

RODRIGO BARRIA

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Interests

Asset Pricing and Market Microstructure, International Finance, Macro-Finance Modeling.
Applied Econometrics.

Education

University of Warwick	Warwickshire, United Kingdom
PhD in Finance	2019 - 1Q2024 (exp)

Goethe University Frankfurt	Frankfurt am Main, Germany
MSc Quantitative Economics (2 year degree)	2009 - 2011

Pontificia Universidad Católica de Chile	Santiago, Chile
Industrial Engineer with Computer Eng. Specialization, Diploma and Licenciatura (BSc) (6 year degree)	2001- 2006

Other Training

Bayesian Econometrics Summer School (2023, Italy), Market Microstructure Summer School (2023, UK)

Bank of England Summer Research Internship (2022, UK), Dynare DSGE Modeling Summer School (2022, Cepermap France)

Official Institutions Educational Seminar (2015, Pimco US), International Reserves Management Training Seminar (2017, BlackRock UK)

Teaching Experience (Warwick)

Corporate Finance (IB 2360, undergraduate, Business School, 2021 and 2022)

Investment Management (IB9490, master, Business School, 2021 and 2022)

Research

Job Market Paper: Ambiguity, Trading Volume and Liquidity

In this paper, I build a trading volume model that explicitly considers the impact of ambiguity (Knightian Uncertainty) surrounding public information announcements. I derive a closed form expression that illustrates how ambiguity influences trading volume through two channels: expectations and volatility. The empirical results highlight the significant role played by the expectations channel of ambiguity in driving trading activity. Specifically, on a monthly basis, I observe that a one-standard-deviation increase in ambiguity results in approximately a 20% increase in trading volume. Additionally, by employing this model, I demonstrate that a substantial portion of the positive returns of a standard US Turnover sorted portfolio, approximately 70% of the returns, traditionally attributed to Liquidity, are actually driven by information ambiguity.

Working Papers (details below):

Mispricing in Inflation Markets (with Gabor Pinter, [BoE Link](#))

Asset Prices Around FOMC Meetings

Analyzing the Economic Outcomes of Peer Effects (with Alejandro Bernales, Javier Peters, Marcela Valenzuela, Miguel Valenzuela and Ilknur Zer)

Work in Progress (details below):

Global Inflation Expectations Transmission and Ambiguity

Work Experience

Central Bank of Chile Financial Markets Division and Financial Risk Unit Financial Economist / Quant	Santiago, Chile 2015 – 2019
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Allianz Global Investors RiskLab Associate in Financial Engineering	Münich, Germany 2013 – 2015
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Deutsche Zentral-Genossenschaftsbank (DZ Bank) Market Risk Controller Analyst	Frankfurt am Main, Germany 2012 – 2013
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LarrainVial Investment Bank Fixed Income Analyst / Portfolio Manager	Santiago, Chile 2007 – 2009
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Other Skills / Interests

Programming: Advanced programming in python, matlab, R, C++, java, excel vba. Experience in distributed parallel computing using Matlab Parallel Computing Toolbox and Intel MPI Library. Advanced programming and management of SQL, MySQL, Access and TimeScape databases. Experience working with high frequency TAQ data, EMIR and MiFID data. Experience working with SAS and Stata.

Experienced user of Bloomberg Terminal, Bloomberg Data License, Murex and Intex. Experience working with Datastream/Thomson Reuters.

Languages: Spanish (native), English (fluent) and German (business fluent).

Interests: Sailing, jogging, ski.

References

Available upon request

Working Papers Details

Mispricing in Inflation Markets (with Gabor Pinter, [BoE Link](#))

We use UK transaction-level data on nominal bond, inflation-linked bond and inflation swap markets to study trading behaviour and prices in inflation markets. Our empirical analysis yields five main results: (i) there is persistent inflation mispricing over the 2018–22 period, with nominal gilts on average 135 basis points more expensive (per £100 notional) than their synthetic counterparts constructed from inflation swaps and inflation-linked bonds; (ii) hedge funds respond to changes in mispricing but their response does not constitute arbitrage – they adjust their bond portfolios appropriately, but do not hedge these trades in the inflation swap market; (iii) inflation markets are largely segmented with liability-driven investors and pension funds (LDI-P) dominating the inflation swap market, and many clients that are active in bond markets are absent in the inflation swap market; (iv) LDI-P activity is a key driver of inflation mispricing – the sector’s orderflows in inflation-linked bonds and (to lesser extent) nominal bonds and inflation swaps contribute significantly to day-to-day variations in mispricing; (v) the generally weak link between market-based measures of inflation expectations and survey-based measures is strengthened once we clean market prices from the effect of LDI-P trading activity.

Asset Prices Around FOMC Meetings

The effect of the US Federal Reserve FOMC Policy Meetings on asset prices has been a subject of debates in the recent academic literature. In this paper, I show a recurring pattern in the behavior of a G10 currencies and U.S. equity implied volatility in the even-weeks surrounding FOMC meetings. During these even-weeks, equity implied volatility, as measured by the VIX and VXO indices, tends to decline by approximately 0.24% and 0.40% per day, respectively. Conversely, a long-short G10 FX index tends to appreciate by 0.03% per day on these weeks, indicating that G10 risk-rich currencies systematically tend to yield higher returns compared to safe-haven currencies in the even-weeks surrounding FOMC meetings. Importantly, these even-weeks concentrate the majority of the implied volatility downturns and the FX index upwards movements. This pattern closely resembles a pattern observed in equities, where there is a consistent appreciation of 0.06% per day during the even-weeks surrounding FOMC meetings. Furthermore, I find that this pattern across these three asset classes can be explained by repetitive calendar effects and a few specific shocks. These calendar effects are the start of the month and a second one occurring on day-16. Regarding the factors influencing these calendar effects, I find that liquidity plays a significant role in explaining these patterns for equities and implied volatility. Towards the end of the month and on day-15, there is a notable increase in scheduled cashflows from U.S. Treasury instruments. In addition, there is a statistically significant increase in the TED rate on day-15.

Analyzing the Economic Outcomes of Peer Effects

(with Alejandro Bernales, Javier Peters, Marcela Valenzuela, Miguel Valenzuela and Ilknur Zer)

We provide evidence that peer effects have a negative economic impact on pension funds investment decisions. We structure our analysis around a stylized model, where investment losses emerge when agents overestimate the quality of peers’ information. Then, using pension funds data, we confirm that firms follow their peers when determining portfolio allocations, and we quantify the economic damage through a counterfactual firm that is not peer-influenced.

Work In Progress Details

Global Inflation Expectations Transmission and Ambiguity

I show how ambiguity affects the transmission of inflation relevant announcements across countries and its impact on local inflation markets and expectations.