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**Curriculum Vitae**  
**Fall 2007**

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**Major Fields of Concentration**

Financial Economics, Mathematical Finance, Econometrics

**Education**

<i>Degree</i>	<i>Field</i>	<i>Institution</i>	<i>Year</i>
PhD	Economic	University of Minnesota (Expected)	2008
MPhil	Economics	Indira Gandhi Institute of Development Research, Mumbai, India	2000
MSc(Integrated)	Physics	Indian Institute of Technology, Kanpur, India	1996

**Dissertation**

Title: “Three essays on Financial Economics”

Dissertation Advisor: Professor Jan Werner

Expected Completion: Summer, 2008

**References**

Professor Jan Werner (612) 625-0708  
[jwerner@econ.umn.edu](mailto:jwerner@econ.umn.edu)

Professor Erzo Luttmer (612) 625-5054  
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### **Honors and Awards**

2000 – 2002 Department of Economics Fellowship, University of Minnesota.  
September 1999 Visiting Research Scholar, Mathematics Department, Indian Institute of Science, Bangalore, India.

### **Teaching Experience**

2003 - Present *Instructor*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Taught *Principles of Microeconomics*, *Principles of Macroeconomics*, *Principles of Microeconomics (Honors)*, *Intermediate Microeconomics*, *Financial Economics*, *Money and Banking (Honors)*, *Macroeconomic Policy*.

2002 - 2003 *Teaching Assistant*, Department of Economics, University of Minnesota. Led Recitation sections for *Principles of Microeconomics* and *Principles of Macroeconomics*.

### **Research Experience**

1997 – 1999 *Research Assistant*, Indira Gandhi Institute of Development Research, Mumbai, India.

Summer 1994 *Research Project* on Fluctuation Phenomena in Statistical Systems, Saha Institute of Nuclear Physics, Kolkata, India.

### **Non-Academic Experience**

Summer 2003 *Summer Internship* at Parker Hughes Cancer Center, Saint Paul, Minnesota.

**Computer Skills** C++, C, MATLAB, Mathematica, LaTeX, Excel.

**Selected Doctoral Coursework** Financial Economics, Applied Econometrics, Public Economics, Economics of Health Care System, Mathematics of Finance, Theory of Probability, Stochastic Processes, Prediction and Filtering, Real Analysis, Theory of Ordinary Differential Equations.

### **Paper**

“Asset Pricing with Heterogeneous Risk Aversion and Portfolio Constraints”, November 2007.

## **Dissertation Abstract**

### **Essay 1: “Asset Pricing with Heterogeneous Risk Aversion and Portfolio Constraints”** (Job Market Paper)

The Federal Reserve Board uses margin requirement rules to control the stock market volatility and stabilize the economy. However, there is a lack of common consensus among economists whether the margin constraints are effective in reducing the stock market volatility. In this paper, I consider a continuous-time general equilibrium asset-pricing model with investors who differ in their risk aversion. Investors who are more risk-tolerant tend to be more aggressive in their investment and hence are subject to margin requirement rules. In this framework, I analyze how heterogeneity in preferences affects the equilibrium stock price, stock returns volatility, market price of risk and the risk-free interest rate in the presence of portfolio constraints. I show that margin constraints are indeed effective in reducing the stock market volatility. The reduction in the volatility increases with the tightness of the constraint. The effect of the constraint in decreasing the stock returns volatility is more pronounced when the constraint binds in the bad state of the economy. Given the empirical evidence in support of the stylized fact that stock returns volatility is counter-cyclical, my findings therefore suggest that margin requirements are indeed effective in mitigating the wild fluctuations in the stock market when prices go low. These conclusions are in contrast to those obtained in the previous literature where it has been shown that margin constraints increase stock price volatility. However, those results were obtained in a partial equilibrium framework where the risk-free interest rate was assumed constant. Moreover, in my model, when the constraint binds, stock and bond markets have to clear in equilibrium; this results in a higher market price of risk (Sharpe ratio) and lower risk-free interest rates in equilibrium compared to the unconstrained economy. I also show that, when the constraint binds, the unconstrained investor is better off while the constrained investor is worse off.

## **Other Papers**

"Generalizations of Supermodularity: Characterizations and Applications", January 2000. Available at <http://ssrn.com/abstract=208088>.

“Two Essays on Application of Supermodularity in Economics”, Unpublished M.Phil. Thesis, Indira Gandhi Institute of Development Research, Mumbai, India, 2000.

## **Presentation**

“Optimal Policies in Soil Management”, presented at Econometric Society Winter School, Indian Statistical Institute, Delhi, India, 1999.