



Giant Funds & Market Mispricing

Professor Paul Woolley, Senior Fellow, London School Of Economics Professor Dimitri Vayanos, Professor of Finance, London School Of Economics

Wednesday, 10 May 2023



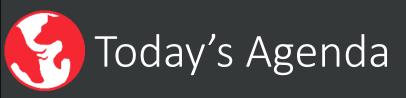
A Word From Today's Chairman

Professor Michael Mainelli

Chairman Z/Yen Group









- 11:00 11:05 Chairman's Introduction
- 11:05 11:25 Keynote Presentation Professor Paul Woolley & Professor Dimitri Vayanos
- 11:25 11:45 Question & Answer





Are markets basically efficient?













Professor Paul Woolley Senior Fellow

London School Of Economics

Professor Dimitri Vayanos Professor of Finance London School Of Economics

GIANT FUNDS AND ASSET MISPRICING

FS Club

10 MAY 2023

Dimitri Vayanos and Paul Woolley

London School of Economics and Political Science

1. Background and Objectives

Centre for the Study of Capital Market Dysfunctionality established at LSE in 2007.

- Paul Woolley had spent his entire career as an academic, asset manager and policymaker puzzling how asset prices are formed.
- Dimitri Vayanos as a finance professor at LSE, and before that at MIT and Stanford, had questioned the efficiency of markets.
- Together with other colleagues at LSE we have been building a theory of mispricing based on agency frictions in asset management.
 - □ Momentum, "the premier unexplained anomaly".
 - □ Value, how a large component of stocks can become cheap.
 - □ Inversion of the relationship between risk and return.

2. Momentum and Value

- Vayanos-Woolley, "An Institutional Theory of Momentum and Reversal", *Review of Financial Studies* 2013.
- □ Suppose that a negative shock hits an sector's fundamentals.
 - → Funds overweighting the sector realize poor returns.
 - → Funds experience outflows.
 - → Funds sell stocks in the sector.
 - → If outflows are gradual, stocks' price declines gradually → Momentum.
 - \rightarrow Stocks' price is below fundamental value \rightarrow Value.
- □ Flow-based procyclical trading.

The Bird-in-the Hand Effect

- Question: Why do investors absorb outflows, buying stocks whose price is expected to drop?
 - Why isn't the effect of gradual flows fully anticipated into current prices?
- □ Answer: Investors prefer one bird in the hand.
 - Expectation of outflows renders stocks undervalued.
 - Buy now: Lock in attractive long-run return. (One bird in the hand)
 - Buy after outflows occur: Earn higher return on average, but risk that undervaluation disappears. (Two birds in the bush)

Supporting Evidence

- Lou, "A Flow-Based Explanation for Return Predictability", *Review of Financial Studies* 2012.
 - Predict fund flows based on past returns.
 - Impute flows in or out of individual stocks.
 - Use stock-level flows to predict returns.
 - Fund flows explain a good part of stock-level momentum, especially for large stocks and recent data.

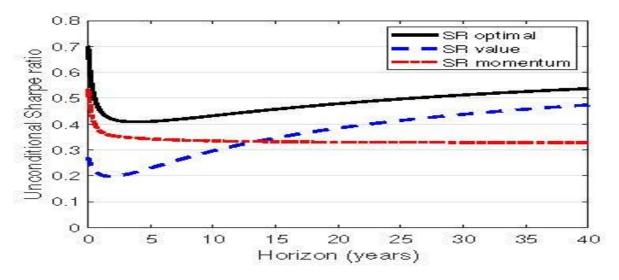
3. Optimal Strategy Mix

- How should long-horizon investors invest in mispriced markets?
- Polk-Vayanos-Woolley, "Long-Horizon Investing in a Non-CAPM World", LSE working paper 2022.
- □ Approach:
 - Calibrate VW RFS 2013.
 - Corroborate theoretical results with VAR analysis of US stock returns.

Main Results

- Performance of value and momentum depends on investment horizon.
 - Value's Sharpe ratio decreases with horizon for short horizons, then increases.
 - Momentum's Sharpe ratio decreases for short horizons, then is flat.
 - → Optimal portfolio tilts from momentum to value as horizon increases.
- Performance of V&M can be forecast based on fund flows.
 - Correlation between value and momentum forecasts short-horizon Sharpe ratios. New predictor, which works in the data (VAR).
 - Value spread becomes a better predictor for long-horizon Sharpe ratios.

Sharpe Ratios and Investment Horizon



- Over short horizons, value and momentum returns are positively autocorrelated.
 - Stock-level momentum.
- Over long horizons, value returns are negatively autocorrelated.
 - Value underperforms → Expected returns and value weights of undervalued stocks rise.

4. Problems Caused by Benchmarking

- Asset managers are constrained, explicitly or implicitly, not to deviate much from benchmark indices.
- Constrained-based procyclical trading.
 - Example: Sector with 10% weight in index and 5% weight by managers.
 - Sector rises to 20% weight in index.
 - $\square \rightarrow$ Weight by managers rises to (approximately) 10%.
 - \rightarrow Managers must buy asset to raise weight to 15%.
- Buffa-Vayanos-Woolley, "Asset Management Contracts and Equilibrium Prices", Journal of Political Economy, 2022.

Overvaluation and Market Anomalies

- Constrained-based procyclical trading is more pronounced for overvalued stocks.
 - $\square \rightarrow$ Overvalued stocks have higher volatility.
 - Inversion of the relationship between risk and return.
 - Volatility anomaly derives primarily from overvalued stocks.
 - $\square \rightarrow$ Momentum is more pronounced within overvalued stocks.
 - → Benchmarkers are generating the momentum (procyclical flows) and are exploited by momentum traders.
 - $\square \rightarrow$ Overvaluation bias for aggregate market.

5. Implications of New Theory

- Unified body of theory, not piecemeal explanations.
- Investing comprises two basic strategies:
 - Momentum targets short-term share prices and valuations.
 - Value targets long-term cash flows.
 - Share prices are a battleground between these two strategies.
- □ Systematic mispricing of shares, sectors and markets.
 - Bias to overvaluation, with bubbles and crashes.
 - Inversion of risk and return.
 - Indicates scale of distortion.
 - False signals to corporate sector.
 - Overturns every strategy and policy based on market efficiency.
 - Mark-to market, passive investing, rewards to CEO.

6. Making Markets More Efficient

- Standard theory of Efficient Markets is a special and limiting case and cannot explain imperfection or how to deal with it.
- Theory of dysfunctional markets shows cause of mispricing and suggests remedies.
- Solution depends on Giant Funds revising the way they contract with and monitor asset managers.
 - □ Confers private, early-bird advantage as well as social benefit.
- Sustainability goals and market efficiency depend on investors and corporates acting for long term.
- Non-technical summary: "Asset Management as Creator of inefficient markets", Atlantic Economic Journal, 2023.
- Bizarre that in 2023 we can do amazing science but cannot deliver efficient capitalism.

GIANT FUNDS AND ASSET MISPRICING

FS Club

10 MAY 2023

Dimitri Vayanos and Paul Woolley

London School of Economics and Political Science





Are markets basically efficient?





Comments, Questions & Answers













Thank You For Participating

FS Club

Forthcoming Events

- Thu, 11 May (08:00-09:30) Developing Emissions Trading Schemes BizTech Huihuà Chat
- Thu, 11 May (17:00-18:30) A Walk Round The Financial Centre Of The City Exploring Its

History, Dark Secrets & Challenges – Post Brexit, Post Covid

 Tue, 16 May (16:00-16:45) Transforming Retail Banking For Streamlined International Transactions

Visit https://fsclub.zyen.com/events/forthcoming-events/

Watch past webinars https://www.youtube.com/zyengroup