Wenxi Liao

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EDUCATION

The Fuqua School of Business, Duke University – Durham, NC   2014 - 2020
    Ph.D. in Finance   (expected)

Duke University – Durham, NC   2012 - 2014
    M.A. in Economics

Renmin University of China – Beijing, China   2008 - 2012
    B.A. in Public Finance

RESEARCH INTERESTS

Asset Pricing, Macro-Finance, Innovation

WORKING PAPERS

Risk Premia along the Technological Race (Job Market Paper)

I study the cross-section of returns from the perspective of firms with differentially advanced technologies. Firms with leading technologies have some market power and enjoy monopolistic rents. Firms with lagging technologies, however, have to sell their products in more competitive markets. Lagging firms innovate to displace leaders in a technological race. I develop a general equilibrium model in which (1) technological leaders have market power and enjoy monopolistic rents, while followers generate no rents, and (2) each period, leaders, followers, and entrants innovate to take or keep the leading positions in the next period. Leading technologies are risky, since market power allows leaders to raise rents in good times and thus their monopoly profits are procyclical. Firms with high exposure to the risk of leading technologies (LTR) have high risk premia. While both current leaders and current followers can be the future leaders, the returns on current followers are more exposed to the future LTR and thus have higher premia, due to the potential large price jump from becoming a new leader. Empirically, I construct the factor that captures LTR. I find that leading technology is risky, and that the LTR price of risk is 7 percent. The followers that actively innovate have high exposure to the future LTR and high risk premia, supporting my model.

Uncertainty-Induced Reallocations and Growth
joint with Ravi Bansal, Mariano Max Croce and Samuel Rosen

Focusing on both micro and aggregate U.S. data, we show the existence of a significant link between aggregate uncertainty and reallocation of resources away from R&D-intensive capital. This link is important because a decrease in the aggregate share of R&D-oriented capital forecasts lower medium-term growth. In a multi-sector production economy in which (i) growth is endogenously supported by risky R&D investments, and (ii) the representative agent is volatility-risk averse and has access to other safer technologies that do not support growth, uncertainty shocks have a first-order negative impact on medium-term growth and welfare.

Levered Ideas: Risk Premia along the Credit Cycle
joint with Lukas Schmid

We quantitatively evaluate a general equilibrium model in which the endogenous supply of collateral drives the joint dynamics of credit, risk and risk premia. Endogenous adoption facilitates the transformation of intangible ideas into technology that productive firms can borrow against. In the model, the arrival of new technologies drives the ratio between ideas and collateralizable capital (IC ratio) which is a significant predictor of leverage and returns in stock and corporate bond markets. In particular, a high IC ratio predicts an endogenously high market price of risk and high unlevered returns to technology adoption, while a low IC ratio comes with a low equilibrium market price of risk but high levered returns. Interpreted in the context of venture capitalists (adopters) and buyout funds (levered firms), the model rationalizes repeated, but distinct, venture capital and buyout waves, and returns. VC waves occur when the equilibrium price of risk is elevated, while buyout volume spikes when credit risk premia are endogenously low. Quantitatively, our model of a credit cycle driven by the slow transformation of new ideas into collateralizable assets gives rise to predictability in stock and corporate bond markets. Empirically, we document that innovation measures forecast aggregate leverage, credit spreads and credit risk premia, as well as buyout activity, supportive of the model predictions.

CONFERENCES AND SEMINARS

*(including scheduled, * by co-author)*

2019	Duke Fuqua, 5th BI-SHoF conference*, Bocconi University*
2018	American Finance Association
2017	MIT*, Wharton*, NBER Asset Pricing*, LBS Summer Finance Symposium*
	Society for Economic Dynamics*, Stanford SITE*, Ohio State University*
2016	Duke Fuqua, U of Mannheim Asset Prices and the Macroeconomy Conference*

Teaching Experience

Asset Pricing (PhD), Prof. Ravi Bansal, 2014 - 2019

Investment (MBA), Prof. Lukas Schmid, 2019

Intermediate Finance (MQM), Prof. Ravi Bansal, 2018

Financial Economics (PhD), Prof. Lukas Schmid, 2017

Global Financial Management (MBA), Prof. Simon Gervais, 2016

Foundations of Corporate Finance (MMS), Prof. Jillian Grennan, 2016

Derivatives (MBA), Prof. Michael Brandt, 2015

Probability and Statistical Inference (Undergraduate), Prof. David Banks, 2013

Invited Participation

| 2017 | MIT-FARFE Capital Markets Research Workshop |
| 2017 | NBER Summer Institute |

Honors & Awards

| 2014 - 2019 | Fuqua Fellowship, The Fuqua School of Business, Duke University |
| 2010 | Academic Exellence Award, Renmin University of China |

Computer Skills

Python, Matlab, Stata, R

References

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