Arthur Boman

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Education

UC Berkeley, Ph.D. in Agricultural and Resource Economics, completed December 2013

Primary fields: Finance, Environmental Economics.

Also completed the Haas Ph.D. Finance curriculum as defined for 2010

University of South Carolina, International MBA, 2005

GPA 4.0/4.0, first in class of 110. Student President.

University of Pittsburgh, B.S., Mechanical Engineering, 1993

Graduated with honors. Emphasis on mathematical modeling of complex systems.

References

*Peter Berck, SJ Hall Professor, UC Berkeley, Agricultural and Resource Economics (Adviser)

Email: pberck@berkeley.edu, Phone: 510-642-7238, http://are.berkeley.edu/~pberck/

*Shachar Kariv, Professor, UC Berkeley, Department of Economics

E-mail: kariv@econ.berkeley.edu, Phone: 510-643-0712, http://emlab.berkeley.edu/~kariv/

Experience

UC-Berkeley, Graduate Student Researcher, Three semesters, 2011-2012

Worked with Peter Berck on macro-finance projects that are developing into two papers.

University of South Carolina, Moore School of Business, Adjunct Professor of Finance, 2008-2010

Taught undergraduate classes in Corporate Finance, Corporate Case studies (for Seniors, four sections in all), Intro to Finance, and Investments. Taught a master's level Financial Management case study.

Doty Scientific, Engineer and R&D Projects Manager, 1996-2003

Promoted to an R&D Projects Manager in 2000. Wrote several accepted R&D research articles. (available at http://aboman.org/r-d-research.html). Served as the lead writer of a grant-writing team.

Westinghouse Nuclear, Engineer, 1993-1995

Coordinated several foreign engineers to develop key reactor equations for large contract. Successfully defended the nuclear research against company panel of A.I. researchers and nuclear engineers.

Fellowships and Awards

2007-2008 Haas Department of Finance Full tuition fee, full stipend fellowship

2003-2005 Darla Moore Academic Excellence Award for graduating first in class as student president

2003-2005 Full tuition/fee Darla Moore fellowship

1995 Westinghouse Inter-divisional "Signature of Excellence" Research Award for new reactor equation.

1993 Service Award for unique progress mentoring inner-city kids. Whales Tale Organization.

Finance Research

"What Can We Learn from a Consumption Based Asset Pricing Model with Systemic Risk?"

JOB MARKET PAPER.

Under review. ssrn.com/abstract=2352686

This paper uses the standard consumption based asset pricing model with endogenous stochastic discount factor (sdf). Maintaining arbitrary return distributions, I add interfirm systemic risk. In contrast to the case without systemic risk, the market and planner allocate capital differently. Potential systemic spillovers cause the planner to reduce investment in the risky firm. The market, modeled as a representative agent, does not just ignore the externality and invest as if there were none. Instead, systemic risk increases the market's investment in the systemically risky institution or industry, further increasing systemic risk. These additional welfare losses from distorted capital allocation, caused by the asset-pricing effects of systemic risk, appear to be significant. I introduce bailout of the financial industry and find it has a beneficial direct effect and a distortion effect. An Arbitrage Pricing Theory (A.P.T.) version of the model has empirical potential for asset prices and systemic risk.

"How Much Can Regulation Lower Systemic Risk?"

Presented at the 2012 Financial Management Association Conference.

Under review. ssrn.com/abstract=2358556

CoVaR seeks to use joint return data to measure a firm's contribution to systemic risk. To assess the effect of comprehensive regulatory changes on systemic risk in general, and CoVaR in particular, this paper estimates the impact of the extensive and coincident U.S. regulatory changes of 1993 on the CoVaR of commercial banks. Using difference-in-difference, investment banks not subject to the law are controls. The unique circumstances could be exploited to inform other risk/regulation questions. With high power, no effect is found. This eliminates from possibility one of two formerly widely held beliefs: 1. That Prompt Corrective Action and concurrent regulation lowered systemic risk, or 2. That CoVaR measures systemic risk. Recent theory allows derivation of CoVaR in terms of an asset-pricing model, yielding two additive terms. Results show a problem with one of the terms. However, the other term clearly measures spillovers and is not present in most other measures.

“Types of Systemic Risk” Summary here: http://aboman.org/types-of-systemic-risk.html

I use an asset-pricing factor model to distinguish between systematic and systemic risks. Return distributions with correlated tails and humps in the left-hand tail are found to be the implication of interfirm systemic risk. The model shows why systematic risk is so often mistaken as systemic risk, why systematic risk in the financial industry is important, and why it should be considered along with systemic risk in regulatory efforts. The model is then used to delineate and outline the various types of risk relevant to systemic crises. This vocabulary can facilitate communication and research in systemic risk. Finally, asset return distributions with humps in the left-hand tail and correlated tails are found to be the implication of interfirm systemic risk.

WORKS IN PROGRESS:

“Testing Tax Smoothing via Synthetic Securities”
with Peter Berck and Jonathan Lipow

Changing the portfolio of the government by sale of state owned enterprises or the taking of explicit market positions, such as the short position in Bohn (1990), provides the equivalent of an investment opportunity not offered in the natural market for assets. Using an asset-pricing model modified by deadweight loss of taxation, we show that investors benefit from the government buying a particular asset if and only if they would benefit from purchasing a synthetic asset with a price of the tax rate times the asset's price. We use the **Fama-French (FF)** asset pricing model with and without momentum to test the desirability of a government portfolio change. Significantly mitigating joint-test problem outlined by Fama, we find the FF 25 portfolio that is euclidean-closest to the synthetic asset in a scaled factor space. We use the alpha of this FF portfolio as the null for our hypothesis test. Such an alpha-corrected FF model represents a new asset-pricing model with good accuracy. It has future applications for hypothesis testing asset-pricing implications when no asset exists.

“Investing in Low Usage Cost”

Empirical literature has established that firms (consumers) often forgo investing in expensive capital equipment (durables) with low usage cost, foregoing high expected returns - even in the absence of credit constraints. This is the basis of unexplained phenomena ranging from cell phone contracts to the important “energy paradox” in environmental economics. Treating the upgrade as an asset purchase in a CCAPM model, and properly accounting for the fact that the investor is expecting to decrease usage in bad states of nature, then demanding a very high expected return from this (high beta) asset is reasonable. The business and consumer models have many testable predictions.