

JINAN LIU

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EDUCATION

Ph.D. Economics, University of Calgary, GPA: 4.0 *Expected May 2021*
Dissertation: “Contributions to Monetary Aggregation”
References: Apostolos Serletis, William Barnett, Daniel Gordon
Visiting Student, Hoover Institution, Stanford University *2016 summer*
Ph.D. program in Economics, University of Kansas, GPA: 3.77 *2015-2018*
M.A. Economics, University of Akron, GPA: 3.85 *December 2014*
B.A. Finance, Jilin University of Finance and Economics, GPA: 3.97 *May 2009*

FIELDS OF SPECIALIZATION

Macroeconomics Quantitative Economics and Finance Applied Econometrics

PUBLICATIONS

Liu, Jinan, Apostolos Serletis. 2020. “[The Complex Relationship between Inflation and Equity Returns](#).” *Journal of Economic Studies* (Forthcoming).

Liu, Jinan, Apostolos Serletis, Sajjadur Rahman. 2020. “[Cryptocurrency shocks](#).” *The Manchester School* 1-13.

Liu, Jinan, Apostolos Serletis. 2020. “[On the Output Effects of Money Growth Uncertainty](#).” *Studies in Nonlinear Dynamics and Econometrics* 24 (5).

Serletis, Apostolos, Jinan Liu. 2020. “[Inflation and Economic Activity in Advanced and Emerging Economies](#).” *International Journal of Finance and Economics* 1-28.

Liu, Jinan, Cosmas Derry, and Apostolos Serletis. 2020. “[Recent Monetary Policy and the Credit Card-Augmented Divisia Monetary Aggregate](#).” *Journal of Macroeconomics* 64.

Barnett, William, Jinan Liu. 2019. “[User Cost of Credit Card Services under Risk with Intertemporal Nonseparability](#).” *Journal of Financial Stability* 42: 18-35. (*Invited Submission*)

Liu, Jinan, Apostolos Serletis. 2019. “[Volatility in the Cryptocurrency Market](#).” *Open Economies Review* 30: 779-811.

SUBMITTED FOR PUBLICATION AND WORK IN PROGRESS

“[Credit Cards, the Demand for Money, and Monetary Aggregates](#)”, revise and resubmit to *Macroeconomic Dynamics* (**Job market paper**)

“The Demand for Cryptocurrencies”

“Pricing Kernel Specification for the Risk Adjustment of the User Cost of Monetary Services”

“Ultimate Consumption Risk and the Risk-Adjusted User Cost of Credit Card Transaction Services”

“A Re-examination of the Demand System of the Divisia Monetary Aggregates”

INVITED SEMINARS AND WORKSHOPS

2018 Department of Economics, Kansas State University, Manhattan, Kansas

2017 Department of Quantitative Business Administration, University of Zurich, Switzerland

2016 Initiative for Computational Economics (ICE) and Stanford Institute for Theoretical Economics (SITE), Stanford University, Stanford, California

CONFERENCE PRESENTATIONS

- 2021** Midwest Economic Association 85th Virtual Annual Meeting (Scheduled)
- 2020** Southern Economic Association 90th Annual Meeting, New Orleans, Louisiana
- 2020** Department of Economics Seminar, University of Calgary, Calgary, Canada
- 2019** SEM 6th Conference, Goethe-Universität and European Central Bank, Frankfurt, Germany
- 2018** World Economics Association Forum: Monetary Policy after the Global Crisis
- 2017** Missouri Valley Economic Association 54th Annual Conference, Kansas City, Kansas
- 2017** SEM 4th Conference, MIT, Cambridge, Massachusetts
- 2017** Financial Services Indices, Liquidity and Economic Activity, Bank of England, London, UK
- 2015** Graduate Research Conference, University of Kansas, Lawrence, Kansas
- 2014** Ohio Association of Economists and Political Scientists 74th Conference, Perrysburg, Ohio

RESEARCH EXPERIENCE

- Research Fellow at International Center for Emerging Market Research, Advanced Financial Economics Program, RUDN University, Moscow, Russia, *April 2017 - present*
- Researcher at Economics and Environmental Policy Research Network (EEPRN) and Greening Growth Partnership, Smart Prosperity Institute, University of Ottawa, Canada, *November 2020 - present*
- Research Assistant for Professor Apostolos Serletis, University of Calgary, *January 2020 - May 2020*
- Research Assistant for Professor Jennifer Winter, University of Calgary, *March 2020 - present*

TEACHING AND MENTORING EXPERIENCE

UNIVERSITY OF CALGARY

Course Instructor - Undergraduate Introductory Level Courses

Principle of Microeconomics (ECON 201), *Spring 2021* (Scheduled)

Responsibilities: Design and teach an introductory course in microeconomics with more than 100 students. Topics include supply and demand, utility maximization and expenditure minimization, profit maximization and cost minimization, perfect competition, monopoly power, and game theory.

Course Instructor - Undergraduate Intermediate Level Courses

Intermediate Macroeconomics (ECON 303), *Spring 2020*

Responsibilities: Designed and taught a 3 credit core course in intermediate macroeconomics with 65 students which met 2 times a week on zoom. Selected course topics, textbooks and any other material relevant to the course, presented the materials, held regular and extended office hours and evaluated student performance.

Teaching Assistant - Undergraduate Upper Level Courses

Econometrics (ECON 495), *Fall 2020*

Computational Economics (ECON 520), *Summer 2020*

Empirical Energy Economics (ECON 493), *Winter 2020*

Intermediate Macroeconomics (ECON 303), *Fall 2019*

Teaching Assistant - Undergraduate Freshman Courses

Principle of Microeconomics (ECON 201), *Spring 2019, Winter 2021*

Principle of Macroeconomics (ECON 203), *Fall 2018, Spring 2020*

JOHNS HOPKINS UNIVERSITY, DICKINSON COLLEGE

Instructor

Game theory, *Summer 2018, Guest Lecturer*

Responsibilities: Explaining course material, encouraging students' critical thinking. Conducted and supervised in-class research where students presented scholarly work on economic and social issues.

Teaching Assistant

Macroeconomics, *Summer 2018*

UNIVERSITY OF KANSAS

Course Instructor - Undergraduate Intermediate Level Course

Intermediate Macroeconomic Theory (ECON 520), *Spring 2017*

Responsibilities: Designed and taught a senior capstone course in intermediate macroeconomics with 25-35 students which met 3 times a week. Topics include IS-LM-AD-AS model, the effects of various macroeconomic shocks, causes and consequences of business cycles and growth.

Teaching Assistant - Undergraduate Upper Level Courses

Game Theory (ECON 590), *Fall 2017*

Teaching Assistant - Undergraduate Freshman Courses

Principles of Macroeconomics (ECON 144), *Fall 2016*

Principles of Microeconomics (ECON 142), *Spring 2016*

Introductory Economics (ECON 104), *Fall 2015*

UNIVERSITY OF AKRON

Teaching Assistant

Macroeconomics, *Fall 2013*

Microeconomics, *Spring and Fall 2014*

Responsibilities: Evaluated rubrics and other assessment techniques regarding students' in class participation. Provided administrative support and helped to ensure that the class runs smoothly.

ADVISING AND MENTORING EXPERIENCE

UNIVERSITY OF KANSAS

Graduate Mentor

"Economics in Global Context" Exchange Program, *Summer 2017*

Responsibilities: Met with a small group of masters and undergraduate economics students from Capital University of Economics & Business twice a week. Advised and provided feedback to students as well as facilitated discussions on global economic issues.

SELECTED HONORS, AWARDS, GRANTS AND FELLOWSHIPS

Excellent Teaching Assistant Award (nominated) - University of Calgary	<i>2021</i>
Excellence in Doctoral Dissertation Award - University of Calgary	<i>2020</i>
Eyes High International Doctoral Scholarship - University of Calgary	<i>2019 and 2020</i>
Doctoral Research Award - University of Calgary	<i>2020</i>
Faculty of Graduate Studies Travel Award - University of Calgary	<i>Summer 2019</i>

Anton and Dalgarno Memorial Graduate Scholarship - University of Calgary 2018
 Department of Economics Teaching and Research Assistant Scholarship - University of Calgary 2018
 Economics Graduate Teaching and Research Assistantships - University of Kansas 2015 - 2018
 Doctoral Comprehensive Exam Pass with Honors - University of Kansas 2017
 Graduate Student Presentation Travel Award - University of Kansas 2017
 Initiative for Computational Economics Workshop Scholarship - Stanford University 2017
 Department of Economics Travel Fund - University of Kansas 2017
 Department of Economics Summer Fellowship - University of Kansas Summer 2016
 Third Place of KU Sigma Xi Graduate Research Competition - University of Kansas 2015
 Third Place of Graduate Students Research Competition - Ohio Association of Economists and Political Scientists 74th Annual Meeting and Conference 2014
 Significant Contribution of International Education Week - University of Akron 2014

SELECTED SERVICE AND OTHER ACTIVITIES

Graduate Peer Mentor, University of Kansas 2017-2018
 Orientation Leader, University of Akron 2014

PROFESSIONAL MEMBERSHIPS

American Economic Association (AEA) Canadian Economic Association (CEA) Society for Economic Measurement (SEM) Midwest Economics Association (MEA) Missouri Valley Economic Association (MVEA) Sigma Xi Scientific Research Honor Society Southern Economic Association (SEA)

COMPUTER SKILLS

RATS, SQL, Python, TensorFlow, Stata, Matlab, R, SAS

MACHINE LEARNING AND DATA SCIENCE CERTIFICATIONS

Machine Learning, Stanford University, California, 2020
 Machine Learning Foundation: A Case Study Approach, University of Washington, Washington, 2020
 Sequence Models, Deeplearning.ai, California, 2020
 Structuring Machine Learning Projects, Deeplearning.ai, California, 2020
 Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, Deeplearning.ai, California, 2020
 Unsupervised Machine Learning for Customer Market Segmentation, Coursera, California, 2020
 SQL for Data Science, UCDavis, California, 2020
 SAS Certified Professional: Advanced Programming Using SAS 9.4, SAS, 2020
 SAS Certified Base Programmer, SAS, 2014

LANGUAGE SKILLS

English (Fluent), Chinese (Native), German (Beginner)

REFERENCES

Dr. Apostolos Serletis
 Professor
 Department of Economics
 University of Calgary
 Email: serletis@ucalgary.ca
 Phone: (403) 968-0728

Dr. William Barnett
 Distinguished Professor
 Department of Economics
 University of Kansas
 Email: barnett@ku.edu
 Phone: (785) 832-1342

Dr. Danial Gordon
 Professor
 Department of Economics
 University of Calgary
 Email: dgordon@ucalgary.ca
 Phone: (403) 220-5080

ABSTRACTS

“Credit Cards, the Demand for Money, and Monetary Aggregation,” with Apostolos Serletis, revise and resubmit to *Macroeconomic Dynamics* (**Job market paper**)

We use nonparametric and parametric demand analysis to empirically estimate a credit card-augmented monetary asset demand system, based on the Minflex Laurent flexible functional form, and a sample period that includes the 2007-2009 global financial crisis and the Covid-19 pandemic. We also use multivariate copulae in an attempt to capture various patterns of dependence structures. In doing so, we relax the joint normality assumption of the errors of the demand system and estimate the model without having to delete one equation as is usually the practice. We show that the Minflex Laurent copula-based demand system produces a higher income elasticity for credit card transaction services and higher Morishima elasticities between credit card transaction services and monetary assets compared to the traditional estimation of the Minflex Laurent demand system. We also show that credit cards are substitutes for monetary assets and that there is lower tail dependence between the demand for credit card transaction services and monetary assets.

“Inflation and Economic Activity in Advanced and Emerging Economies,” with Apostolos Serletis, (2020), *International Journal of Finance and Economics*

Although the inflation rates have been low in recent years, the uncertainties that put downward pressure on inflation remain the key uncertainties that economies around the world are facing, and they could be unexpectedly persistent. In this paper, we investigate the relation between nominal uncertainty and macroeconomic performance in the G7 and EM7 countries. We use a bivariate VARMA GARCH-in-Mean asymmetric BEKK model to estimate the response of output growth to inflation uncertainty. We find that inflation uncertainty is persistent in most of the G7 and EM7 countries. The uncertainty surrounding future inflation lowers output growth in most of the G7 countries, however, the effect is mixed in the EM7 countries.

“User cost of credit card services under risk with intertemporal nonseparability,” with William Barnett, (2019), *Journal of Financial Stability*

This paper derives the user cost of monetary assets and credit card services with interest rate risk under the assumption of intertemporal non-separability. Barnett and Su (2016) derived theory permitting inclusion of credit card transaction services into Divisia monetary aggregates. The risk adjustment in their theory is based on consumption capital asset pricing model (CCAPM) under intertemporal separability. The equity premium puzzle focuses on downward bias in the CCAPM risk adjustment to common stock returns. Despite the high risk of credit card interest rates, the risk adjustment under the CCAPM assumption of intertemporal separability might nevertheless be similarly small. While the known downward bias of CCAPM risk adjustments are of little concern with Divisia monetary aggregates containing only low risk monetary assets, that downward bias cannot be ignored, once high risk credit card services are included. We believe that extending to intertemporal non-separability could provide a non-negligible risk adjustment, as has been emphasized by Barnett and Wu (2015). In this paper, we extend the credit card-augmented Divisia monetary quantity aggregates to the case of risk aversion and intertemporal non-separability in consumption. Our results are for the “representative consumer” aggregated over all consumers. While credit card interest rate risk may be low for some consumers, the volatility of credit card interest rates for the representative consumer is high, as reflected by the high volatility of the Federal Reserve’s data on credit card interest rates aggregated over consumers. One method of introducing intertemporal non-separability is to assume habit formation. We explore that possibility.