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When Beta Matters: Conditional Asset Pricing Around Macroeconomic Announcements

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Abstract

This thesis[1] examines whether market beta—the core risk measure in the Capital Asset Pricing Model—is priced conditionally on the timing of public information. We test whether beta earns a premium specifically on macroeconomic announcement days using U.S. equity data from 1963 to 2024. Building on an established empirical framework, we replicate prior results and extend them to explore time variation, announcement-type effects, and pre-announcement dynamics. Our objective is to determine whether systematic risk is rewarded not continuously, but selectively—during moments of heightened market attention and uncertainty resolution.

[1] This thesis benefited from the use of large language models (LLMs) for editing and stylistic refinement. All substantive content, data analysis, and interpretations are the sole work of the authors.

1 Introduction

The Capital Asset Pricing Model (CAPM)[2] has long served as the theoretical backbone of modern portfolio theory. It links expected returns to a single systematic risk factor—market beta—and offers an elegant, tractable framework for understanding the risk–return trade-off. Yet, despite its foundational role, the CAPM has been persistently challenged on empirical grounds. A large body of evidence, most notably from **Fama and French (1992)** and **Black (1972)**, shows that beta often fails to explain cross-sectional variation in average returns. This apparent disconnect between theory and data has led many to view beta as irrelevant, and to pivot toward multifactor models that incorporate size, value, momentum, and other characteristics.

However, a growing literature suggests that the empirical failure of the CAPM may be less a flaw in the model itself and more a limitation of how it has been tested **(Lettau and Ludvigson, 2001; Cochrane, 2001; Adrian et al., 2014; Pastor and Veronesi, 2013)**. Traditional asset pricing tests evaluate average returns across the full trading calendar, treating all days as equally informative. But markets are not informationally uniform. Investor attention, uncertainty, and volatility are not constant. A key insight emerging from conditional asset pricing models is that the relationship between beta and returns may be state-dependent: the CAPM could work, but only under specific conditions—particularly when new information enters the market and uncertainty is resolved.

In a pivotal study, **Savor and Wilson (2014)** formalize this idea by testing whether beta is priced conditionally on the arrival of macroeconomic news. Using a binary classification of trading days—announcement days ("a-days"), when CPI/PPI, employment, or FOMC decisions are scheduled, versus non-announcement days ("n-days")—they find that the CAPM holds remarkably well on a-days but shows no significance on n-days. Their results are robust across asset groupings, including decile portfolios, Fama-French portfolios, and industry-level returns. This pattern suggests that the risk–return trade-off is not universally present but rather emerges when macroeconomic uncertainty is publicly resolved. Instead of rejecting the CAPM, their paper reframes it as conditionally valid: its assumptions may apply only during high-information periods.

[2] The Capital Asset Pricing Model (CAPM), developed by **Sharpe (1964), Lintner (1965), and Mossin (1966)**, is a foundational model in finance that explains the relationship between an asset's expected return and its exposure to market-wide risk. It assumes that investors are compensated only for systematic risk—captured by the asset's beta—while idiosyncratic risk can be diversified away.

This thesis aims to replicate and extend the empirical findings of **Savor and Wilson (2014)**. Our contribution is twofold. First, we test their central hypothesis over an extended sample that runs through the end of 2024, using CRSP data and implementing their methodology in full—portfolio sorting, Fama-MacBeth cross-sectional regressions, and pooled panel specifications. Second, we go beyond replication to probe the robustness and limits of conditional beta pricing. Specifically, we examine:

- Whether the beta–return relationship varies across macroeconomic regimes, particularly before and after the 2008 financial crisis.
- Whether conditional beta pricing is consistent across different types of announcements (FOMC, inflation, employment).
- And whether beta is priced in anticipation of news—on the day before scheduled announcements.

The results confirm and extend the original claim. We find that beta is significantly and positively priced on a-days, while the relationship vanishes on n-days. This pattern is present not only in decile portfolios but also in individual stock-level regressions—even after controlling for size, value, book-to-market and past one-year returns.

However, the effect is not constant over time. It tends to strengthen during periods of heightened macro uncertainty, though our DiD regression does not indicate a persistent structural shift across regimes.

Moreover, we found that beta pricing is concentrated around FOMC announcements, with little evidence of similar patterns on inflation or employment days. Finally, while average returns may drift in the 24 hours leading up to announcements, we find no evidence that beta is priced in advance. The premium materializes only when public information is released.

These findings have important implications for asset pricing theory and empirical practice. They challenge the view that the CAPM is obsolete, and instead suggest that its failure stems from overlooking the role of informational context. Risk premia appear to be episodic, not continuous—concentrated in short windows of uncertainty resolution. As such, tests that average across all days may systematically understate the conditions under which beta matters. This thesis does not propose a new model, but instead sharpens our lens on an old one—demonstrating that the CAPM may still have relevance, if applied at the right time.

2 Literature Review

Empirical studies of asset returns have consistently challenged the predictive power of the Capital Asset Pricing Model (CAPM), particularly in unconditional settings. Introduced by **Sharpe (1964), Lintner (1965),** and **Mossin (1966)**, the CAPM offered a parsimonious prediction: that expected excess returns are linearly related to a single measure of risk—market beta. Despite its theoretical appeal, this prediction has not held up robustly in the data.

2.1 Shortcomings of Classical Asset Pricing Models

The empirical shortcomings of the CAPM became apparent early in its development. **Black (1972)** introduced a zero-beta version to address the observed flatness of the Security Market Line (SML), and **Fama and MacBeth (1973)** developed a two-pass regression method to facilitate empirical testing. However, it was the work of **Fama and French (1992)** that most clearly undermined the model's central claim. By showing that firm size and book-to-market equity explain cross-sectional return differences more effectively than beta, they shifted the focus toward alternative risk factors.

This empirical evolution led to a proliferation of multifactor models. The Fama-French three-factor model **(Fama and French, 1993)** incorporated size and value, and their later five-factor extension **(Fama and French, 2015)** added profitability and investment. **Carhart (1997)** included momentum as a fourth factor, while others introduced variables such as liquidity **(Pastor and Stambaugh, 2003)**, idiosyncratic volatility, or downside risk. Although these models improved statistical fit, they also moved the field further from the CAPM's theoretical elegance—raising concerns over model proliferation, overfitting, and diminished interpretability.

2.2 Conditional Asset Pricing Models

An alternative path was to retain the structure of the CAPM while allowing its parameters to evolve over time. Conditional asset pricing models argue that the beta–return relationship is not static but varies with macroeconomic states or the informational environment. **Lettau and Ludvigson (2001)** formalized this idea using the consumption–wealth ratio (CAY) as a conditioning variable, showing that beta is priced more strongly during certain economic regimes.

Cochrane (2001) advanced this approach by reframing asset pricing in terms of stochastic discount factors[3] (SDFs), which incorporate state variables directly into the pricing function. Later models explored the role of intermediaries and long-run risk: **Adrian, Etula, and Muir (2014)** argue that the balance sheet capacity of financial institutions governs risk premia over time, while **Bansal and Yaron (2004)** emphasize persistent shocks to economic growth and volatility in their long-run risk model.

The unifying insight across these frameworks is that the pricing of systematic risk is not constant across time. Rather, beta's explanatory power may be masked in average return regressions precisely because its relevance fluctuates with prevailing conditions. These models make clear that beta may be priced—but only in specific informational states. One such state, characterized by the arrival of public macroeconomic information, is the subject of the next section.

2.3 Asset Prices Around Macroeconomic Announcements

An increasingly influential literature has examined how financial markets respond to scheduled economic news. **Andersen et al. (2003)** and **Balduzzi et al. (2001)** demonstrate that macroeconomic announcements cause abrupt shifts in asset prices and volatility, particularly in bond markets. These releases act as focal points for market participants to update beliefs, often triggering large revaluations of risk premia. **Lucca and Moench (2015)** extend this insight to equities, documenting that a disproportionate share of S&P 500 returns occurs in the hours preceding Federal Reserve policy announcements—a pattern known as the "pre-FOMC drift." Their findings highlight how investor attention and anticipation around scheduled events can concentrate return generation into brief, high-information windows.

Despite these results, standard asset pricing tests continue to treat all trading days equally, averaging over both high- and low-information periods. This practice risks obscuring systematic risk pricing by failing to account for the timing of information flow.

These studies suggest that scheduled announcements create temporary states of heightened uncertainty resolution, elevated volatility, and concentrated investor focus. **Savor and Wilson (2014)** offer a targeted intervention to integrate these informational conditions into cross-sectional asset pricing frameworks.

[3] A stochastic discount factor (SDF) is a state-dependent variable that links payoffs to present values by discounting future cash flows according to prevailing economic conditions and investors' marginal utility.

3 Methodology

This section outlines the empirical strategy used to test whether market beta is priced conditionally on the arrival of macroeconomic information. We follow the framework of **Savor and Wilson (2014)**, distinguishing between announcement days (a-days) and non-announcement days (n-days), and extend it to explore time variation, announcement-type effects, and pre-announcement dynamics. The methodology includes portfolio construction, cross-sectional and pooled regressions, and a difference-in-differences design to assess shifts in beta pricing across regimes.

3.1 Hypotheses Development

Savor and Wilson (2014) central claim is that beta—the CAPM's core measure of systematic risk—is not priced uniformly across time, but only on days when significant macroeconomic information is released. These "announcement days" (a-days) are treated as distinct from the rest of the trading calendar, which they label as "non-announcement days" (n-days).

The central hypothesis put forward by the authors is that the relation between market beta and expected stock returns is state-dependent: beta is positively priced on trading days with scheduled macroeconomic announcements, whereas on non-announcement days beta bears no economically or statistically significant relationship to expected returns.

Having replicated the core beta–return relationship on macroeconomic announcement days, we also turn to possible underlying mechanisms that could explain this conditional pricing pattern. While the CAPM fails to find support in unconditional settings, the emergence of a significant beta premium on announcement days (a-days) raises important questions: What types of announcements drive this effect? How persistent is it over time? And when exactly is systematic risk rewarded?

Building on this, we introduce three new hypotheses to probe the robustness and mechanisms of conditional beta pricing:

- The beta–return relationship on macroeconomic announcement days is constant over time.
- The beta–return relationship shows a difference across different types of announcements.
- There is no beta–return relationship on the day before macroeconomic announcements.

These hypotheses allow us to systematically evaluate the temporal dynamics, informational heterogeneity, and anticipatory effects surrounding beta pricing. Each subsection below is dedicated to testing one of these hypotheses through targeted empirical extensions of the original framework.

3.2 Regression Framework

Our empirical pipeline follows the structure introduced by **Savor and Wilson (2014)**, with all steps developed independently to maintain full control over data handling and model estimation. The methodology rests on conditioning the CAPM framework on high-information macroeconomic announcement days, contrasting these (a-days) with information-poor days (n-days).

To estimate each stock's beta, we run rolling-window regressions of daily excess returns on market excess returns. Betas are computed using a trailing 252-trading-day window, ending at the close of each calendar month. These month-end beta estimates are then held fixed and used to sort stocks into decile portfolios for the following month.

At the end of each month, all eligible stocks are sorted into ten portfolios based on their lagged beta estimates. We construct two sets of portfolios: one using equal weighting, where each stock contributes equally to the portfolio return, and another using value weighting, where stocks are weighted in proportion to their market capitalization. Market capitalization is calculated as the product of price and shares outstanding, measured at the end of the prior month.

Portfolios are rebalanced monthly to reflect updated beta estimates and constituent changes. For each portfolio, we compute daily excess returns and split them based on whether the observation date coincides with a scheduled macroeconomic announcement. This produces separate return series for a-days and n-days for each of the ten beta-sorted portfolios under both weighting schemes.

To evaluate how the pricing of beta varies across these two information regimes, we estimate two core sets of regression. First, we estimate **Fama–MacBeth (1973)** regressions cross-sectionally by regressing portfolio-level excess returns on betas, separately for a-days and n-days. This yields time series of slope coefficients (risk premia), from which we compute average coefficients and associated t-statistics across the sample period. More specifically for each day t, we run a cross-sectional regression of portfolio excess returns on their estimated betas:

$$\boldsymbol{R_{j,t} - R_{f,t} = \gamma_{0,t} + \gamma_{1,t}\widehat{\beta}_j + \varepsilon_{j,t}}$$

Where:

- $\boldsymbol{R_{j,t} - R_{f,t}}$ is the excess return of portfolio j on day t,
- $\boldsymbol{\widehat{\beta}_j}$ is the market beta of portfolio j estimated at the prior month-end,
- $\boldsymbol{\gamma_{1,t}}$ is the estimated price of beta risk on day t.

The final estimate of the risk premium is the average of $\boldsymbol{\gamma_{1,t}}$ over time, and standard errors are computed from the time-series variation of the coefficients.

Second, we estimate pooled time-series regressions that include an a-day indicator variable and an interaction term between the a-day dummy and beta. This allows us to test whether the beta-return relationship differs systematically across announcement and non-announcement days. To test for a difference in the beta-return relationship across information states, we estimate the following pooled regression:

$$\boldsymbol{R_{j,t} - R_{f,t} = \gamma_0 + \gamma_1\widehat{\beta}_j + \gamma_2 A_t + \gamma_3(\widehat{\beta}_j \times A_t) + \varepsilon_{j,t}}$$

Where:

- $\boldsymbol{R_{j,t} - R_{f,t}}$ is the excess return of portfolio j on day t,
- $\boldsymbol{\widehat{\beta}_j}$ is the market beta of portfolio j estimated at the prior month-end,
- $\boldsymbol{A_t}$ is a dummy variable equal to 1 if day t is a macroeconomic announcement day and 0 otherwise,
- $\boldsymbol{\gamma_3}$ captures the differential beta pricing on a-days relative to n-days.

Standard errors are clustered by day to account for common shocks and cross-sectional dependence. A significantly positive $\boldsymbol{\gamma_3}$ supports the hypothesis that market beta is more strongly priced on announcement days, consistent with a state-dependent CAPM.

Next, to examine whether the conditional beta premium varies systematically across macro-financial regimes, we implement a difference-in-differences (DiD) regression framework. This methodology allows us to isolate structural shifts in the beta–return relationship on days when market-moving macroeconomic information is released, which in our case is the response to the 2008 Global Financial Crisis (GFC). In our setting:

- The treatment group consists of returns on scheduled macroeconomic announcement days (a-days)
- The control group consists of returns on non-announcement days (n-days), during which no major scheduled information is released to markets.

We distinguish two regimes based on timing:

- Pre-treatment period: before 2008 (pre-GFC),
- Post-treatment period: after 2008 (post-GFC).

The treatment condition occurs when an observation falls on an announcement day in the post-2008 period. This setting allows us to assess whether the market prices beta risk differently when exposed to macroeconomic surprises under the post-crisis monetary regime.

In the absence of market-moving announcements (i.e., on non-announcement days), the beta–return relationship is expected to evolve naturally. This "normal evolution" is measured as:

$$\bar{y}_{control,after} - \bar{y}_{control,before}$$

The pre-treatment difference between treatment and control groups is:

$$\bar{y}_{control,before} - \bar{y}_{treatment,before}$$

Assuming parallel trends in the absence of treatment, we expect:

$$\bar{y}_{control,after} - \bar{y}_{control,before} = \bar{y}_{treatment,after} - \bar{y}_{treatment,before}$$

The treatment effect—interpreted as the change in the pricing of beta on announcement days after the crisis—is then:

$$\left(\bar{y}_{control,after} - \bar{y}_{control,before}\right) - (\bar{y}_{treatment,after} - \bar{y}_{treatment,before})$$

Formally, the return-generating process is:

$$\mu_{ij} = \mu + \alpha_i + \beta_j + \alpha\beta_{ij}$$

so, the DiD expression becomes:

$$(\mu_{control,after} - \mu_{control,before}) - (\mu_{treatment,after} - \mu_{treatment,before})$$

$$= \alpha\beta_{treatment,after}$$

which corresponds to the three-way interaction term in our DiD regression:

$$Beta_i \times Aday_t \times Post2008_t$$

3.3 Data Construction

To ensure comparability with **Savor and Wilson (2014)**, we replicate their data construction as closely as possible using the same data sources.

Daily stock returns and market index data are drawn from the Center for Research in Security Prices (CRSP) via the WRDS platform. We use CRSP's daily stock files and market indices (S&P 500, NYSE/AMEX/NASDAQ) for the 1963–2024 period (WRDS–CRSP). We also utilize the CRSP–Compustat Merged Database via WRDS to link firm-level accounting data to CRSP securities. Compustat fundamentals (e.g., total assets, book equity, market equity, and earnings) are matched to CRSP for the 1963–2024 period. From this merged data, we compute firm-level book-to-market ratios required to model the regressions in our paper. The risk-free rate and Fama-French factors are sourced from Kenneth French's Data Library.

Scheduled macroeconomic announcement dates are classified according to three main categories: inflation (CPI and PPI), employment situation, and monetary policy (FOMC interest rate decisions). Historical CPI and PPI release dates are retrieved from the Bureau of Labor Statistics archived release calendars (BLS Archive). Employment announcements use the same BLS archive, aligned with release dates for the Employment Situation report. FOMC decision days are sourced from the Federal Reserve Board's H.15 release schedule (Federal Reserve H.15). The macroeconomic announcement dataset spans the 1963–2024 window for inflation and employment releases, while FOMC announcements begin in 1978. We flag the day of public information release (not the FOMC meeting date itself), as those events did not always occur simultaneously.

Each macroeconomic announcement was manually matched to the appropriate trading day in the return dataset, ensuring that a-day and n-day labels reflect only information available at the time. This prevents any look-ahead bias in the construction of event-based return series.

Additionally, we extract daily value-weighted and equal-weighted returns for the 25 size- and book-to-market-sorted portfolios, as well as the 10 industry portfolios, from Kenneth French's database. These portfolios are used in both the core analysis and as robustness checks for the persistence of the beta–return relationship across asset groupings.

All return and factor data are daily. Macroeconomic announcement dates are mapped to the same trading-day frequency. Our key variables include daily excess returns, ex-ante firm- or portfolio-level betas, and dummy indicators for announcement days.

All return-based regressions and portfolio sorts are based on excess returns over the daily risk-free rate. Fama-MacBeth and pooled regressions are conducted using announcement-conditional subsetting, as detailed in **Section 3.2**. Descriptive statistics for the return data, announcement windows, and regression variables are reported in **Section 4.1**.

4 Empirical Analysis

This section presents the results of our empirical work. We begin by replicating the core finding of Savor and Wilson (2014) from **Sections 4.1** through **4.3**. From there, we examine the broader implications of conditional beta pricing, probing its robustness and underlying mechanisms. Specifically, we test three additional hypotheses introduced in **Section 3.1**: whether the beta–return relationship is stable over time, whether it holds uniformly across different types of announcements, and whether it emerges prior to the announcement itself. These tests, organized in **Sections 4.4** to **4.6**, go beyond replication to assess the informational context and timing in which systematic risk is priced.

4.1 Conditional Beta Pricing on Announcement Days

Table 1 presents the results of our core replication: cross-sectional Fama-MacBeth regressions and pooled regressions with announcement-day interaction terms. This is the central empirical test in **Savor and Wilson (2014)**, proving their hypothesis mentioned in **Section 3.1** that beta is positively priced on trading days with scheduled macroeconomic announcements, whereas on non-announcement days beta bears no economically or statistically significant relationship to expected returns.

Building on the methodology described in **Section 3.2**, we apply this structure to our beta-sorted decile portfolios, computing returns separately for announcement days (a-days) and non-announcement days (n-days). The Fama-MacBeth regressions estimate the average cross-sectional beta–return slope over time, while the pooled regressions formally test the conditionality by interacting beta with the a-day dummy variable. Results are presented for both value-weighted (VW) and equal-weighted (EW) portfolios.

4.1.1 Panel A: Value-Weighted Portfolios

The results for value-weighted portfolios show a strong positive beta-return slope on a-days. The average Fama-MacBeth slope coefficient is *0.000548*, with a t-statistic of *2.132*, indicating that higher-beta portfolios earn significantly higher returns on the day of macroeconomic announcements.

On non-announcement days, the relationship disappears. The estimated slope is *0.000015* with a t-statistic of *0.1713*, which is statistically indistinguishable from zero, suggesting that on n-days, higher-beta stocks do not systematically outperform lower-beta stocks.

The pooled regression confirms this conditional dynamic. The interaction term between beta and the a-day dummy variable is positive and significant (β = *0.00053*, t = *1.96*), while the main effect of beta is flat and insignificant. These findings support the hypothesis that beta is priced mostly on macroeconomic announcement days, in contrast to the unconditional CAPM prediction of constant beta pricing.

4.1.2 Panel B: Equal-Weighted Portfolios

The results are even more pronounced for equal-weighted portfolios. On a-days, the estimated Fama-MacBeth slope is *0.00064* with a t-statistic of *2.417*, larger than the VW equivalent. This suggests that the conditional beta premium is not confined to large-cap stocks and is instead broadly present across the cross-section.

On n-days, as before, the slope is statistically insignificant (*-0.00015*, t = *-1.586*). The pooled regression reinforces the story: the beta × a-day interaction is strong and significant again (*0.00079,* t = *2.80)*, while the base beta term remains flat. The stronger a-day slope in the EW portfolios may come from the fact that smaller stocks are on average more sensitive to information shocks.

4.1.3 Panel C: Fama-French and Industry Portfolios

Panel C presents results from an expanded set of test assets, including the 25 Fama-French portfolios sorted by size and book-to-market, along with the ten industry portfolios. This robustness check follows **Savor and Wilson (2014)**'s original approach, using grouped portfolios in addition to the beta-sorted portfolios. Despite the coarser granularity, the key pattern persists: the a-day beta-return slope is positive and statistically significant (*0.0000321*, t = *2.32*), while the slope on non-announcement days remains effectively zero *(–0.0000035*, t = *–0.73*).

The pooled regression confirms this result, with a significant interaction term of *3.57E-05* (t = *2.43*). These findings suggest that the conditional pricing of beta is not confined to custom-constructed decile portfolios but also generalizes to widely used groupings in asset pricing research. The consistency across these different portfolio structures reinforces the robustness and external validity of the core hypothesis.

4.1.4 Interpretation

Taken together, these results replicate — and reinforce — the findings of **Savor and Wilson (2014)**. They support the idea that beta is priced conditionally, not unconditionally. That is, systematic risk earns a premium mostly on days when investors are actively recalibrating expectations based on macroeconomic information.

This result is critical for modern asset pricing. It suggests that tests of risk premia which average returns across all days may obscure where and when risk is actually compensated. The fact that this pattern holds in both VW and EW portfolios indicates that the result is not driven by market cap concentration or index-level effects.

By replicating this core finding using updated data and computational methods, we confirm that the conditional pricing of beta remains a robust and statistically significant feature of the cross-section.

4.2 Visualizing the Conditional Beta–Return Slope

To complement the regression-based evidence presented in **Table 1**, **Figure 1** (replicated and exended from **Savor & Wilson, 2014**) provides a visual representation of the beta–return relationship using average daily returns for beta-sorted decile portfolios. This Security Market Line (SML) plot shows the linear fit between portfolio-level ex-ante betas and realized average excess returns, separately for announcement days and non-announcement days.

The contrast is immediate. On announcement days, the SML displays a clear, upward-sloping relationship in both equal-weighted and value-weighted portfolios: higher-beta portfolios systematically earn higher average returns. On non-announcement days, however, the slope of the line is flat or even negative (for EW portfolios), visually confirming the regression results from **Section 4.1.1**. In the equal-weighted case, the a-day SML is steeper than in the value-weighted plot, which echoes the stronger slope estimates observed in the Fama-MacBeth regressions.

This figure makes the conditional nature of beta pricing intuitive. These visual differences highlight that the pricing of systematic risk is not persistent across time, but rather emerges during discrete, high-information windows. This conditional pricing dynamic has important implications for both theoretical modelling and empirical testing of asset pricing frameworks.

4.3 Conditional Beta Pricing for Individual Stocks

Table 2 extends our analysis from portfolio-level to firm-level regressions, allowing us to examine the conditional pricing of beta with greater granularity and control. While the general pattern echoes the results in **Table 1**—systematic risk is rewarded on macroeconomic announcement days but not otherwise—this specification provides two important contributions. First, it allows us to verify whether the beta premium persists at the individual stock level. Second, by including firm-level controls (size, book-to-market, and past one-year return), we can test whether conditional beta pricing is robust to other well-known return predictors.

Across all panels, the results confirm (as in **Savor & Wilson, 2014**) a sharp divergence in the pricing of beta between announcement days (a-days) and non-announcement days (n-days). In Panel A, the Fama-MacBeth regressions show that beta earns a statistically significant premium on a-days (0.000779, $t = 2.65$), while it is insignificant and slightly negative on n-days. The pooled regressions in Panel B reinforce this point: the negative unconditional beta slope (–0.000253, $t = -2.33$) is offset by a positive interaction term between beta and the announcement-day dummy (0.000631, $t = 1.88$), which is significant at the 10% level ($\alpha = 0.10$). This yields a positive effective beta premium on a-days only.

Panels C and D add firm-level controls—size, book-to-market, and past one-year returns—to account for potential confounding effects. These controls enter with strong statistical significance, as expected: size is negatively associated with returns, book-to-market loads positively, and past one-year returns enters with a large negative sign. Yet, the key result remains intact. The beta coefficient on a-days increases to 0.001129 ($t = 3.74$) in the Fama-MacBeth setting (Panel C), and the beta × announcement interaction remains positive and marginally significant at 0.000637 ($t = 1.90$) in the pooled regression (Panel D), again at the 10% level.

Economically, this implies that systematic risk earns a premium specifically when public macroeconomic information is released, even after accounting for persistent drivers of cross-sectional returns. The fact that beta becomes more pronounced once we control for firm characteristics suggests that some of the noise around beta's signal may be due to omitted variables—yet the conditional beta premium remains distinct from effects captured by size, value, or momentum.

These findings strengthen the broader message of the conditional CAPM: risk pricing is episodic and environment-dependent. While firm characteristics help explain return differences across the full sample, only beta becomes relevant when macro uncertainty is resolved—offering a cleaner test of the CAPM's core prediction under high-information conditions.

4.4 Time Variation in Conditional Beta Pricing

A central question for any conditional asset pricing model is whether the beta–return relationship remains stable over time or varies across macro-financial regimes. In particular, the **2008 Global Financial Crisis (GFC)** marked a widely recognized structural break in both monetary policy frameworks and investor behavior, with lasting implications for how markets respond to risk and information (**Borio, 2014**). This shift warrants closer scrutiny of the persistence of conditional beta pricing across the crisis divide. To test this, we implement a difference-in-differences (DiD) regression, interacting market beta with both announcement-day and post-2008 dummy variables, along with their three-way interaction. This specification allows us to assess whether the conditional beta premium—measured as the strength of the beta–return relationship on announcement days—changes meaningfully after the GFC.

Table 3 presents these results for value-weighted (VW) portfolios, equal-weighted (EW) portfolios, and individual stocks. The key coefficient of interest is the three-way interaction term (Beta × Announcement × Post2008), which captures any differential change in conditional beta pricing after 2008.

We find that the three-way interaction term is small and statistically insignificant across all specifications, including individual stocks. This suggests that while the conditional beta premium may have weakened slightly after 2008, the change is not statistically distinguishable from zero.

To complement this analysis, we also compute rolling 5-year Fama-MacBeth regressions using a-day returns. **Figures 3** and **4** plot the evolution of the conditional beta–return slope for VW and EW. These visualizations provide a more granular picture of how the beta premium behaves over time.

The rolling estimates reveal a pattern of episodic beta pricing. The slope of the beta–return relationship rises sharply in moments of elevated macro uncertainty. These periods suggest that systematic risk is more clearly priced when uncertainty is high and investors are especially sensitive to macro signals. This observation is consistent with the arguments advanced by **Pastor and Veronesi (2013)**, who link heightened macro uncertainty to elevated risk premia.

The figures show that from the early 1970s through the mid-1980s, announcement-day β-slopes bounce between slightly positive (as Fed tightening in the late ’70s rewarded high-β stocks on news days) and slightly negative (peaking negative around the October 1987 crash, when high-β deciles underperformed on extreme volatility). During the late-1990s dot-com boom, announcement-day slopes surge to their highest levels (around 0.003–0.004), reflecting sky-high tech returns on earnings and IPO news; after the bubble bursts in 2000–2001, slopes plunge into negative territory as high-β names fare poorly on announcement days. In the run-up to and during the 2007–2009 Financial Crisis, slopes fall even deeper (below –0.001 in late 2008) as bank- and policy-driven news devastates high-β portfolios; then, once the Fed’s 2009 rescues kick in, they rebound sharply into positive territory (around 0.002). Throughout the calmer 2010s, announcement-day slopes stay modestly positive (0–0.002), dipping near zero during events like the 2015–16 Fed rate debates. Finally, COVID-19 causes a brief drop to near zero or slightly negative in early 2020—high-β stocks sold off hard on pandemic announcements—but by mid-2020, stimulus and vaccine news drive slopes back into mildly positive territory (around 0.001–0.0015). Across each cycle, non-announcement-day slopes remain close to zero, underscoring that the β–return relationship is strongest and most significant on days when major announcements hit the market. Taken together, our results suggest that conditional beta pricing is not constant through time. While we find no conclusive statistical evidence of a structural break post-2008 in the DiD framework, the rolling regressions clearly demonstrate the time-varying nature of the beta–return relationship. These findings underscore the importance of evaluating asset pricing models within a state-contingent framework, where the effectiveness of classical risk factors depends critically on the macro-financial environment.

4.5 Heterogeneity Across Announcement Types

While previous sections evaluate beta pricing on all macroeconomic announcement days collectively, this may obscure heterogeneity across the nature and informativeness of different announcements. To investigate this, we disaggregate announcement days by category, focusing on three macroeconomic release types: inflation (CPI and PPI), employment reports, and Federal Open Market Committee (FOMC) policy decisions. These categories reflect the dominant announcement types used in both the original study and our replication data.

Each announcement type was manually tagged using external macroeconomic calendars and matched to the trading-day frequency of the return data. We replicate the same Fama-MacBeth and pooled regression methodology described in **Section 3.2** but apply it separately to each announcement category. In doing so, we test whether beta is priced equally across different forms of scheduled information.

Figure 5 plots average Fama-MacBeth beta–return slopes by announcement type for both value-weighted (VW) and equal-weighted (EW) portfolios. The results show a clear ordering: FOMC days are associated with markedly higher beta slopes, reaching 0.00212 for VW portfolios and 0.00189 for EW portfolios. In contrast, inflation and employment announcements yield significantly smaller slopes — all below 0.0005 — and are not statistically significant. **Figure 6** confirms this by comparing the corresponding t-statistics: only FOMC events exceed the standard 1.96 threshold in both weighting schemes.

Table 4 complements these visuals by presenting regression output side-by-side for the full-sample a-days and the subset of FOMC days. The contrast is substantial. For instance, the beta coefficient for VW portfolios rises from 0.00055 ($t = 2.13$) in the pooled sample (**Table 1**) to 0.00212 ($t = 3.46$) on FOMC days. Similar amplification appears in the pooled interaction term, where the beta × FOMC dummy coefficient reaches 0.00210 ($t = 3.39$). These differences suggest that monetary policy announcements are disproportionately responsible for the conditional beta pricing observed in earlier sections.

A possible explanation lies in the nature of the information conveyed. FOMC decisions are inherently forward-looking: they reflect not only current economic conditions but also policymakers' expectations and strategic positioning in response to uncertain future developments. The timing and direction of rate changes, as well as any surprises in tone or forward guidance, can significantly influence discount rates and volatility expectations — both of which affect how systematic risk is priced (**Cieslak, Morse, & Vissing-Jorgensen, 2019**). In contrast, inflation and employment figures tend to reflect economic conditions that have already materialized. Their content is more likely to be forecastable and potentially already incorporated into prices, especially in the presence of consensus expectations. This interpretation aligns with the Efficient Market Hypothesis **(Fama, 1970)**, which posits that markets respond only to unexpected information, expected information being already priced in.

In addition, prior research **(Lucca and Moench, 2015)** suggests that FOMC announcements receive heightened investor attention, which may further contribute to their disproportionate impact on asset pricing. This suggests that both the informational novelty and salience of FOMC events may be required to trigger systematic repricing of risk.

From a modeling perspective, these findings imply that the conditional pricing of beta is not driven solely by the presence of scheduled announcements, but also by the nature and novelty of the information released. They highlight the importance of distinguishing between announcements that update beliefs about future states of the world (such as interest rate policy) versus those that report on past outcomes. For empirical research, this suggests that conditioning on the content of announcements — not just their timing — may be essential to recovering risk-return relationships that are obscured in unconditional frameworks.

In sum, this announcement-type decomposition strengthens the conditional CAPM narrative and clarifies one of its mechanisms. While macroeconomic news days are clearly moments of elevated informational intensity, only certain types of announcements appear to systematically move risk premia.

4.6 Testing for Pre-announcement Beta Pricing

To examine whether the beta–return relationship emerges in anticipation of macroeconomic announcements, we extend our analysis to the trading day immediately preceding scheduled releases (D–1). This test is motivated by **Lucca and Moench (2015)**, who document that a large portion of equity market gains surrounding FOMC announcements occur in the 24-hour window leading up to the announcement, with virtually no reaction afterward. If market participants begin repricing risk ahead of macroeconomic events, one might expect to observe conditional beta pricing on the day before the announcement.

We begin by applying our Fama-MacBeth and pooled regression framework to all D–1 announcement days collectively. **Table 5** shows no significant relationship between beta and returns: estimated slopes are near zero and t-statistics fall well below standard significance levels. This suggests that systematic risk is not broadly priced in advance of macroeconomic news, at least not in a way captured by CAPM-style beta sensitivity.

Given the strong beta pricing documented on FOMC days in **Section 4.5**, we then narrow our focus to FOMC D–1 specifically. **Figure 7** presents the results. While the beta–return slope on FOMC days (D0) is large and statistically significant (VW: 0.00212, t = 3.46), the slope on the day before is notably smaller (0.00040) and not significant (t = 0.67). Similar results are observed for equal-weighted portfolios and in pooled regressions, where the beta × announcement interaction terms remain far from significance.

These findings do not contradict those of **Lucca and Moench (2015)** but rather reflect a different dimension of analysis. Their study focuses on aggregate market-level returns within a narrow time window — specifically, the 24 hours leading up to the scheduled FOMC release. In contrast, our approach tests whether cross-sectional variation in beta predicts returns on the full trading day before announcements. The absence of significance in our setting suggests that, while average market drift may occur, conditional beta pricing does not appear to take hold until the day of the announcement itself.

In sum, we find no evidence that beta is priced on the day preceding macroeconomic announcements — neither in aggregate nor within the subset of monetary policy events. These results further support the idea that beta pricing is concentrated around the actual arrival of new, high-impact information, rather than its anticipation.

5 Conclusion

This thesis explores whether beta explains returns, focusing not on new variables, but on the timing of information flow. While countless studies have rejected the CAPM based on its inability to explain average returns, few have asked whether this failure is itself conditional. Our study addresses that gap by showing that the risk–return trade-off reemerges selectively, and that beta is priced mostly in moments of concentrated investor attention—namely, macroeconomic announcement days.

Across all empirical tests, the pattern is consistent. On the majority of trading days, market beta carries no explanatory power. But on days when new public information is released, beta earns a statistically and economically significant premium. This effect holds across value- and equal-weighted portfolios, industry groupings, and individual stock returns. The pricing of systematic risk, in short, is not constant—it is contextual.

What begins as a replication of **Savor and Wilson (2014)** becomes, through our extensions, a broader statement about how risk is priced. We show that the conditional beta premium is not stable through time but instead responds to the macro-financial environment. Rolling regressions reveal that beta pricing intensifies in periods of heightened uncertainty—such as the Global Financial Crisis or the COVID-19 shock—and fades in more tranquil conditions. This time variation challenges the idea of a fixed risk–return relationship and points toward a more episodic model of how investors demand compensation for bearing risk.

Moreover, not all announcements carry the same weight. By disaggregating event types, we find that monetary policy announcements are disproportionately responsible for the conditional beta premium. Inflation and employment data—more backward-looking and often forecastable—do not trigger the same repricing of systematic risk. This asymmetry supports the idea that what matters is not merely the presence of news, but its surprise element, forward guidance, and perceived market relevance.

Finally, we examine the day before announcements to test whether beta is priced in anticipation. The answer is no. While markets may drift upward ahead of scheduled events, we find no evidence that this drift reflects a risk-based return pattern. Systematic risk is rewarded not before, but when uncertainty is resolved.

These results have broader implications for how we test asset pricing models. Traditional cross-sectional tests flatten the trading calendar, treating low-information days and high-stakes macro events as equivalent. In doing so, they may systematically miss the moments when theory actually works. Our findings suggest that conditioning on information flow—rather than assuming stationarity—may restore explanatory power to models long dismissed as broken.

The CAPM, when judged appropriately, continues to offer insight. Not always. Not on average. But when markets are paying attention, and when risk matters most, the relationship between beta and returns becomes visible again. In that sense, the contribution of this thesis is not just to beta—it is to the idea that asset pricing must be sensitive to context. Time, attention, and uncertainty are not noise to be averaged over; they are the very conditions under which risk becomes meaningful. And in those moments, beta still speaks.

5.1 Limitations and Future Research

While our replication confirms the conditional beta–return relationship identified by **Savor and Wilson (2014)**, several limitations should be acknowledged. First, although our dataset spans over six decades and incorporates a large number of macroeconomic announcements, our analysis focuses exclusively on U.S. markets. This leaves open the question of whether similar conditional pricing dynamics hold in other international markets, where announcement structures and investor attention may differ. Future research could extend this framework to global equities where macro news may carry different implications for risk premia.

Second, our methodology assumes a binary classification of information flow—announcement days versus non-announcement days. While this aligns with the original paper, it likely oversimplifies how information arrives and is absorbed by markets. Incorporating measures such as forecast errors, rate surprises, or volatility shifts could offer a more precise lens on how and when expectations are revised.

Third, although our tests control for major characteristics like size, book-to-market, and past year returns, they remain grounded in a linear CAPM structure. Other conditional pricing models—such as those emphasizing intermediary constraints **(Adrian et al., 2014)** or investor inattention—may capture different facets of risk pricing under uncertainty. Moreover, while we find no evidence of pre-announcement beta pricing, this does not rule out anticipatory dynamics at higher frequency intervals. Exploring intraday responses, particularly around announcement timestamps, could help refine the timing dimension of conditional risk premia.

Lastly, the broader implication of our findings is that the risk–return trade-off may only emerge under heightened uncertainty or concentrated investor attention. This perspective is echoed in **Savor and Wilson (2016)**, who show that option prices incorporate significant risk premia in the days leading up to political elections—another moment of sharp uncertainty resolution. Together, these studies suggest that models of asset pricing must account not only for exposure to systematic risk, but also for when and how that risk becomes salient.

In sum, while our replication supports the robustness of conditional beta pricing on macroeconomic announcement days, further research is needed to explore its generality across contexts, improve the modeling of informational dynamics, and better understand the mechanisms that govern time-varying risk compensation.

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Appendix

Tables

Figures

	Fama-MacBeth Regression				Pooled Regression				
Type of day	Intercept	Beta	Avg, R^2		Intercept	Beta	Ann.	Ann. * Beta	Avg, R^2
Panel A: Ten beta-sorted portfolios (value-weighted)									
a-day	0,00061	0,000548	0,54605		0,00055	1,54E-05	6,1E-05	0,000533	0,00027
	[5,372]	[2,132]			[13,45]	[0,17]	[0,5]	[1,96]	
n-day	0,00055	0,000015	0,52504						
	[13,455]	[0,1713]							
a-day - n-day	6,1E-05	0,000533	0,02101						
	[-8,082]	[1,9607]							
Panel B: Ten beta-sorted portfolios (equal-weighted)									
a-day	0,00088	0,0006404	0,65712		0,00058	-0,000146	0,0003	0,000786	0,00079
	[9,860]	[2,417]			[17,55]	[-1,59]	[3,11]	[2,8]	
n-day	0,00058	-0,000146	0,63471						
	[17,552]	[-1,586]							
a-day - n-day	0,0003	0,0007865	0,02241						
	[-7,692]	[4,004]							
Panel C: Ten beta-sorted (value-weighted), 25 Fama and French, and ten industry portfolios									
a-day	0,00096	3,21E-05	2,66E-03		0,00026	-3,53E-06	0,0007	3,57E-05	0,00038
	[3,956]	[2,3222]			[3,17]	[-0,73]	[2,72]	[2,43]	
n-day	0,00026	-3,53E-06	2,48E-03						
	[3,174]	[-0,734]							
a-day - n-day	0,0007	3,57E-05	1,73E-04						
	[0,782]	[3,0558]							

Table 1: This table reports estimates from Fama-MacBeth regressions (left panel) and pooled regressions (right panel) of daily excess returns on market betas for various test portfolios. Separate regressions are run for scheduled macroeconomic announcement days (a-days) and non-announcement days (n-days), and the difference in coefficients is reported in the last row of each panel. The pooled regression includes an a-day dummy and its interaction with beta (Ann. × Beta). Panels A and B show results for ten beta-sorted portfolios (value-weighted and equal-weighted, respectively), while Panel C includes the combined sample of ten beta portfolios, 25 Fama and French portfolios, and ten industry portfolios. The key variable of interest is the beta coefficient and its difference between a-days and n-days. t-statistics are reported in brackets, calculated using the time-series standard deviation of coefficient estimates for Fama-MacBeth regressions, and clustered standard errors by day for the pooled regressions. The sample covers the period from 1963 to 2024.

Panel A: Beta only (Fama-MacBeth)							
Type of day	Beta						Avg. R²
a-day	0,000779						0,0225
	[2,65]						
n-day	-0,000151						0,0224
	[-1,509]						
Panel B: Beta only (pooled regression)							
Type of day	Beta				Ann.	Ann. * Beta	Avg. R²
	-0,000253				0,000474	0,000631	0,000062
	[-2,325]				[3,172]	[1,882]	
Panel C: Firm characteristics as controls (Fama-MacBeth)							
Type of day	Beta	Size	BM	Past one-year			Avg. R²
a-day	0,001129	-0,000291	0,000038	-0,0007			0,0291
	[3,744]	[-10,32]	[1,628]	[-7,257]			
n-day	-5,70E-05	0-0,000147	0,00008	-0,0007			0,03
	[0,561]	[-14,323]	[8,737]	[-16,958]			
Panel D: Firm characteristics as controls (pooled regression)							
Type of day	Beta	Size	BM	Past one-year	Ann.	Ann. * Beta	Avg. R²
	-0,000019	-0,000189	0,000025	-0,000321	0,000474	0,000637	0,000206
	[0,182]	[-10,164]	[5,65]	[-5,082]	[3,169]	[1,901]	

Table 2: This table reports estimates from Fama-MacBeth and pooled regressions of daily excess returns on market beta for individual stocks. Panels A and B include only beta as an explanatory variable. Panels C and D include controls for firm characteristics: size (log market capitalization), book-to-market ratio (BM), and past one-year return. The announcement-day indicator variable (Ann.) equals one on days with scheduled macroeconomic announcements and zero otherwise. The interaction term (Ann. × Beta) captures the conditional beta premium on announcement days. t-statistics are reported in brackets, calculated using the time-series standard deviation of coefficient estimates for Fama-MacBeth regressions and clustered standard errors by trading day for pooled regressions. The sample covers the period from 1963 to 2024.

DiD regression Pre/Post 2008

	VW Portfolios		*EW Portfolios*		*Individual Stocks*	
	Estimate	T-stat.	Estimate	T-stat.	Estimate	T-stat.
Intercept	0,000592	[12,598]	0,000596	[15,145]	0,0008	[13,292]
Beta	-0,000123	[-1,231]	-0,000184	[-1,846]	-0,0004	[-3,027]
A-day	0,000123	[0,911]	0,000488	[4,513]	0,0007	[4,675]
Post 2008	-0,000156	[-1,632]	-4,67E-05	[-0,638]	-0,0001	[-0,666]
Beta : A-day	5,58E-04	[1,832]	0,0008449	[2,806]	0,0007	[1,949]
Beta : Post 2008	0,000531	[2,402]	0,0001458	[0,623]	0,0003	[1,087]
A-day : Post 2008	-0,000221	[-0,757]	-0,000697	[-3,129]	-0,0014	[-2,661]
Beta : A-day : Post 2008	-0,000118	[-0,180]	-0,00022	[-0,310]	0,0003	[0,367]

Table 3: This table presents results from the difference-in-differences (DiD) regression designed to test whether the beta–return relationship on macroeconomic announcement days changes after the 2008 financial crisis. The specification includes interaction terms between market beta, announcement-day indicators, and a post-2008 dummy. Estimates are reported for value-weighted portfolios, equal-weighted portfolios, and individual stocks. The key coefficient of interest is the three-way interaction term (Beta × A-day × Post 2008), which captures any structural shift in conditional beta pricing across the crisis period. The sample covers the period from 1963 to 2024.

Legend:	FOMC	CPI/PPI	Employment
# of a-days	347	719	710

Fama-MacBeth Regression

Type of day	Intercept (FOMC)	Intercept (CPI/PPI)	Intercept (Employment)	Beta (FOMC)	Beta (CPI/PPI)	Beta (Employment)	Avg, R^2 (FOMC)	Avg, R^2 (CPI/PPI)	Avg, R^2 (Employment)
Panel A: Ten beta-sorted portfolios (value-weighted)									
a-day	0,00063	0,00025	0,00082	0,00212	0,000358	0,000249	0,5361	0,5415	0,5624
	[2,341]	[1,3582]	[-4,8917]	[3,457]	[0,908]	[0,626]			
n-day	0,00056	0,00057	0,00055	2,66E-05	6,01E-05	6,55E-05	0,5271	0,5266	0,5256
	[14,279]	[14,53]	[13,770]	[0,31]	[0,691]	[0,754]			
a-day - n-day	7,36E-05	-0,0003	0,00027	0,0021	0,000297	0,000183	0,009	0,0141	0,0368
	[-11,938]	[-13,172]	[-8,879]	[3,147]	[0,217]	[-0,128]			
Panel B: Ten beta-sorted portfolios (equal-weighted)									
a-day	0,0009	0,00049	0,00121	0,00189	0,000349	0,000495	0,6925	0,6506	0,6540
	[4,923]	[3,2681]	[9,217]	[2,89]	[0,851]	[1,24]			
n-day	0,00061	0,00062	0,00059	-0,0001	-7,97E-05	-8,66E-05	0,6359	0,6365	0,6364
	[19,278]	[19,52]	[18,325]	[-1,195]	[-0,0895]	[-0,971]			
a-day - n-day	0,00029	-0,0001	0,00062	0,002	0,000428	0,000582	0,0566	0,0141	0,0176
	[-14,355]	[-16,252]	[-9,108]	[4,085]	[1,746]	[2,211]			

Pooled Regression

Intercept (FOMC)	Intercept (CPI/PPI)	Intercept (Employment)	Beta (FOMC)	Beta (CPI/PPI)	Beta (Employment)	Ann. (FOMC)	Ann. (CPI/PPI)	Ann. (Employment)	Ann. * Beta (FOMC)	Ann. * Beta (CPI/PPI)	Ann. * Beta (Employment)	Avg, R^2 (FOMC)	Avg, R^2 (CPI/PPI)	Avg, R^2 (Employment)
Panel A: Ten beta-sorted portfolios (value-weighted)														
0,0005562	0,00057	0,00055	2,66E-05	6E-05	6,55E-05	7,36E-05	-0,000326	0,00027	0,0021	0,0003	0,00018	0,0008	3,2E-05	8,3E-05
[14,279]	[14,530]	[12,005]	[0,310]	[0,691]	[1,353]	[0,271]	[-1,756]	[1,287]	[3,386]	[0,738]	[0,814]			
Panel B: Ten beta-sorted portfolios (equal-weighted)														
0,00061	0,00062	0,00059	-0,0001	-8E-05	-8,66E-05	0,000286	-0,000138	0,00062	0,002	0,00043	0,00058	0,00081	4,4E-05	0,00045
[19,278]	[19,52]	[12,585]	[-1,195]	[-0,895]	[-1,739]	[1,550]	[-0,907]	[2,867]	[3,027]	[1,022]	[2,512]			

Table 4: This table applies the Fama–MacBeth and pooled regression frameworks from Table 1, disaggregated by the type of macroeconomic announcement. Announcement days (a-days) are grouped into three categories: FOMC policy decisions, CPI/PPI inflation releases, and employment reports. Panels A and B report results for value-weighted and equal-weighted beta-sorted portfolios, respectively. Each column within the a-day rows corresponds to a distinct announcement type. The a-day vs. n-day rows report the differential between announcement and non-announcement days by type. The pooled regressions include interaction terms between beta and announcement-type dummies to assess whether the pricing of beta differs across types of scheduled macroeconomic news. The sample covers the period from 1963 to 2024.

	Fama-MacBeth Regression			Pooled Regression				
Type of day	Intercept	Beta	Avg, R^2	Intercept	Beta	Ann.	Ann. * Beta	Avg, R^2
Panel A: Ten beta-sorted portfolios (value-weighted)								
a-day-1	0,0006722	-0,000127	0,5208	0,00054	9,87E-05	0,000128	-0,00023	3,15E-05
	[5,915]	[-0,49]		[13,27]	[1,1]	[1,06]	[-0,82]	
n-day	0,0005438	9,87E-05	0,5269					
	[13,272]	[1,097]						
a-day - n-day	0,0001284	-0,000225	0,0039					
	[-7,357]	[-1,587]						
Panel B: Ten beta-sorted portfolios (equal-weighted)								
a-day-1	0,000528	-4,57E-05		6,20E-04	-6,14E-05	-7,15E-05	1,57E-05	1,27E-05
	[6,168]	[-0,1722]		[18,77]	[-0,67]	[-0,75]	[0,06]	
n-day	0,0006243	-6,14E-05						
	[18,77]	[-0,665]						
a-day - n-day	-7,15E-05	-1,57E-05						
	[-12,603]	[0,494]						
Panel C: Ten beta-sorted (value-weighted), 25 Fama and French, and ten industry portfolios								
a-day-1	0,0002847	-4,66E-06	2,50E-03	0,00035	-1,01E-06	-6,18E-05	-5,66E-06	3,32E-06
	[1,196]	[-0,335]		[4,17]	[0,21]	[-0,25]	[-0,39]	
n-day	0,0003465	1,01E-06	2,51E-03					
	[4,173]	[0,209]						
a-day - n-day	-6,18E-05	-5,66E-06	-5,51E-06					
	[-2,977]	[-0,544]						

Table 5: This table replicates the regression specifications from Table 1 but applies them to the trading day immediately preceding scheduled macroeconomic announcements (D–1). We use the same beta-sorted portfolios and estimation methods, reclassifying each a-day as its corresponding D–1. Panels A and B report Fama-MacBeth and pooled regression results for value-weighted and equal-weighted decile portfolios, respectively. Panel C extends the analysis to 25 Fama-French and 10 industry portfolios. t-statistics are reported in brackets. The sample covers the period from 1963 to 2024.

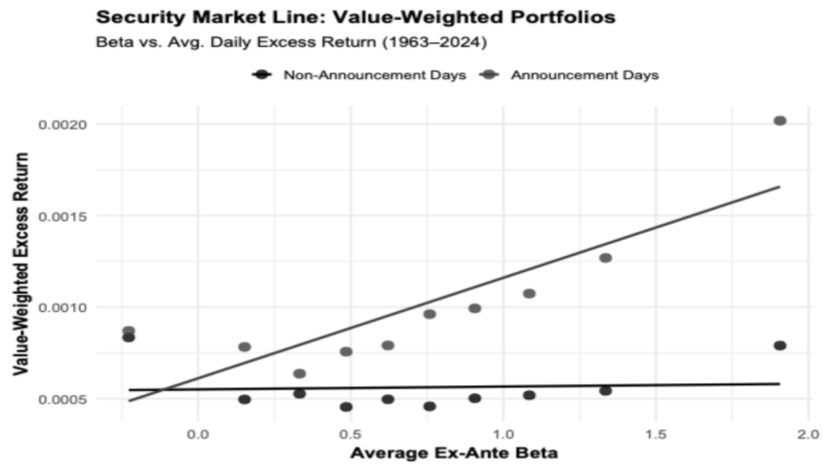

Figure 1: This figure plots average daily excess returns (1963–2024) against average ex-ante betas for ten value-weighted portfolios sorted by beta. The grey line represents the security market line estimated on announcement days, while the black line corresponds to non-announcement days. The figure provides a visual complement to the regression results in Table 1, Panel A.

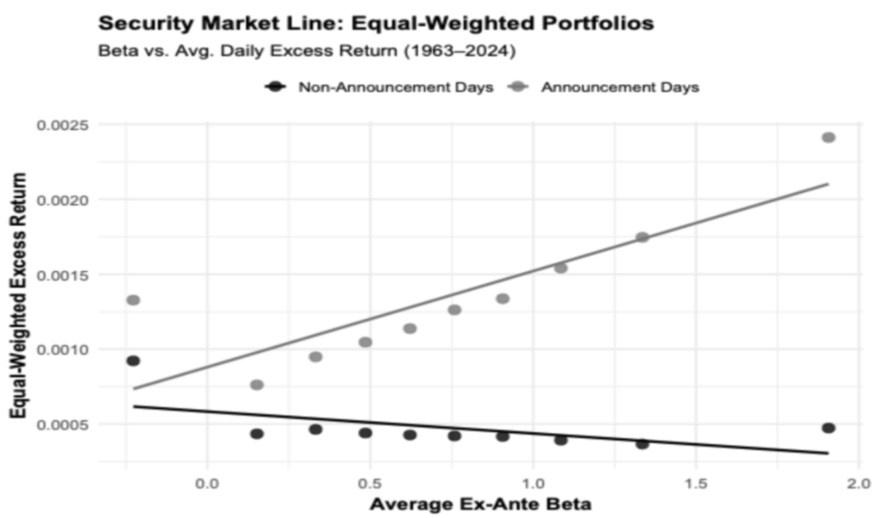

Figure 2: This figure plots average daily excess returns (1963–2024) against average ex-ante betas for ten equal-weighted portfolios sorted by beta. The grey line represents the security market line estimated on announcement days, while the black line corresponds to non-announcement days. The figure provides a visual complement to the regression results in Table 1, Panel B.

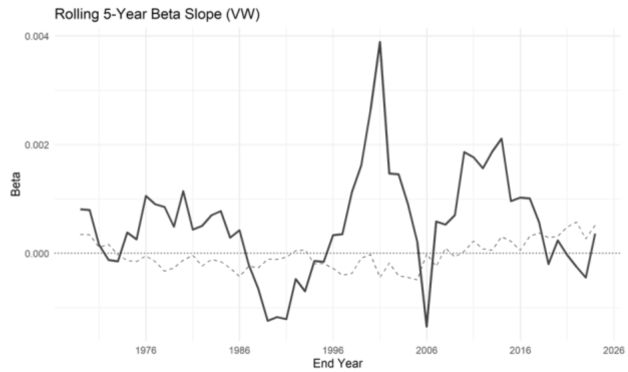

Figure 3: This figure displays 5-year rolling average estimates of the beta–return slope from Fama–MacBeth regressions, based on value-weighted beta-sorted portfolios. Separate estimates are shown for macroeconomic announcement days (a-days, solid line) and non-announcement days (n-days, dashed line). Each point represents the average beta premium computed over a trailing 5-year window. The figure is used to examine how the conditional beta–return relationship evolves over time under an equal-weighting scheme.

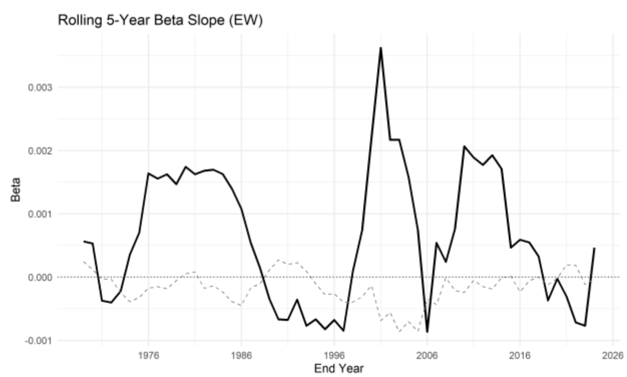

Figure 4: This figure displays 5-year rolling average estimates of the beta–return slope from Fama–MacBeth regressions, based on equal-weighted beta-sorted portfolios. Separate estimates are shown for macroeconomic announcement days (a-days, solid line) and non-announcement days (n-days, dashed line). Each point represents the average beta premium computed over a trailing 5-year window. The figure is used to examine how the conditional beta–return relationship evolves over time under an equal-weighting scheme.

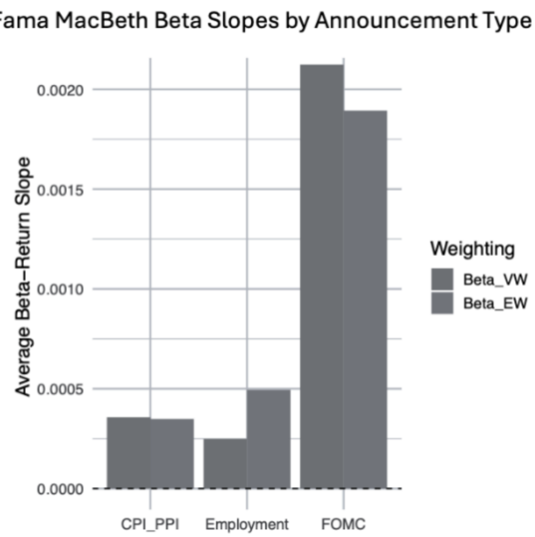

Figure 5: This figure presents average beta–return slope estimates from Fama–MacBeth cross-sectional regressions, disaggregated by macroeconomic announcement type. Separate regressions are run for inflation announcements (CPI/PPI), employment reports, and FOMC policy decisions. For each announcement type, we report beta slopes based on both value-weighted (VW) and equal-weighted (EW) beta-sorted portfolios. The figure is designed to assess whether the strength of the conditional beta–return relationship varies depending on the type of macroeconomic information released.

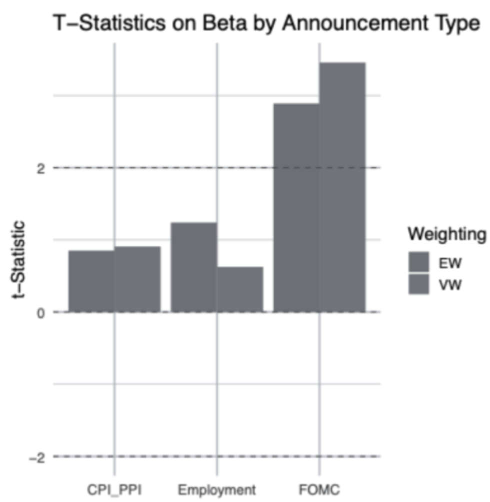

Figure 6: This figure displays the t-statistics corresponding to average beta–return slope estimates from Fama–MacBeth regressions, separated by announcement type: CPI/PPI inflation releases, employment reports, and FOMC policy decisions. Estimates are shown for both value-weighted (VW) and equal-weighted (EW) beta-sorted portfolios. The figure is used to assess the statistical significance of the conditional beta–return relationship across different categories of scheduled macroeconomic news.

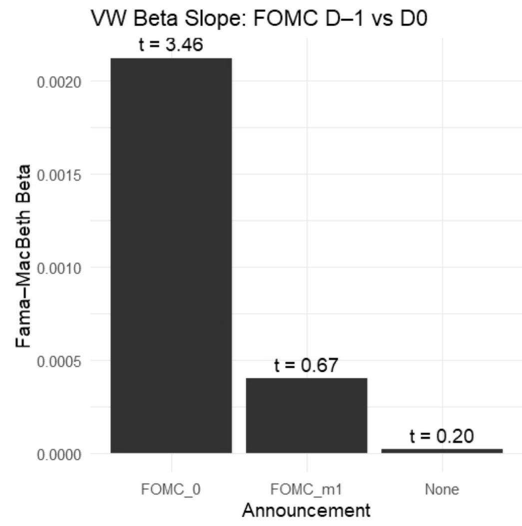

Figure 7: This figure visualizes the estimated beta–return slopes from Fama–MacBeth cross-sectional regressions of value-weighted beta-sorted portfolios. Separate estimates are produced for FOMC announcement days (FOMC_0), the day immediately preceding those announcements (FOMC_m1), and non-announcement days (None). The figure is designed to assess whether beta pricing differs depending on the timing of scheduled monetary policy announcements.