

FEDERICO MAINARDI

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This version: January 5, 2026

Academic Appointments

Columbia University, Columbia Business School *2025–present*
Assistant Professor

Education

University of Chicago, Booth & Department of Economics *2019–present*
Joint Ph.D. in Financial Economics

Bocconi University *2016–2018*
M.Sc. in Finance

Bocconi University *2013–2016*
B.Sc. in Economics and Finance

Research and Teaching Fields

Primary: Finance, Macroeconomics
Secondary: Asset Pricing, Public Finance, Household Finance

Working Papers

Monetary Policy, Segmentation, and the Term Structure (with Rohan Kekre and Moritz Lenel)
Revise & Resubmit, American Economic Review

Abstract: We develop a segmented markets model which rationalizes the effects of monetary policy on the term structure of interest rates. When arbitrageurs' portfolio features positive duration, an unexpected rise in the short rate lowers their wealth and raises term premia. A calibration to the U.S. economy accounts for the transmission of monetary shocks to long rates. We discuss the additional implications of our framework for state-dependence in policy transmission, the volatility and slope of the yield curve, and trends in term premia accompanying trends in the natural rate.

Asset Demand of U.S. Households (with Xavier Gabaix, Ralph Koijen, Sangmin Oh, and Motohiro Yogo) *Revise & Resubmit, Journal of Financial Economics*

Abstract: We document new facts about portfolio rebalancing for U.S. households, using novel security-level data on portfolio holdings, flows, and returns with broad coverage across asset classes and the wealth distribution (including over 400 billionaires). In market downturns, less wealthy households sell, while the wealthiest households buy U.S. equity. Although less wealthy households respond more procyclically to the market return, all households respond countercyclically to their active returns (i.e., their household portfolio return minus the market return). Three factors that capture equity, credit, and municipal bond risks explain 81% of the variation in portfolio rebalancing within liquid risky assets.

Who Harvests? Tax Alpha and Heterogeneous Responses to Capital Gains Taxation

Abstract: Capital taxation is a central component of the U.S. fiscal system: realized gains totaled 1.4trillionin2024, andtheirpreferentialtaxtreatmentamountedto244 billion in foregone federal revenue. Yet little is known about how households, especially the ultra-wealthy, respond to capital gains taxes. Using granular, high-frequency data on U.S. households-including more than 700 billionaires-I study the response to capital gains taxation across the wealth distribution. Wealthier households realize a smaller fraction of gains but a larger fraction of losses than less wealthy households, consistent with tax-loss

harvesting. These differences intensify during market downturns and are concentrated among households supervised by sophisticated advisors, especially private banks. Exploiting a regression kink design around zero unrealized returns, I show that the realization behavior at the top reflects an active response to tax incentives rather than unobserved factors correlated with wealth. The implications for after-tax performance are significant: tax expenses decline from 70 basis points of wealth at the bottom to 20 basis points at the top, generating a 50-basis-points annual tax alpha, equal to over one-third of documented return gaps. Absent this tax alpha, the top 1% aggregate wealth share would grow by 3.54 percentage points less over thirty years, corresponding to 63% of the historical rise in top-end wealth concentration over an equivalent horizon. These findings reveal a policy-relevant channel through which the U.S. tax code amplifies wealth concentration, informing both macroeconomic models of wealth dynamics and normative models of capital taxation.

A Demand-Based Approach to Short-Selling

Abstract: I microfound and estimate a tractable demand system in which both the spot and the lending markets jointly clear. In the spot market, investors subject to short-selling constraints are complemented by heterogeneous investors that are allowed to take both long and short positions. In the lending market, the long-short investors borrow stocks from oligopolistic lenders in exchange for the payment of a lending fee. In equilibrium, the elasticity of short-selling demand to the spot market price is the result of two countervailing economic forces. On one hand, an exogenous increase in the spot market price leads to an increase in short-selling demand. On the other hand, the increase in short-selling demand prompts oligopolistic lenders to charge higher lending fees which in turn compresses the demand for short positions. I show empirically that the second channel dominates and that the demand for short-selling is ultimately decreasing in the spot market price. Quantitatively, a 1% exogenous increase in the spot market price decreases short-selling demand by 0.32% to 0.63% on average. Using the extended demand system including both long and short positions, I then estimate the price impact induced by a shock to short-selling demand and study the exposure of short-sellers to different classes of long investors. A 10% increase in short-selling demand decreases the average stock price by 0.30% to 0.94%. Moreover, short-sellers are mostly exposed to demand shocks that originate in the mutual fund sector, followed by households and investment advisors. Quantitatively, a 10% increase in the demand of mutual funds increases the valuation of short-sellers' portfolio by 8.04% on average, compared to 6.77% for households and 5.52% for investment advisors.

Market Power, Fund Proliferation, and Asset Prices (with Marco Loseto)

Abstract: We develop an equilibrium model of the passive mutual fund industry to study how the proliferation of passive funds affects household welfare. Fund proliferation results from entry decisions of profit-maximizing asset management firms, with more efficient firms introducing funds earlier and faster. These fund proliferation incentives increase market concentration, but also lower investment costs through scale economies. By matching observed entry patterns, we estimate that the largest firms benefit from significant cost advantages. Counterfactual simulations show that welfare losses from removing these firms stem primarily from forgone scale economies—suggesting market concentration may be the outcome of efficient industry dynamics.

Limited Risk Transfer Between Investors: A New Benchmark for Macro-Finance Models (with Xavier Gabaix, Ralph Koijen, Sangmin Oh, and Motohiro Yogo)

Abstract: We define risk transfer as the percent change in the market risk exposure for a group of investors over a given period. We estimate risk transfer using novel data on U.S. investors' portfolio holdings, flows, and returns at the security level with comprehensive coverage across asset classes and broad coverage across the wealth distribution (including 400 billionaires). Our key finding is that risk transfer is small with a mean absolute value of 0.65% per quarter. Leading macro-finance models with heterogeneous investors predict risk transfer that exceeds our estimate by a factor greater than ten because investors react too much to the time-varying equity premium. Thus, the small risk transfer is a new moment to evaluate macro-finance models. We develop a model with inelastic demand, calibrated

to the standard asset pricing moments on realized and expected stock returns, that explains the observed risk transfer. The model is adaptable to other macro-finance applications with heterogeneous households.

Democratizing Private Markets: Private Equity Performance of Individual Investors (with Cynthia Balloch, Sangmin Oh, and Petra Vokata)

Abstract: Using novel data on U.S. households, we provide the first systematic study of private equity performance by individual investors. We identify two innovations that democratize access to private equity: funds with low minimum commitments and pooling capital via advisors. On average, individual investments in private equity perform similarly to institutions and outperform public markets. The most affluent investors outperform the least affluent by 6 to 10 percentage points in public market equivalent. Advisor skill is more likely to explain the performance gap than preferential access. Intermediary fees impose a sizable drag on performance, especially for less affluent investors.

Work in Progress

The Impact on Fiscal Policy on Financial Institutions and Asset Prices

Awards, Scholarships, and Grants

The Brattle Group Ph.D. Candidate Awards for Outstanding Research	2025
Best Paper in Asset Pricing at SFS Cavalcade 2025	2025
Ph.D. Student Grant at SFS Cavalcade	2025
Fisher Black Fellowship in Finance	2024
John and Serena Liew Fama-Miller Fellowship Fund	2024
Yiran Fan Memorial Fellowship	2022
John and Serena Liew Fama-Miller Fellowship Fund	2021
CRSP Summer Research Grant	2020
John and Serena Liew Fama-Miller Ph.D. Fellowship	2019
Unicredit Foundation US Ph.D. Scholarship	2019
Joint Program in Financial Economics Ph.D. Fellowship	2019
Vittorio Bertazzoni Scholarship	2016

Teaching Experience

Quantitative Portfolio Management (MBA)	TA for Ralph Koijen	2023
Topics in Dynamic Asset Pricing (Ph.D.)	TA for Pietro Veronesi	2023
Financial Instruments (MBA)	TA for John Heaton	2022
Investments (EMBA)	TA for John Heaton	2022
Fixed Income Asset Pricing (MBA)	TA for John Heaton	2022
Investments (MBA)	TA for John Heaton	2021
Econometrics (undergraduate)	TA for Francesco Ruggieri	2021
Investments (undergraduate)	TA for John Heaton	2020
Financial Econometrics (master)	TA for Massimo Guidolin	2019
Sport Analytics (undergraduate)	TA for Carlo Favero	2019
Empirical Methods (undergraduate)	TA for Carlo Favero	2018

Presentations

Conferences

4th Holden Conference 2025, FOM 2025, Junior Finance Conference University of Wisconsin-Madison 2025, WFA 2025, SFS Cavalcade 2025, AFA 2025, IMIM 2024, Annual Finance Conference Washington University in St. Louis 2024, MFA 2024, NBER SI Household Finance 2024, Yiran Fan Memorial Conference 2024, SFS Cavalcade 2023, EFA 2023, SED 2022, EGSC 2022

Seminars

Bocconi, Columbia Business School, Duke Fuqua, Harvard, Harvard Business School, Imperial College London, London Business School, NYU Stern, OSU Fisher, Princeton, Stanford GSB, UC Boulder Leeds, UBC Sauder, UC Berkeley Haas, UCLA Anderson, UCSD Rady, UT Austin McCombs, UW Foster, Wharton

Discussions

UNC Junior Finance Conference: Lu and Wallen (2025), MFA 2023: Golez and Matthies (2023)