## **BENJAMIN MARROW**

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#### Education

University of Chicago, Booth School of Business, Ph.D., Financial Economics 2019–2025 (exp)

Booth School of Business, M.B.A

2024

Yale College, B.A., Ethics, Politics, & Economics Magna cum Laude, Phi Beta Kappa

2013-2017

#### References

Professor Stefan Nagel (Chair) University of Chicago Booth School of Business Stefan.Nagel@chicagobooth.edu (773) 834-3709

Professor Niels Gormsen University of Chicago Booth School of Business Niels.Gormsen@chicagobooth.edu (773) 834-8689

Professor Lars Peter Hansen University of Chicago Department of Economics lhansen@uchicago.edu Professor Ralph Koijen University of Chicago Booth School of Business Ralph.Koijen@chicagobooth.edu

Professor Lubos Pastor University of Chicago Booth School of Business Lubos.Pastor@chicagobooth.edu (773) 834-4080

#### Research and Teaching Fields

Primary: Empirical Asset Pricing, Behavioral & Institutional Finance

Secondary: Household Finance, Corporate Finance

## Job Market Paper

#### The Pricing of Earnings News

Abstract: How does earnings news get priced into stock returns? I use a demand system approach to show that this passthrough depends on investor responses to both earnings and prices and that these sensitivities are heterogeneous across investors. A key identification challenge is that earnings news is rapidly incorporated into prices; as a result, it is difficult to distinguish whether investors react to the earnings news itself or the concurrent price change. Using a two-step procedure to isolate price from earnings responses, I identify an average asset-weighted earnings elasticity of 3, i.e. for a stock that beats earnings expectations by 1%, the average investor would increase his number of shares held by 3% if prices were held fixed. These estimates vary across sectors, with most institutional investors more earnings elastic and price inelastic compared to the residual ("household") sector. The stock-level sensitivities implied by their ownership account for heterogeneous earnings passthroughs, as stocks with higher earnings sensitivity and lower price sensitivity see larger return responses from the same earnings surprise. Extremes of price and earnings elasticities are also closely related to misreaction:

a strategy that bets on subsequent reversal (momentum) in sensitive (insensitive) stocks in response to earnings news generates significant outperformance and alpha. These findings suggest that the pricing of earnings news is closely related to the ownership structure of stocks.

## **Working Papers**

## Real-Time Discovery and Tracking of Return-Based Anomalies (with Stefan Nagel)

Abstract: We explore the cross-sectional predictability of stock returns with lagged past returns through the lens of a hypothetical Bayesian researcher who begins with an initial prior that is neutral, showing no bias toward momentum, reversal, or other predictable patterns. This researcher considers a wide range of monthly lags as potential return predictors. By applying Gaussian process regression, which flexibly allows expected returns to depend on lagged returns, and using empirical Bayes shrinkage to guard against spurious anomaly discovery due to multiple testing and against mistaking the ex-post visible effects of investor learning as ex-ante expected returns, this researcher would have discovered prominent return-based anomalies—such as momentum and long-term reversal—well before the authors of the published studies analyzed the data. This suggests that these anomalies represented properties of ex-ante expected returns at the time of their academic discovery. However, tracking these anomalies in real-time, with posterior beliefs based on optimally weighted historical data, reveals that the ex-ante expected returns of many prominent anomalies diminish significantly around their publication dates. Based on these findings, there is little justification for viewing momentum, long-term reversal effects, or other return-based anomalies as permanent features of the cross-section of expected stock returns.

## Inflation Expectations and Stock Returns (with Manay Chaudhary)

**Abstract**: How do inflation expectations affect stock returns, and what accounts for this relationship? We directly measure investors' expectations using traded inflation-indexed contracts and show that, post-2000, stocks offer positive returns in response to higher expected inflation: unconditionally, a 10 basis point increase in 10-year breakeven inflation is associated with a 1.1% increase in the value-weighted stock index. Using a wide range of approaches, we show that this positive relationship is almost entirely due to aggregate variations in expected excess returns rather than changes in firm cash flows (e.g., due to higher mark-ups) or fluctuations in risk-free rates (e.g., due to expected monetary policy response). Overall, a risk premium "proxy" mechanism appears to explain this dominant role of expected excess returns: higher long-term inflation expectations signal stronger future economic growth and reduced volatility.

# The Past is Present: Optimal Monetary Policy at the Effective Lower Bound (with Fernando Duarte)

Abstract: We use a New Keynesian model with an effective lower bound (ELB) and a general stochastic process for the natural rate to study optimal monetary policy. The central bank has perfect commitment and an interest rate smoothing term in its loss function. Despite the ELB binding occasionally and endogenously, we can derive a closed-form solution for the optimal interest rate: it is the maximum of zero and a weighted average of all past realizations of the output gap. This implies that the optimal interest rate (i) takes a simple form, (ii) is path dependent at all times, (iii) should be pre-emptively lowered when close to the ELB — or kept at zero if at the ELB — if and only if the weighted average of past output gaps is negative, and (iv) behaves very differently from the Taylor rule. We illustrate these insights by solving for key variables in the New Keynesian model using a neural network.

### Works in Progress

Subjective Expectations and Saving for Retirement (with Jingoo Kwon)

Bank Relationships and the Pricing of Loans (with Brandon Zborowski)

## Awards, Scholarships, and Grants

Fischer Black PhD Fellov	rahin		2023
AQR Asset Management Institute Prize (Best Finance Paper, TADC Conference)			2023 2023
Yiran Fan Memorial Fellowship (Best 3rd Year Finance Paper) CRSP Summer Research Prize John and Serena Liew Fama-Miller PhD Fellowship			2022
			2020
			2019
Phi Beta Kappa James Tobin Research Fe	llowahin		2017 2016
	nowsmp		2010
Teaching Experience			
Asset Pricing II (PhD)		TA for Ralph Koijen, Stefan Nagel	Winter 2024 Fall 2022
Corporate Finance I (PhD) Advanced Investments (MBA)		TA for Zhiguo He, Doug Diamond TA for Stefan Nagel	Winter 2023
Portfolio Management (MBA)		TA for Lubos Pastor	Spring 2023
Behavioral Finance (MBA	,	TA for Sam Hartzmark	Spring 2022
Corporation Finance (Undergraduate)		TA for Constantine Yannelis	Spring 2021
Employment			
Senior Research Analyst in Capital Markets, Federal Reserve Bank of New York			2017-2019
Quantitative Analysis Associate, New York Yankees			2022
Research Assistant for Prof. Sam Hartzmark			2022
Research Assistant for Profs. Aleh Tsyvinski, Fernando Parro, Lorenzo Caliendo			2017
Research Assistant for Prof. Michael Peters			2016
Research Assistant for Prof. Edward Snyder			2014
Summer Analyst, Abdiel Capital			2014
Professional Experience			
Organizer of Behavioral Finance Reading Group			Fall 2023
Member of Booth Standing Committee on PhD Climate		2023-2025	
Conferences	Trans-Atlantic Doctoral Conference, Yiran Fan Memorial Conference, Inte Finance PhD Seminar, IHS Graduate Conference		
Refereeing Activity	American Economic Re	view, Journal of Corporate Finance	
Additional Information			
Citizenship	USA		
Programming Skills	R, Python, SAS/SQL, Stata, Matlab, $\mbox{\sc IAT}_{\mbox{\sc E}}\mbox{\sc X}$		
Languages	English (Native), Ancient Greek, Latin		
Other interests	Chess (Yale, University of Chicago Chess Team; former New Jersey State Championship team); Scrabble (3rd nationally at the National Scholastic Championships), sports statistics, blogging, commercial aviation		