

JIAN HU

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EDUCATION

PhD in Economics (expected), Southern Methodist University, Dallas TX, USA	May 2010
MS in International Economics and Business, Stockholm School of Economics, Sweden	Feb 2005
BBA in Accounting, Nankai University, China	Jul 2000

DISSERTATION

Title: “Essays on Financial Markets using Copula Models”

Job Market Paper: Dependence Structures in Chinese and U.S. Financial Markets: A Time-varying Conditional Copula Approach

Committee: Thomas Fomby (Chair), Nathan Balke, Daniel Millimet.

RESEARCH INTERESTS

Primary: Financial Economics, Macroeconomics

Secondary: International Finance, Applied Econometrics

PUBLICATION

“Dependence Structures in Chinese and U.S. Financial Markets: A Time-varying Conditional Copula Approach” (*Applied Financial Economics*, forthcoming)

WORKING PAPERS

“Does a Slowdown in the Sensitive Sector of the Economy Signal Economic Recession?”, with Thomas Fomby

“Does Weather Matter?” (under review)

“Return Dependence and the Limits of Product Diversification in Financial Firms”, with Thomas Fomby and Jeffery Gunther

WORK IN PROGRESS

“A Dynamic Common Factor Model on Inflation”

“Systemic Risk in Financial Services: Evidence from the Home Mortgage Crisis”, with Thomas Fomby and Jeffery Gunther

“Asymmetric Dependence Between Hedge Fund and Market Returns”, with Thomas Fomby and Jeffery Gunther

TEACHING AND RESEARCH EXPERIENCE

Instructor , Department of Economics, SMU	2008-2010
Introduction to Financial Economics (Fall 2008 Spring 2009 Fall 2009)	
International Macro Theory and Policy (Summer I 2009)	
Intermediate Macroeconomics (Summer I 2009)	
Financial Derivatives (Fall 2009 Spring 2010)	
Teaching Assistant , Department of Economics, SMU	2005-2008
Graduate: Intro. to Quantitative Economics, Microeconomics II, Econometrics II, Monetary Economics, Cost-Benefits Analysis, Strategic Behavior, Economic and Business Forecasting	
Undergraduate: Principles of Microeconomics, Principles of Macroeconomics, Price Theory, Intermediate Macroeconomics, Intro. to Financial Economics, Financial Economics	
Research Assistant , Department of Finance, Cox School of Business, SMU	2007-2008
Provided SAS and Stata programming assistance to Prof. Natalia Reisel for a research project.	

SCHOLARSHIP AND AWARDS

Graduate Student Travel Grant, Office of Research and Graduate Studies, SMU	Mar 2009
Graduate Student Travel Grant, Office of Research and Graduate Studies, SMU	Jan 2009
Omicron Delta Epsilon (ODE), International Honor Society for Economics	2009
Teaching Fellowship, Department of Economics, SMU	2008-2009
Best Third-Year Research Paper Award, Department of Economics, SMU	2008
“Who’s Who Among Students in American Universities and Colleges” Award	2007
Full Tuition Scholarship and Teaching Assistantship, Department of Economics, SMU	2005-2008
Procter & Gamble Fellowship, Nankai University	2000
Academic Scholarship, Nankai University	1998-1999

PRESENTATIONS, DISCUSSIONS AND CONFERENCE SERVICES

Presenter at 2010 SWFA Annual Meeting - Dallas TX, March 4-6, 2010
Reviewer / Program Committee for 2010 EFA Annual Meeting - Miami Beach, Florida, April 14 – 17
Discussant at 2010 AEA-ODE Graduate Student Session - Atlanta, GA, January 3-5, 2010
Presenter, Discussant & Session Chair at 2009 SEA Annual Meeting - San Antonio, TX, November 21-22
Presenter & Discussant at 2009 MEA Annual Meeting - Cleveland, OH, March 20
Poster at Graduate Research Day, Southern Methodist University- Dallas, TX, February 17, 2009

Presenter at Texas Camp Econometrics XIII - New Braunfels, TX, January 31 - February 1, 2009

Presenter at Graduate Economics Club Seminar Series - SMU, May 2008 | October 2008

Texas Camp Econometrics XII - Kerrville, TX, February 16 - 17, 2008

The 16th Texas Monetary Conference - Federal Reserve Bank of Dallas, May 3-4, 2008

PROFESSIONAL AFFILIATIONS

American Economic Association | Southern Economic Association | Midwest Economic Association

American Finance Association | Financial Management Association

PROFESSIONAL EXPERIENCE

Financial Analyst, Headquarter of Industrial and Commercial Bank of China, Beijing 2000-2003

COMPUTER SKILLS

Statistical: MATLAB, SAS, EViews, Stata, S-Plus, Maple, R, SPSS, and WinRATS.

Office: MS Office, Scientific Workplace, FrontPage, Dreamweaver.

REFERENCES

Thomas Fomby (Primary Advisor), Southern Methodist University, (214) 768-2559, tfomby@smu.edu

Nathan Balke, Southern Methodist University, (214) 768-2693, nbalke@smu.edu

Daniel Millimet, Southern Methodist University, (214) 768-3269, millimet@mail.smu.edu

Jeffery Gunther, Federal Reserve Bank of Dallas, (214) 922-5370, jeffery.w.gunther@dal.frb.org

ABSTRACTS OF SELECTED PAPERS

“Dependence Structures in Chinese and U.S. Financial Markets: A Time-varying Conditional Copula Approach” (*Applied Financial Economics*, forthcoming)

In this paper, we use a time-varying conditional copula approach to model Chinese and U.S. stock markets' dependence structures with other financial markets. The ARGARCH- t model is used to examine the marginal distributions, while Normal and Generalized Joe-Clayton copula models are employed to analyze the joint distributions. In this pairwise analysis, both constant and time-varying conditional dependence parameters are estimated by a two-step maximum likelihood method. A comparative analysis of dependence structures in Chinese versus U.S. stock markets is also provided. There are three main findings: First, the time-varying-dependence model does not always perform better than constant-dependence model. This result has not previously been reported in the literature. Second, we find that the upper tail dependence is much higher than the lower tail dependence in some short periods, which has not been documented in previous literature. Last, Chinese financial market is relatively separate from other international financial markets in contrast to the U.S. market. The tail dependence with other financial markets is much lower in China than in the United States. Dependence, on average, rises significantly over sub-periods.

“Return Dependence and the Limits of Product Diversification in Financial Firms”, with Thomas Fomby and Jeffery Gunther

We use copula-GARCH models to investigate dependence between the returns to banking and three other financial businesses: insurance underwriting, securities brokerage, and mortgage finance. Typically, negative shocks are less likely to occur to both banking and one of these other financial businesses than to both banking and the market overall. However, in a financial crisis, when risk-reducing diversification is most important, negative tail dependence between banking and other financial businesses increases dramatically. These findings casts doubt on any risk-reducing benefits associated with conglomerates combining banking and other financial businesses.

“Does Weather Matter?” (under review)

In response to a recent debate about the weather effect on stock market returns, we use various regressions and copula techniques to reexamine the relationship between temperature and stock market returns and find that the negative correlation is statistically significant in most countries. We disentangle pure temperature effect and seasonality by including month dummies and find negative temperature effects on returns do not change very much. Furthermore, to overcome some drawbacks of the naive regression analysis, copula models are employed to analyze the general dependence between temperature and stock market returns and show that the negative relation remains strong even after controlling for autocorrelations, GARCH effects and non-normality. We conclude that the negative correlation between temperature and stock market returns is prevalent.

“Does a Slowdown in the Sensitive Sector of the Economy Signal Economic Recession?”, with Thomas Fomby

Motivated by a 2006 *New York Times* article, we perform formal econometric analysis on a proposed leading indicator of the U.S. economy. We distinguish between the strategy for estimating forecasting equations with final-revised data and that with real-time-vintage data. Using conventional autoregressive (AR) and autoregressive distributed lag (ARDL) models we find that the slowdown in the so-called sensitive sector of our economy is an important indicator for economic recession. We also find that even though real-time-vintage data provides better fit in our linear regressions, it does not perform better than final-revised data in terms of forecasting exercises. Forecasts on GDP growth and efficiency of competing models are compared.