (€ 81,920)
2019	Strategic Investment Fund, UVA ($25,000)
2019	Sparkesse Agency ($5,000)
2017	NBER Household Finance Small Grant ($11,000)

RESEARCH ACTIVITIES

Research Assistant	Dean Henry Brady, Goldman School of Public Policy	May 2016–Feb 2017
Research Assistant	Ulrike Malmendier, Haas School of Business	Jun 2014–Jan 2017
Research Assistant	Bank of Canada	Jun 2010–May 2012
Research Assistant	Dhanoos Sutthiphisal, McGill	Sept 2008 – Dec 2008

FELLOWSHIPS AND AWARDS

2017	Yale Summer School in Behavioral Finance Travel Grant
2016	Hayase Award for Mentorship of Fellow PhD students, Canadian Economics Association Grant, Bank of Canada Student Paper Award (Finalist), Fellow for the Gardner Seminar on Higher Education
2015	Haas Research Fellowship, Fellow for the Gardner Seminar on Higher Education
2014	White Fellowship for Investment Banking Research
2012	Joseph-Armand Bombardier Scholarship for Graduate Studies (declined)

REFEREEING

The Review of Economics and Statistics

OTHER INFORMATION

Citizenship: Canada, U.S. Permanent Resident

Santiago Truffa - Ph.D Business Administration

Personal information

E-mail: struffa.ese@uandes.cl
web: www.santiagotruffa.cl

Professional experience

June 2019: ESE Business School, Universidad de los Andes
Assistant Professor / Santiago, Chile
Director Real Estate Modeling Lab

July 2017- May 2019: Tulane University, Finance
Visiting Assistant Professor / New Orleans, USA

June 2008- June 2011: MINISTRY OF FINANCE
Economic analyst / Santiago, Chile

May 2007- May 2008: CUPRUM (Pension Fund)
Financial trader and analyst / Santiago, Chile

Education

- 2017 UC Berkeley
  Phd Business Administration Berkeley, USA.
- 2013 UC Berkeley
  Master in Business Administration Berkeley, USA.
- 2009 UNIVERSIDAD DE CHILE
  M.A. Applied Economics /Santiago, Chile
  B.A. Industrial Engineering /Santiago, Chile

Areas of Expertise

Household finance, Urban Economics and Applied Microeconomics

Teaching Experience

- 2019 **ESE Business School**
  Financial Modeling (MFI)
  Advanced Corporate Finance (MDI)
  Financial Data Science (MFI)

- 2017-2018 **Tulane**
  Financial Modeling (Undergrad & MBA)
  Financial Modeling (Undergrad)
  Financial Modeling (MBA)
  Fixed Income Analysis (E-MF)
  Advanced Corporate Finance (E-MBA)

- 2013-2016 **UC Berkeley**
  Microeconomics (MBA)
  Microeconomics (EMBA)
  Ethics (MBA)

- 2010 **Universidad de Chile**
  Economics (Undergraduate level)

Fellowships and Awards

UC Berkeley: Graduate Student Research Grant (2011, 2012, 2013); Sasakawa Young Leaders Fellowship Tokyo Foundation (2013, 2014, 2015), Sylff fellowship Tokyo Foundation (2015-2016), Travel Grant (2014, 2013); Summer Research Award (2013-2014), NBER Household finance small grant program (2017)

Presentations

2019: UEA Conference, Finance UC, CU Boulder, Universidad de los Andes

2018: CU Boulder, CFBP Consumer finance conference, NBER SI 2018 Development of the American Economy, Universidad de los Andes, BCCH, SBIF research Conference.

2017: Michigan State University, Australian National University, SBIF Chile, FCC, UCLA, NYU, UC Berkeley.

2016: IGC Cities Conference, London (March), Real State Lunch, Berkeley (May), Business and Public Policy Lunch, Berkeley (May), Business and Public Policy Lunch, Berkeley (August), OEW Seminar Berkeley (November), BPP Conference, Boston (October), Urban Economics Association, Minnesota (November), Auckland Finance Meeting (December)

2015: Business and Public Policy Lunch, Berkeley (May), Business and Public Policy Lunch, Berkeley (August), Political Economy Seminar, Berkeley (September)

Working Papers

- 1.“ ***On the Geography of Inequality: Labor Sorting and Place-Based Policies in General Equilibrium***”

- 2. *“**Agglomeration, Coordination and Corporate Investment”*** with William Grieser (TCU) and Gonzalo Maturana (Emory)

- 3. “***Playing Checkers in Chinatown***” with Jose Antonio Espin-Sanchez (Yale)
  - Presented in NYU (2017) , UC Berkeley (2017), FCC (2017) and UCLA (2017). Scheduled for NBER SI (2018)

- 4. “***Estimating the Information Component in Switching Costs: A Structural Approach***” with Sheisha Kulkarni (Virginia, NBER)) and Gonzalo Iberti
  - Finance by the Alfred P. Sloan Foundation through the NBER Household finance small grant program
  - Scheduled for CU Boulder, CFBP consumer finance conference and BCCH 2018

- 5. “***Keeping it Constant: The Effects of Standardization on Consumer Loan Outcomes***” with Sheisha Kulkarni (Virginia, NBER)) and Gonzalo Iberti
  - Finance by the Alfred P. Sloan Foundation through the NBER Household finance small grant program
  - Presented at UC Berkeley (2018), U. Virginia (2018), Wharton (2018)

Selected Work in Progress

- 6. “***Credit Constraints and Consumer Welfare***” with Jordan Nickerson (Boston College) and Gonzalo Maturana (Emory)

- 7. “***Labor Market Effects of Deleting Delinquencies***” with Jordan Nickerson (Boston College) and Gonzalo Maturana (Emory)

- 8. “***More Effective Financial Literacy***” with Sean Higgins (Northwestern, NBER), Sheisha Kulkarni (Virginia, NBER) and Erk Berwart CMF)

- 9. “***Public Bank Lending During a Financial Crisis***” with Alexis Montecinos (Suffolk)

Additional information

Languages:	Spanish (native speaker), English (fluent) and Italian (fluent).
Computing Skills:	R, LaTeX, Stata