Peixuan (Wesley) Yuan

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EDUCATION

Ph.D. in Finance, Rutgers University *2016 – 2021 (Expected)*

Thesis Title: Essays on Asset Pricing

Committee: Yangru Wu (Chair), Azi Ben-Rephael, Ren-raw Chen (External), Priyank Gandhi, Sophia Li, Ken Zhong

M.S. in Quantitative Finance, Rutgers University *2015 –*

B.S. in Remote Sensing and Information Engineering, Wuhan University *2011 – 2015*

RESEARCH INTERESTS

Empirical Asset Pricing, Derivatives Pricing, Machine Learning, Data Science

WORKING PAPERS

Specification Analysis: A New Model for The Joint Valuation of S&P 500 and VIX Options (*Job Market Paper*)

Abstract: I analyze the specifications of pricing models for the joint valuation of S&P 500 and VIX options. I find that the existing models cannot adequately represent the two options markets and introduce a new factor that controls the higher-order moments of the risk-neutral return distribution. The proposed model significantly outperforms all other alternatives, and, in particular, it improves on the benchmark two-variance-factor model with co-jumps by 23.66% in-sample and 31.64% out-of-sample. The performance analysis shows that the better fit results from improvements in the modeling of both S&P 500 and VIX options, highlighting the model features that are critical in reconciling the two markets.

Time-Varying Skew in VIX Derivatives Pricing, *Revise & Resubmit, Management Science*

Abstract: This paper proposes a new reduced-form model for the pricing of VIX derivatives that includes an independent stochastic jump intensity factor and co-jumps in the level and variance of VIX, while allowing the mean of VIX variance to be time-varying. I fit the model to daily prices of futures and European options from April 2007 through December 2017. The empirical results indicate that the model significantly outperforms all other nested models and improves on benchmark by 21.6% in-sample and 31.2% out-of-sample. The model more accurately portrays the

tail behavior of VIX risk-neutral distribution for both short and long maturities, as it successfully captures the time-varying skew found to be largely independent of the level of the VIX smile.

Market Right-Tail Risk Matters! (with Yangru Wu)

Abstract: We propose a method to estimate relatively high frequent market left- and right-tail risks by constructing trading strategies with daily S&P 500 options. Our measures are forward-looking and show low correlations with other risk factors. We dissect pricing implications of tail risks for cross-sectional stock returns. Stocks more sensitive to left-tail (right-tail) risk exhibit lower (higher) returns. The right-tail risk premium is significant and partially absorbs the left-tail premium. Results also hold using equity portfolios and mutual funds as test assets. The widespread effect of right-tail risk on assets stands in contrast to previous findings that only negative jumps are priced.

Gambling Preference in Loser Stocks

SELECTED WORK IN PROGRESS

Intraday Stock Return Predictability and Machine Learning (with Cheng Gao)

News and the Cross-Section of Option Returns

Unspanned Feal Premium in the Global FX Options Market (with Hao Chang)

TEACHING EXPERIENCE

Lecturer of Professional Practice *Rutgers Business School*

Research Method in Finance (Master Level, 2 Sections) *Fall 2020*

Research Method in Finance (Master Level) *Scheduled, Spring 2021*

Financial Management for Finance Majors *Scheduled, Spring 2021*

Course Instructor *Rutgers Business School*

Corporate Finance *Summer 2019*

Workshop Instructor *Rutgers Business School*

SAS Programming (Master of Financial Analysis) *Summer 2020*

Recitation Instructor *Rutgers Business School*

Finance: *Fall 2016*

Introduction to Finance: *Spring 2017*

Financial Management (General): *Fall 2018, Spring 2019, Spring 2020*

Financial Management for Finance Majors: *Fall 2016, Spring 2017, Spring 2019*

HONORS AND AWARDS

Dean's Fund Summer Research Fellowship, Rutgers Business School	*2018 – 2020*
TA/GA Professional Development Fund, Rutgers Business School	*2018*
Ph.D. Summer Scholarship, Rutgers Business School	*2017*
Ph.D. Full Scholarships, Rutgers University	*2016 – 2020*
Second Class Scholarship, Wuhan University	*2015*

CONFERENCE AND SEMINAR PRESENTATION

FMA Doctoral Student Consortium (2020, Scheduled); Ph.D. Seminar, Rutgers Business School (2017, 2018); Barclays Capital (2019, 2020)

INDUSTRY EXPERIENCE

Summer Quantitative Associate *Barclays Capital, New York*

Quantitative Analytics Practice (Desk Strategy, Credit Risk) *Summer 2020*

TECHNICAL EXPERTISE

Computer Languages: Python, Matlab, SAS, C/C++, R, SQL, CUDA Parallel Programming

Computational packages: NumPy, SciPy, Pandas, Scikit-Learn, Keras, TensorFlow

Languages: English (fluent), Chinese (native)

REFERENCES

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