

Bo-Yu Chen

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Education

PhD Candidate in Economics, University of California, Riverside Spring 2018 (expected)
Dissertation Advisor: Dr. Marcelle Chauvet
Dissertation Title: *Essays on Contagion and Linkages of International Financial Markets*

MSc in Economics, University College London 2010

BSc in Physics, National Taiwan University 2008

Publications

"International Stock Markets Linkages: A Dynamic Factor Model Approach," with Marcelle Chauvet.
Handbook of Global Financial Market: Transformations, Dependence, and Risk Spillovers. Ed. Sabri Boubaker and Duc Khuong Nguyen, World Scientific Publishing, 2017.

"Evaluating the Impacts of Carbon Tax on Imported Forest Products — The Evidences from Taiwan," with Ping-Yu Chen and Chi-Chung Chen, *Forest Policy and Economics*, 50(2015), 45–52.

Job Market Paper

"International Stock Markets Linkages: A Dynamic Factor Model Approach," with Marcelle Chauvet.

Working Paper

"Leaders and Followers: Conditional Causality and Contagion in International Financial Markets."

Work in Progress

"Forecasting Bear and Bull Phases of International Stock Markets."

Awards and Honors

Studying Abroad Scholarship, Ministry of Education, Taiwan 2016 - 2018
- Two-year grant of US\$32,000 for distinguished scholars from Taiwan

Full Scholarship University of California Riverside 2014 - Present

Research Experience

Graduate Student Researcher 2013 – 2014
Department of Environmental Science, University of California, Riverside

Research Assistant 2010 – 2013
Department of Applied Economics, National Chung Hsing University, Taiwan

Teaching Experience

Associate Instructor

2017

Department of Economics, University of California, Riverside

- Intermediate Microeconomic Theory

Teaching Assistant

2014 – Present

Department of Economics, University of California, Riverside

- Intermediate Macroeconomic Theory
- Intermediate Microeconomics
- Intermediate Macroeconomics
- Introduction to Macroeconomics

Computer Skills

Matlab, GAUSS, eViews, R, SAS, STATA, C++

Languages

English (Fluent), **Chinese-Mandarin** (Native), **Chinese-Minnan** (Native)

Japanese (Intermediate), **Spanish** (basic)

References

Dr. Marcelle Chauvet (Chair)

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Academic Research

Job Market Paper

“International Stock Markets Linkages: A Dynamic Factor Model Approach,” with Marcelle Chauvet.

This paper investigates international stock market dynamics and their linkages. We use factor models to extract stock market indicators from common cyclical stock components of industrialized countries, emerging markets, the BRIC, and global stock markets. We find that the stock market indicators for these groups are correlated with each other and with the global market factor. The BRIC display the highest average stock return and are the least correlated with the others. The stock return indicators as well as the global stock market factor show a close relationship with economic downturns, entering in bear phases around the beginning of recessions, and in bull phases mid-way through recessions, anticipating future economic recovery. We also find that the stock return indicators are more persistent, and therefore more predictable than the stock markets of individual countries. We study international linkages across these stock market groups through impulse response analysis and find that the level of economic development plays an important role in shock propagation. In particular, all stock market indicators respond positively to global factor shocks, with the least reactive group being the BRIC, and the most responsive being the emerging markets. Interestingly, the BRIC respond negatively to positive shocks in the stock market of industrialized countries, indicating that the BRIC may have a role in hedging risk.

Working Paper

“Leaders and Followers: Conditional Causality and Contagion in International Financial Markets.”

This paper proposes a new conditional causality method for studying the direction of spillovers across international stock markets. Unlike the traditional Granger causality test, the proposed conditional causality method is able to distinguish direct impact and indirect contagion across countries. Furthermore, the technique can isolate unique information propagating from the source country to the destination country, and such information has predicative power for a destination country’s stock market. The objective of this paper is twofold: First, it investigates the transmission of stock market movements across countries. Second, it analyzes spillovers in stock market volatility. The results indicate some interesting dynamic patterns across international financial markets as the method identifies countries that lead or follow changes in stock return mean and volatility. Additionally, the paper finds that the source countries for both mean and volatility spillovers are different before and after the 2008 financial crisis.

Work in Progress

“Forecasting Bear and Bull Phases of International Stock Markets.”

This paper uses a dynamic factor model to capture common cyclical stock market movements of industrialized countries, emerging markets, the BRIC, and global stock markets. This paper finds that during expansion and recession periods, countries with different levels of development play different roles in the global stock market. In addition, the factors serve as the stock market indicators for each group and global market. This paper utilizes a Markov switching model with the factors to forecast bear and bull markets. Importantly, this model can provide warnings of external shocks for financial market investors.