

## University of Minnesota - Twin Cities

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**Curriculum Vitae**  
**Fall 2019**

## ISAAC D. SWIFT

### Personal Data

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### Major Fields of Concentration

Microeconomic Theory, Financial Economics

### Education

<i>Degree</i>	<i>Field</i>	<i>Institution</i>	<i>Year</i>
PhD	Economics	University of Minnesota (expected)	2020
MA	Economics	University of Minnesota	2018
BS	Mathematics	Brigham Young University	2015
BS	Economics	Brigham Young University	2015

### Dissertation

Title: "Essays on Information in Financial Markets"  
Dissertation Advisor: Professor David Rahman  
Expected Completion: Summer 2020

### References

Professor David Rahman	(612) 625-3525 dmr@umn.edu	Department of Economics University of Minnesota 4-101 Hanson Hall 1925 Fourth Street South Minneapolis, MN 55455
Professor Aldo Rustichini	(612) 625-4816 rusti001@umn.edu	
Professor Martin Szydlowski	ma.szydl@gmail.com	Department of Finance Carlson School of Management 321 19 <sup>th</sup> Avenue South Minneapolis, MN 55455

## Honors and Awards

- 2015 *First Place* “The Distributional Effects of Redistributive Tax Policy,” Mary-Lou Fulton Research Conference Poster Session, Brigham Young University, Provo, Utah
- Spring 2015 *ORCA Grant* for “The Distributional Effects of Redistributive Tax Policy,” Brigham Young University, Provo, Utah

## Teaching Experience

- 2017 - present *Instructor*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Taught *Principles of Macroeconomics*, *Introduction to Econometrics* and *Financial Economics*.
- 2016 - 2017 *Teaching Assistant*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Led recitations for *Introduction to Econometrics*.
- Summer 2015 *Instructor*, Brigham Young University, Provo, Utah. Taught *Advanced Topics in Applied Mathematics*.
- Winter 2015 *Instructor*, American Enterprise Institute, Washington, DC. Taught *Introduction to Scientific Computing*.
- 2012 - 2015 *Teaching Assistant*, Brigham Young University, Provo, Utah. Led recitations for *Advanced Macroeconomic Theory*, *Computational Methods*, *Introduction to Econometrics*, *Intermediate Macroeconomics*, *International Monetary Theory*, *Fundamentals of Mathematics*, and *Calculus I & II*.

## Research Experience

- June 2014 - August 2015 *Research Assistant*, Macroeconomic Computational Lab, Brigham Young University, Provo, Utah

## Papers

- “Dynamics of Price Discovery,” job market paper
- “Equilibrium Seat-Vote Curves”
- “Ratings and Reputation”
- “The Distributional Effects of Redistributive Tax Policy,” with Jason DeBacker, Richard Evans, Evan Magnusson, Kerk L. Phillips, and Shanthi Ramnath. Revise and resubmit *Quantitative Economics*.

## Presentations

- “Dynamics of Price Discovery,” presented at the Midwest Economic Association 83<sup>rd</sup> Annual Meeting, St. Louis, Missouri, March 2019; Econometric Society Summer School, Sapporo, Japan, August 2019.
- “Ratings and Reputation,” presented at the Stony Brook Center for Game Theory International Conference, New York, New York, July 2019.
- “The Distributional Effects of Redistributive Tax Policy,” presented at the Eastern Economic Association 41<sup>st</sup> Annual Meeting, New York, New York, February 2015.

## Computer Skills

Python, C++, MATLAB, Stata, LaTeX

## Languages

English (native), Japanese (proficient)

## Abstracts

- “Dynamics of Price Discovery,” job market paper

Changes in the price of a financial asset represent learning as the market updates its expectation about fundamentals. In this paper I characterize what price dynamics are possible when the information is being released strategically by a profit maximizing trader. I study how information is incorporated into prices over time in model with general trading strategies that allow for the spread of false information and price manipulation. Every period an informed trader reveals their information by buying or selling an asset. After observing the trade, beliefs and prices are updated. The informed trader’s preferred equilibrium is characterized with and without commitment leading to starkly different results. Regardless of how beliefs impact prices, the optimal strategy

for the informed trader is to release their information gradually mixed with a nearly equal amount of misinformation. This strategy leads to volatile price paths that bounce back and forth each period. In the continuous time limit, the price process converges to a Brownian motion. Moving prices back and forth in this way hinges critically on the informed traders ability to commit ex ante to their strategy. Without such commitment power, the optimal strategy is to release nearly all information suddenly at randomized times. The optimum resembles a pump-and-dump price manipulation scheme and can lead to sudden crashes or spikes in the price of the asset. In the limit, the price converges to a Poisson process. This paper gives a micro-foundation to price processes commonly assumed in the literature.

#### “Equilibrium Seat-Vote Curves”

Through gerrymandering, a state drawing congressional districts can have a large effect on who gets elected. This in turn affects the policy chosen by elected representatives. This paper studies the seat-votes curves from an equilibrium of the fifty states electing members of the United States House of Representatives. A seat-vote curve is a graph of the fraction of seats in congress that go to a political party against the fraction of votes obtained by that party. I first estimate the seat-vote curve for each state and observe a few motivating facts. First, seat-vote curves are highly responsive. Every state's seat-vote curve has a slope much steeper than one (the "proportional" seat-vote curve). Second, the size of the state is predictive of the responsiveness. Smaller states have steeper curves. Third, amount of control a political party has in the state is uncorrelated with its responsiveness. I then propose a game theoretic model that explains these facts. Each state has a distribution of citizens' preferred policy in an interval. A state chooses a seat-vote curve to minimize the welfare cost to its citizens. The national social optimal is for each state to have a seat-vote curve that is less responsive (flatter) than proportional (45 degree line). However, each state has an incentive individually to choose a highly responsive seat-vote curve to disproportionately swing policy in their favor. In equilibrium each state chooses an extreme seat-vote curve close to a winner-take-all election. This is a prisoner's dilemma situation where every state is worse off in equilibrium, but it is the dominant strategy of each state to choose a highly responsive seat-vote curve.

#### “Ratings and Reputation”

This paper studies an information designer with reputation concerns. Each period a firm seeks to raise debt to finance a project of uncertain quality. The firm may higher a credit rating agency. The credit rating agency is able to perform an investigation and obtain a metric of product quality. The credit rating designs a rating system contingent on their observed metric to maximize profit. Investors observe the credit rating before making investment decisions. The correlation between the rating agency's metric and project quality is uncertain and beliefs about this correlation play the role of the rating agency's reputation. Investors attempt to learn about project quality to make investment decisions, but also learn the metric's correlation so they know how much to trust future ratings. The rating agency faces a trade-off in designing the rating protocol. A rating protocol that is more informative about project quality is also more revealing about the metric's correlation. In the best pooling equilibrium, reputation concerns have a different affect on different agencies. The rating agencies with a low reputation issue more revealing ratings than they would in a static game to try to build their reputation. The rating agencies with a high reputation reveal even less information than they would in a static game to try to protect their reputation. In some cases, there can be separating equilibria. These equilibria all have the same form. The high quality (high correlation) rating agency must give very revealing ratings until they are able to correctly predict quality a number of times. Then they can conceal information by playing the static optimal for a rating agency known to be the high type for the remainder of periods.

#### “The Distributional Effects of Redistributive Tax Policy,” with Jason DeBacker, Richard Evans, Evan Magnusson, Kerk L. Phillips, and Shanthi Ramnath

This paper uses a large scale overlapping generations model with heterogeneity across the life cycle and over lifetime income groups to evaluate the distributional effects of tax policy. The model is calibrated to the U.S. economy and includes realistic demographics, mortality risk, and progressive income taxes. The model generates distributions of hours worked, earnings, and wealth that are consistent with those observed in the U.S. We consider the effects of two policies that have the same steady-state revenue effect: (i) a progressive wealth tax and (ii) a progressive increase in income tax rates. We find that the wealth tax is extremely effective at reducing inequality relative to an increase in the progressivity of the income tax with the same steady-state tax revenue. The costs of reducing inequality using the wealth tax are primarily borne by the top 10 percent of wage earners and by individuals over the age of 60. The reductions in wealth and consumption from the income tax are concentrated among the top 20 percent of wage earners and among middle-aged individuals between the ages of 40 and 70