# ZHENGYANG (DANIEL) XU

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EDUCATION

**University of Michigan**, Ann Arbor, MI
*Ross School of Business*
    PhD in Finance                                 Expected: May 2020
    Job market paper: "Expectation Formation in the Treasury Bond Market"

**University of Pennsylvania**, Philadelphia, PA
    MA in Applied Mathematics                           2014

**Fudan University**, Shanghai, China
    BS in Computational Mathematics                     2012

REFERENCES

Stefan Nagel (co-chair)
Booth School of Business
University of Chicago
(773) 834-3709
stefan.nagel@chicagobooth.edu

Tyler Shumway (co-chair)
Ross School of Business
University of Michigan
(734) 763-4129
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Robert Dittmar
Ross School of Business
University of Michigan
(734) 763-6821
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RESEARCH INTERESTS

Empirical and theoretical asset pricing, investor behavior, macroeconomics

RESEARCH PAPERS

**"Expectation Formation in the Treasury Bond Market"**
(Job market paper)

I document that subjective bond risk premia implied by survey forecasts of future Treasury yields are acyclical at the one-year horizon. This is in stark contrast to large countercyclical variation in objective risk premia fitted from in-sample predictive regressions of future bond excess returns. This difference in risk premia implies a wedge between subjective and objective expectations of future short rates, which I show is predictable by trend and cycle components of macroeconomic forecasts. I show that these empirical findings can be explained with a learning model in which the agent filters latent trend and cycle components of fundamentals in real time, while an econometrician analyzing the data ex-post has full knowledge of the data-generating processes. The model also yields predictions, consistent with the data, on the joint behavior of the unconditional yield curve slope, the cyclicality of short-rate and macroeconomic expectation wedges, and the cyclicality of objective risk premia. My results suggest that equilibrium models of bond risk premia should target acyclical

subjective risk premia and expectation formation, rather than ex-post in-sample fitted risk premia from predictive regressions.

**"Asset Pricing with Fading Memory"** with Stefan Nagel
(NBER Working Paper No. 26255, *Under Review*)

Building on recent evidence that lifetime experiences shape individuals' macroeconomic expectations, we study asset prices in an economy in which a representative agent learns with fading memory about the unconditional mean endowment growth rate. The agent updates subjective beliefs with constant gain, which induces fading memory, but is otherwise Bayesian in evaluating uncertainty. The model explains standard asset-pricing facts and investor expectation survey data within a simple IID setting with constant risk aversion and a gain parameter calibrated to microdata estimates. Fading memory implies perpetual learning and permanently high subjective uncertainty about long-run growth, which generates a high and strongly countercyclical objective equity premium. In contrast, the subjective equity premium is virtually constant. As a consequence, subjective expectation errors are predictable. Consistent with this theory, we show empirically that experienced payout growth (an exponentially weighted average of past growth rates) is negatively related to future stock market excess returns, predicts subjective expectation errors, and is positively related to aggregate analyst forecasts of long-run earnings growth. In the model and in the data, time variation in the objective conditional equity premium is unrelated to time variation in conditional market return volatility.

WORK IN
PROGRESS

**"An Information-based Theory of the Profitability Anomaly"**

I document that the Fama-French 3-factor (FF3) alphas of the profitability anomaly exist only among firms with high information frictions (IF), proxied by young age, high forecast dispersion, high past return volatility, and/or high option-implied volatility. The FF3 alphas of the long-short profitability portfolios are insignificant both economically and statistically in low-IF quintiles, but are as high as monthly 1.46% (t-stat 4.06) in high-IF quintiles. The results are robust to excluding micro-firms and using different measures of profitability. Short-sale constraints, liquidity, and financial distress do not fully account for the alphas. I show that the empirical pattern is consistent with a noisy rational expectations equilibrium model in which investors use profitability as a noisy signal to learn about future firm payoffs.

TEACHING
EXPERIENCE

Financial Management, *Ross BBA* — Winter 2017
    Sole instructor

Empirical Asset Pricing, *Ross PhD* — Winter 2018
    Teaching assistant for Serhiy Kozak

Capital Markets and Investment Strategy, *Ross BBA* — Winter 2018
    Teaching assistant for Serhiy Kozak

ICBC Executive Education Program — Winter 2017
    Teaching assistant

Financial Derivatives in Corporate Finance, *Ross MBA* — Fall 2015
    Teaching assistant for Stefan Nagel

| RESEARCH EXPERIENCE | Research assistant for Serhiy Kozak | 2017–2018 |
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| | Research assistant for Stefan Nagel | 2014, 2016 |
| | Research assistant for Indrajit Mitra | 2015 |

| HONORS, AWARDS, AND GRANTS | Rackham Graduate Student Research Grant | 2019 |
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| | Allan D. Gilmour Doctoral Fellowship | 2018–2019 |
| | Robert G. Rodkey Fellowship | 2014–2019 |
| | Charles H. Gessner Doctoral Fellowship | 2017 |
| | Mitsui Life Award (best overall performance in the second year) | 2016 |

| INVITED WORKSHOPS | NBER Summer Institute, Behavioral Macro | 2019 |
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| DEPARTMENTAL SERVICE | Organizer, Ross Finance Reading Group | 2018 |
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| | Ross PhD Cohort Representative | 2014 |

| COMPUTER SKILLS | MATLAB, R, Stata, Python | |
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Last updated: December 6, 2019