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Bruno Sultanum

Address: Department of Economics, The Pennsylvania State University
404 Kern Building, University Park, PA, 16802
E-mail: sultanum@psu.edu, bruno@sultanum.com
Homepage: www.sultanum.com
(814) 470-3723

Curriculum Vitae

Citizenship Brazilian (F1-Visa)

Education
Ph.D. in Economics, The Pennsylvania State University, (expected) 2015
M.S. in Economics, Getúlio Vargas Foundation, 2010
B.S. in Economics, Getúlio Vargas Foundation, 2007

Ph.D. thesis
Title: Essays on financial fragility
Advisers: Professors Neil Wallace & Russell Cooper

Fields
Primary: Macroeconomics, banking & financial economics
Secondary: Monetary theory & economic theory

Job market paper
"Financial fragility and over-the-counter markets", 2014

Abstract: I propose a model to study whether trade frictions in an over-the-counter market for financial assets exacerbate or attenuate financial fragility. I model the financial sector as a large number of financial institutions, which I label banks. Each bank is a coalition of depositors and depositors are subject to privately observed liquidity shocks. The banks' problem is to maximize the welfare of depositors by implementing the efficient allocation of financial assets among them. I show that when banks use the *balanced team mechanism*, proposed by Athey and Segal (2013), there is always a truth-telling equilibrium which supports the constrained Pareto efficient allocation. When the frictions in the over-the-counter market are small, this equilibrium is unique. However, I provide numerical examples in which these frictions are severe and the economy has other equilibria. In one equilibrium depositors claim high liquidity needs, asset price falls, the trade volume collapses and, consequently, the equilibrium allocation is not constrained Pareto efficient. I label this equilibrium a bank-run equilibrium and I interpret the existence of bank-runs as a financial fragility. I propose two policies to eliminate bank-run equilibria. The first is a suspension scheme and the second is an opening of trade facilities similar to the ones established by the Federal Reserve Bank during the 2007-08 financial crisis. Both policies can eliminate bank runs when contingent on announcements of liquidity needs in a large number of banks.

Publications
"Optimal Diamond-Dybvig mechanism in large economies with aggregate uncertainty", *Journal of Economic Dynamics & Control* 40 (2014) 95-102

Abstract: This paper characterizes the direct mechanism which implements the constrained optimal outcome in a version of Diamond and Dybvig (1983) with aggregate uncertainty and a continuum of agents. Using this result, numerical examples where the best direct mechanism has a bank-run-equilibrium are easily obtained.

Working Papers

"Preventing bank-runs" (with D. Andolfatto & E. Nosal), *FRB of St. Louis Working Paper No. 2014-021A (under review in Theoretical Economics)*, 2014

Abstract: Diamond and Dybvig (1983) is commonly understood as providing a formal rationale for the existence of bank-run equilibria. It has never been clear, however, whether bank-run equilibria in this framework are a natural byproduct of the economic environment or an artifact of suboptimal contractual arrangements. In the class of direct mechanisms, Peck and Shell (2003) demonstrate that bank-run equilibria can exist under an optimal contractual arrangement. The difficulty of preventing runs within this class of mechanism is that banks cannot identify whether withdrawals are being driven by psychology or by fundamentals. Our solution to this problem is an *indirect* mechanism with the following two properties. First, it provides depositors an incentive to communicate whether they believe a run is on or not. Second, the mechanism threatens a suspension of convertibility conditional on what is revealed in these communications. Together, these two properties can eliminate the prospect of bank-run equilibria in the Diamond-Dybvig environment.

"A crisis-bailout game" (with B. Salcedo & R. Zhou), 2014

Abstract: This paper studies the optimal design of a liability-sharing arrangement as an infinitely repeated game. We construct a schematic, non-cooperative, 2-player model. The active agent can take a costly, unobservable action to try to avert a crisis. Whenever a crisis occurs, each agent decides unilaterally how much to contribute mitigating it. For the one-shot game, when the avoidance cost is too high relative to the expected loss of crisis for the active agent, the first-best is not achievable, i.e., the active agent cannot be induced to put in effort to minimize the incidence of crisis at any static Nash equilibrium. We show that with the same stage-game environment, the first-best cannot be implemented as a perfect public equilibrium (PPE) of the infinitely repeated game either. Instead, at any constrained efficient PPE, the active agent "shirks" infinitely often, and when crisis happens, the active agent is "bailed out" infinitely often. The frequencies of crisis and bailout are endogenously determined at equilibrium. This result of the welfare optimal equilibrium being characterized by recurrent crises and bailouts is consistent with historical episodes of financial crises with varying frequency and varied external responses for troubled institutions and countries in the real world. We explore some comparative statics of the PPEs of the repeated game numerically.

Grants & fellowships

The Rosenberg Award, The Pennsylvania State University, 2014

Experience

Research assistant:
Department of Economics, Penn State, 2010 - present
Professor Ruilin Zhou, 2012 - 2013
Professor Russell Cooper, 2013 - 2014

Instructor (with full teaching responsibilities):
Introduction to econometrics (ECON 306), Penn State, 2012

Teaching assistant:
Macroeconomics (ECON 503, Professor Russell Cooper), Penn State, 2013

Conferences & seminars

Presenting "A crisis-bailout game"
2013 – SED Annual Meeting, Yonsei University, South Korea
2013 – Midwest Economic Theory Meetings, Michigan State University

Presenting "Preventing bank-runs"
2014 – SED Annual Meeting, University of Toronto, Canada
2014 – Midwest Macro Meeting, University of Missouri-Columbia
2014 – PSU-Cornell Macro Workshop, The Pennsylvania State University

Presenting "Financial fragility and over-the-counter markets"
2014 – Chicago Fed Workshop on Money, Banking, Payment and Finance
2014 – Brown Bag Seminar, Invited speaker, St. Louis Fed
2014 – Cornell-PSU Macro Workshop, Cornell University
2014 – Brown Bag Seminar, Invited speaker, Philadelphia Fed

Languages English (fluent), Brazilian Portuguese (native)

Programming languages C++, Matlab & Stata

References

Professor Neil Wallace
The Pennsylvania State University
612 Kern Graduate Building
University Park, PA, 16802
E-mail: neilw@psu.edu
(814) 863-3805

Professor Russell Cooper
The Pennsylvania State University
611 Kern Graduate Building
University Park, PA, 16802
E-mail: rwc165@psu.edu
(814) 863-2158

Professor Ruilin Zhou
The Pennsylvania State University
521 Kern Graduate Building
University Park, PA, 16802
E-mail: rzhou@psu.edu
(814) 863-4775

Ed Nosal, Vice President and
Senior Financial Advisor
Federal Reserve Bank of Chicago
230 S LaSalle St, Chicago, IL 60604
E-mail: ed.nosal@chi.frb.org
(312) 322-6070