Under Pressure? Central Bank Independence Meets Blockchain Prediction Markets

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Abstract

Employing data from Polymarket, a blockchain-based prediction market where users trade on Federal Reserve interest rate decisions and scenarios related to central bank independence, we construct a hawk-dove score for individual wallets and link user-level beliefs to monetary policy expectations. Users who believe that President Trump will fire Federal Reserve Chair Jerome Powell, and who therefore expect more intense political pressure on the central bank, hold more dovish views; they expect lower short-term interest rates than other users. These differences persist after controlling for individual wallet-level characteristics such as trading volume, profitability, and collateral use. Agents anticipating Powell's removal also anticipate higher long-term Treasury yields, concordant with concerns about reduced policy credibility and long-run inflation risk as pointed to by the literature on the time inconsistency of optimal policy. These findings suggest that political events shape expectations about future monetary policy, in this case through perceived threats to central bank independence.

JEL Codes: D72, D84, E52, E58, G14

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1 Introduction

> *Donald J. Trump: "This would be a PERFECT time for Fed Chairman Jerome Powell to cut Interest Rates ... CUT INTEREST RATES, JEROME, AND STOP PLAYING POLITICS!"*[1]

A foundational principle of modern central banking is the independence of monetary authorities from political interference. A large literature suggests that central bank independence (CBI) enhances the credibility of monetary policy, reduces inflation bias, and mitigates the risk of time-inconsistent policy decisions (Kydland and Prescott, 1977; Barro and Gordon, 1983; Rogoff, 1985; Cukierman et al., 1992; Alesina and Summers, 1993; Cukierman, 1994).

While legal statutes formally safeguard monetary policy autonomy, a large body of evidence shows that *de jure* and *de facto* CBI frequently diverge. Binder (2021b) documents that roughly 10% of central banks experience overt political pressure in a typical year, including many with high legal independence, and that such pressure almost always pushes toward easier policy. Financial markets appear to respond to these episodes: Bianchi et al. (2023) show that President Trump's 2018 tweets urging the Federal Reserve to cut rates were followed by immediate declines in interest rate futures, indicating that investors revised policy expectations in response to perceived political interference.

Trump's 2018 pressure campaign on the Fed continued into the 2024 election cycle and beyond. On the campaign trail he again demanded rate cuts and suggested he would remove Powell if he failed to ease policy. After taking office in January 2025, Trump stated publicly that firing the Fed Chair was within his authority. In a handwritten note posted on Truth Social in June 2025, he charged Powell with *"costing the USA a fortune"* and insisted that rates *"should be 1 percent, or better"*.[2] He reinforced the threat in April, remarking: *"If I wanted him gone, believe me, he would be gone very quickly."*

Understanding whether such threats shape beliefs in real time is important. The answer has implications for the credibility of monetary policy and for its macroeconomic

[1] Donald J. Trump, Truth Social, posted April 4, 2025. Available at: `https://truthsocial.com/@realDonaldTrump/posts/114280322706682564`

[2] Donald J. Trump, Truth Social, June 30, 2025. `https://truthsocial.com/@realDonaldTrump/posts/114773418889111055`

impacts.

That said, measuring the influence of political pressure empirically is challenging. Standard approaches rely on aggregate data from financial markets and on survey averages of market expectations. Such approaches cannot capture individual investor-level expectations, which may vary widely across participants and shift heterogeneously in response to news.

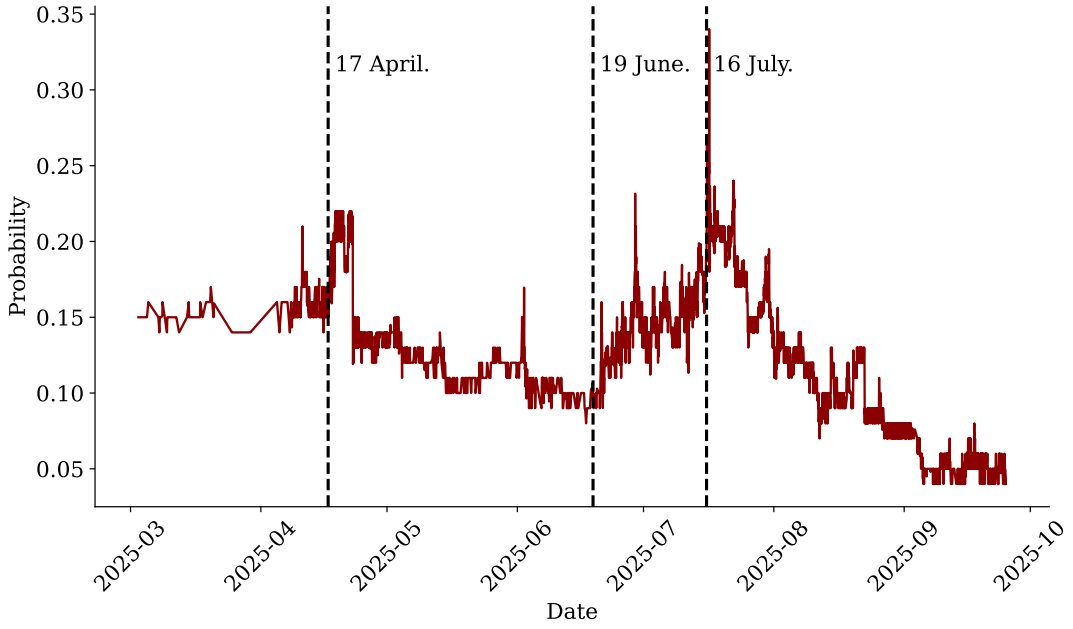
This paper therefore introduces a novel, market-based test of political pressure on the Federal Reserve in a setting where individual expectations are directly observable. We draw on high-frequency data from Polymarket, a decentralized blockchain prediction platform where users trade on Federal Reserve interest rate decisions and on the potential removal of the Fed chair. Since November 2024, Polymarket has hosted active markets for each scheduled FOMC meeting, with contracts on discrete outcomes such as a 25 basis point hike, cut, or hold. Since January 2025, the platform has also featured a contract on "Jerome Powell out as Fed chair in 2025".

All trades are executed through publicly visible wallet addresses, which allows positions to be linked across contracts. This feature provides several advantages over conventional data sources. First, beliefs are observed at high frequency and update in real time following political or macroeconomic news. Second, positions are financially staked, avoiding the hypothetical-bias concerns that affect survey expectations. Third, persistent wallet identifiers allow us to characterize heterogeneity across investors rather than relying on aggregated pricing. Finally, cross-contract linkages enable us to connect beliefs about CBI (proxied by Powell-removal bets) to contemporaneous expectations about monetary policy.

A key strength of this setting is that it combines *individual*, *incentive-compatible* expectations. To establish validity, we compare Polymarket-implied probabilities from FOMC contracts with benchmarks derived from CME Fed Funds futures. The two series co-move tightly, adjust in the same direction around macroeconomic announcements at the contract-set level. This confirms that Polymarket is not a retail-trading anomaly, but an information-aggregating market comparable to institutional financial platforms, with

the unique advantage of investor-level granularity.

Figure 1: President Trump and Federal Reserve Independence



Notes. This figure plots the price of the "Yes" token in the market "Jerome Powell out as Fed Chair in 2025?". Key political events are annotated: on April 17, 2025, Trump stated, "Oh, he'll leave. If I ask him, he'll be out of there." [3] On June 19, 2025, Trump stated, "Too Late—Powell is the WORST. A real dummy, who's costing America Billions! ...Powell should cut rates or quit."[4] On July 16, 2025, Trump reportedly waved a draft letter firing Jerome H. Powell during a meeting in the Oval Office with House Republicans. [5]

Polymarket hosts a range of contracts relevant to our analysis. One is a binary contract on whether Jerome Powell will be removed as Fed Chair in 2025, which provides a direct measure of perceived threats to CBI. Others are event contracts tied to scheduled FOMC meetings where tokens pay out based on the announced policy decision. For each meeting, traders can take positions on discrete outcomes such as a 25 basis point rate cut, a hold, or a hike. The price of a "Yes" token reflects the market-implied probability of that outcome.

Figure 1 plots the Polymarket-implied probability of Powell's removal alongside key political events. In April and June 2025 Trump repeatedly stated that Powell should resign or be removed, and in July 2025 he reportedly brandished a draft termination letter in a private meeting. Each of these episodes coincided with sharp movements in the contract price, suggesting that traders updated their beliefs in real time. This motivates

our empirical strategy. We examine whether investors who expect Powell's removal also anticipate a bias toward lower short-term rates, and whether their expectations align with theories of time inconsistency in which political pressure to cut rates today is associated with beliefs about higher inflation and long-term rates in the future.

Interestingly, the implied probability of Powell's removal fell sharply after August 2025. This decline coincided with weakening labour-market conditions and growing expectations of monetary easing by the Federal Reserve, reducing the policy conflict between Trump's demands and the Fed's likely actions. Indeed, the Fed cut interest rates in both September and October 2025. However, this shift in economic conditions does not affect the core contribution of our study, which focuses on the earlier period when political pressure and expected monetary policy were in clear conflict. Our analysis provides comprehensive empirical evidence on how political intervention risk is priced when market expectations diverge from central-bank policy guidance.

With this motivation, we turn to the construction of a measure of investor-level monetary policy preferences. For each wallet and FOMC event, we observe net directional exposure to discrete interest rate outcomes and treat these positions as revealed beliefs. To extract systematic patterns across events, we develop a latent variable model that infers an agent's monetary policy stance from their trading behavior. Building on the ideal point estimation framework of Clinton et al. (2004) and related applications to central banking by Eijffinger et al. (2018), we define a continuous "hawk–dove" score that places investors on a spectrum from favoring tighter to looser policy. The model imposes monotonic ordering constraints on market slopes to ensure consistent interpretation of rate changes across events and is estimated using Markov Chain Monte Carlo (MCMC) methods. The resulting wallet-level scores provide a structured way to classify heterogeneity in monetary policy expectations, allowing us to link individual beliefs to both macroeconomic fundamentals and perceived threats to CBI.

Our analysis is motivated by three important questions at the intersection of monetary policy, macroeconomic expectations, and threats to CBI. First, do investor expectations about future interest rates respond to macroeconomic fundamentals, as would be predicted

when central banks are known to follow monetary policy rules such as the Taylor rule (Taylor, 1993; Carvalho and Nechio, 2014)? Specifically, do low inflation expectations and the prospect of recession or weak growth, which are typically associated with lower interest rates under such rules, correspond to more dovish expectations regarding future rates? We examine the relationship between expectations about these macroeconomic fundamentals, observable through Polymarket, and corresponding interest rate forecasts at the individual agent (wallet) level.

Second, do investors who anticipate political interference with the Federal Reserve, such as the removal of Chair Powell, also expect looser monetary policy? Prior work utilizing aggregate data suggests that perceived threats to CBI lower expected short-term interest rates (Bianchi et al., 2023; Binder, 2021b). Recognizing that agents and their expectations can be heterogeneous, we reexamine the impact of such threats on expectations at the individual agent level using wallet-linked Polymarket data.

Third, are beliefs about CBI linked to longer-run macroeconomic expectations, including inflation and long-term interest rates? Models of time-inconsistent policy (Kydland and Prescott, 1977; Barro and Gordon, 1983) predict that political pressure for stimulus leads to higher long-run inflation and elevated long-term nominal yields, since such pressure reintroduces the time-inconsistency problem. This motivates testing whether investors who anticipate weaker CBI also expect higher long-term inflation and interest rates, again using individual-level evidence from Polymarket.

As noted, our key innovation is the ability to track trading behavior across markets using wallet-level identifiers. This enables us to connect investor expectations about macroeconomic fundamentals, monetary policy, and CBI in a unified framework.

We begin by asking whether interest rate expectations reflect macroeconomic fundamentals. Using Polymarket contracts on monthly CPI outcomes, we test whether investors who expect lower inflation also expect looser monetary policy, consistent with Taylor-rule logic. The evidence supports this hypothesis: agents forecasting low inflation consistently hold more dovish monetary policy views, a pattern that is especially evident around the March and June 2025 FOMC meetings. Interestingly, however, agents expecting high

inflation do not exhibit significantly more hawkish stance scores, suggesting asymmetric pricing of inflation risk. These results confirm that inflation expectations are an important driver of monetary policy beliefs, consistent with survey-based evidence in Carvalho and Nechio (2014). They are also consistent with significant heterogeneity in the behavior of different agents.

Turning to recession risk, we find little evidence of systematic differences in interest rate beliefs across agents who bet on or against a U.S. recession in 2025. Cross-sectional comparisons therefore do not indicate a strong link between recession views and monetary policy expectations. To identify such effects, we instead examine within-agent variation. Following the April 2025 "Liberation Day" tariffs, some investors revised their recession forecasts upward, and sophisticated agents who did so also shifted toward more dovish policy expectations, consistent with Taylor-rule logic. This suggests that while cross-sectional patterns are weak, individual agents adjust their monetary policy beliefs in response to macroeconomic news.

We then turn to the question of political interference. Specifically, we match users in the Polymarket contract on whether Donald Trump will remove Fed Chair Jerome Powell in 2025 to their positions in FOMC interest rate markets. We find that agents who bet on Powell's dismissal consistently exhibit more dovish stance scores (they expect lower short-term interest rates). This pattern holds after controlling for wallet-level characteristics such as trading volume, collateral use, and profitability. The results indicate a systematic difference in expected policy stance between users who anticipate Powell's removal and those who do not.

Next, we show that beliefs about Powell's potential removal are associated with higher long-term Treasury yields and greater perceived recession risk. These results are consistent with concerns that threats to CBI reduce monetary policy credibility and increase perceived macroeconomic instability. Agents who expect Powell to be dismissed anticipate lower short-term interest rates, but at the same time assign higher probabilities to adverse long-run outcomes, including elevated yields and recession risk. Inflation expectations also vary across belief groups: those who regard the Fed as independent are more likely

to assign probability to low inflation outcomes, whereas agents who anticipate Powell's dismissal are less likely to price downside inflation risk. This asymmetry is consistent with survey evidence in Binder (2021a), who shows that political antagonism undermines central bank credibility and weakens the anchoring of inflation expectations. Taken together, our results suggest that political interference is viewed not only as shaping near-term policy rates, but also as eroding confidence in long-run price stability and amplifying macroeconomic uncertainty.

For causal identification, we complement these cross-sectional and within-agent results with high-frequency local projections around unanticipated presidential social-media posts that shift perceived CBI. Innovations to the Powell-removal probability within narrow event windows raise the odds of rate cuts for the upcoming FOMC, depreciate the dollar, and steepen the 10y–3m term spread, a joint response that corroborates the credibility interpretation and limits the role of confounding macro news.

Related Literature. This paper contributes to five strands of literature. First, we speak to the literature on the theory and empirical measurement of CBI. Theoretically, CBI is seen as addressing the time-inconsistency problem of monetary policy: that central banks may be tempted to deviate from earlier policy announcements in order to exploit short-run trade-offs between inflation and output, resulting in higher inflation expectations in equilibrium (Kydland and Prescott, 1977; Barro and Gordon, 1983). A solution to this time-inconsistency problem is the institutional design of an independent central bank committed to a low inflation target.

Recent work uses structural models to quantify the extent of this problem and its corresponding solution. For example, Debortoli and Lakdawala (2016) estimate that the Federal Reserve operates under a regime of loose commitment, in which policy plans are partially revised to stimulate the economy in the short run. Lakdawala and Wu (2017) show that the credibility of monetary policy influences the term structure of interest rates, with lower credibility associated with greater yield curve curvature due to a rise in medium-term rates.

A related literature examines how legal frameworks and institutional arrangements

influence central bank behavior. Early work developed measures of de jure CBI and showed that independence was associated with lower and more stable inflation but little if any increase in output and unemployment volatility (Cukierman et al., 1992; Alesina and Summers, 1993). More recent contributions document rising trends in *de jure* independence over time (Cukierman, 1994; Eijffinger and Geraats, 2006; Walsh, 2008; Dincer and Eichengreen, 2018; Dincer et al., 2024; Romelli, 2022, 2024; Jung et al., 2025). But whereas the institutional indices utilized in most of this research capture formal, de jure independence, a growing literature emphasizes that de jure and de facto independence are not the same – that political influence remains a persistent factor in central bank decision making in practice (Binder, 2021b,a; Bianchi et al., 2023; Drechsel, 2024; Pagliuca, 2025). Examples include research on the influence of presidential communication with Federal Reserve officials, such as the Nixon–Burns interaction in the early 1970s analyzed by Drechsel (2024), and studies on political alignment between members of the FOMC and the incumbent U.S. president, as proxied by campaign donations in Pagliuca (2025).

Within this literature, our paper is closest to Bianchi et al. (2023), who show that public criticism of the Federal Reserve by President Trump in 2018–2019 coincided with significant movements in interest rate futures, suggesting that market participants updated their expectations of policy in response to perceived political pressure. Our paper contributes by developing a market-based, investor-level measure of beliefs about political interference in the Fed. We show that expectations of increased political threats to Federal Reserve independence are associated with more dovish interest rate beliefs.

A second strand of literature studies FOMC voting decisions through the lens of hawk–dove preferences and the economic forecasts of committee members. Researchers use both historical voting records and external perceptions based on public communication to classify the policy stances of central bank board members (Eijffinger et al., 2018; Istrefi, 2019; Bordo and Istrefi, 2023). These approaches typically apply roll-call scaling models originally developed for political science (Clinton et al., 2004), which are used here to identify fixed and time-varying monetary preferences. Recent work shows that heterogeneity is important in this context. For example, individual experiences with

inflation predict more hawkish positions (Malmendier et al., 2021), while dissent patterns and forecasts also help to reveal underlying views (Filippou et al., 2023; Burghartz, 2025; Bobrov et al., 2025). Our paper adapts this framework to a new setting by applying similar ideal point estimation techniques to individual investor behavior on Polymarket. This source enables us to construct a belief-based classification of monetary policy expectations outside formal institutions such as the FOMC, on which previous work has focused.

Third is the literature exploring whether expectations about monetary policy reflect underlying macroeconomic fundamentals. A prominent benchmark is the Taylor rule, which prescribes that interest rates should respond predictably to changes in inflation and output (Taylor, 1993, 2012; Lakdawala, 2016). Taylor (2013) argues that the shift toward rule-based policymaking in the mid-1980s contributed to greater macroeconomic stability, and that CBI is most effective when paired with a systematic policy framework. Lakdawala (2016) provides complementary evidence that, during the Volcker era, structurally estimated Taylor rules placed greater weight on inflation, indicating a regime shift in the Fed's responsiveness to inflation and the output gap. At the household level, Carvalho and Nechio (2014) examine whether survey-based expectations respond to inflation and unemployment in a manner consistent with the Taylor rule. They find that the expectations of non-expert households co-move with macroeconomic indicators, suggesting that policy rules may be internalized through simple heuristics. Our analysis extends this logic to decentralized prediction markets, testing whether investor-level interest rate forecasts on Polymarket systematically reflect beliefs about these types of macroeconomic variables and whether decentralized traders behave in line with Taylor-type principles.

Fourth, we build on a growing literature documenting heterogeneity in household and investor macroeconomic expectations. A number of studies use survey data to show that political affiliations systematically influence beliefs about inflation, unemployment, and economic growth (Coibion et al., 2020; Mian et al., 2023; Binder et al., 2024; DiGiuseppe et al., 2025; Kay et al., 2025). For example, Coibion et al. (2020) find that U.S. households aligned with the incumbent party report more optimistic expectations about the economy. Binder et al. (2024) and DiGiuseppe et al. (2025) document that Trump supporters reported

higher inflation expectations under Biden and lower expectations following Trump's 2024 victory. Kay et al. (2025) link forecaster optimism in *Wall Street Journal* surveys to political affiliation, finding that Republican-leaning economists are more optimistic under Republican presidents. In contrast to this literature, our focus is on *monetary policy expectations*. Using investor-level data from Polymarket, we recover wallet-specific stances on future policy rates and link them to beliefs about CBI. We show that divergence in expectations arises not only from different macro forecasts but also from differences in perceived political pressure and institutional constraints.

Finally, our paper contributes to the small but growing literature using decentralized prediction markets to study investor beliefs. These platforms offer transparent, high-frequency, financial-incentivized real-time belief measures at the individual level. Recent work leverages data from platforms such as Polymarket to measure beliefs regarding political, macroeconomic, and financial outcomes (Chernov et al., 2025; Ng et al., 2025; Chen et al., 2025). For example, Ng et al. (2025) show that Polymarket prices outperformed polls in predicting outcomes during the 2024 U.S. election. Another example is Chen et al. (2025), who use Polymarket to examine partisan differences in election expectations. Our contribution in this context is twofold. First, we construct wallet-level "hawk-dove" scores from FOMC rate markets using a latent variable model. Second, we link these scores to beliefs about Fed independence by using trading behavior on the Powell-dismissal contract. This setting provides a novel test of political pressure on the Fed, enabled by the granularity and transparency of blockchain-based prediction markets.

Roadmap. Section 2 outlines the institutional setting, describes the data, and explains the construction of our investor-stance scores. Section 3 presents the main hypotheses, beginning with whether investor expectations reflect macroeconomic fundamentals, then examining the link between central bank independence and monetary policy expectations, and finally connecting beliefs about CBI to longer-run macroeconomic outcomes. Section 4 reports the empirical results. Section 5 concludes.

2 Institutional Details and Data

We divide this part into three sections. In Section 2.1, we provide an overview of the key institutional details of Polymarket, including the main features of its trading mechanism. In Section 2.2, we describe how we obtain data from Polymarket, the CME, and Refinitiv Tick history. In Section 2.3, we compare the FOMC decision probabilities implied by Polymarket with those derived from CME 30-day Federal Funds futures and find that the two markets closely track each other.

2.1 Polymarket

Polymarket is the largest decentralized prediction market platform, enabling participants to financialize their beliefs about real-world event outcomes through investment. Traders deposit USDC via the Polygon blockchain network to engage in trading. As of June 2025, Polymarket recorded a monthly trading volume of $1.17 billion, with peak activity reaching $2.4 billion during the 2024 U.S. presidential election.[6]

To organize trading around specific forecasts, Polymarket structures its platform around two key elements: **events** and **markets**. An **event** on Polymarket refers to a real-world occurrence subject to speculation—such as the 2024 U.S. presidential election or the March 2025 Federal Open Market Committee (FOMC) meeting. A **market** corresponds to a specific binary outcome within that event, where traders buy or sell "Yes" or "No" tokens whose payoffs depend on the realization of the outcome. For instance, the March 2025 FOMC event includes a market on whether the Federal Reserve will reduce the federal funds target rate by 25 basis points, and another on whether the rate will remain unchanged. A single event can comprise multiple markets, each representing a mutually exclusive outcome.

Trading mechanism. Markets on Polymarket are structured as binary options, offering "Yes" and "No" outcome tokens. Each pair of "Yes" and "No" tokens is fully collateralized by 1 unit of USDC, and token prices are denominated in USDC, always lying between 0

[6] `https://defillama.com/protocol/dexs/polymarket`

and 1. Traders can buy or sell individual tokens, or mint a pair of one "Yes" and one "No" token by depositing 1 unit of USDC. At any time, one unit of "Yes" and one unit of "No" can be redeemed jointly for 1 unit of USDC.

Letting P_{Yes} and P_{No} denote the current prices of the two tokens (in USDC), they satisfy the identity:

$$P_{\text{Yes}} + P_{\text{No}} = 1.$$

These prices are determined by the most recent trades or standing limit orders and reflect traders' perceived probabilities of the underlying event. Upon market resolution, the token corresponding to the correct outcome pays out 1 unit of USDC per token, while the other becomes worthless.[7]

For further details on Polymarket's trading mechanisms, including the implementation of binary markets through the Conditional Tokens Framework (CTF), order matching via the off-chain operator, and examples of transaction-level mint and merge operations, see Appendix A.

2.2 Data

Subgraph API. We rely on data from Subgraph API to trace the transactions on Polymarket and obtain account-level information.[8]

Each transaction in any given Polymarket market is fully traceable via the Subgraph API. For every trade, we observe the transaction price (denominated in USDC), trade size (in USDC), timestamp, and the identities of both counterparties (buyer and seller IDs).[9] For all traders on Polymarket, we obtain trader-specific information on their trading volume, trading profit, and the number of markets they have bet on.

[7] USDC is a fiat-backed stablecoin pegged 1:1 to the U.S. dollar. It operates on the blockchain and is primarily used to reduce frictions when trading crypto assets. USDC is issued by Circle, a centralized entity, and is backed by reserves held with multiple custodians. These reserves are typically held in cash or cash equivalents, such as U.S. Treasuries and FDIC-insured bank deposits. For more details on Circle's reserve composition and disclosures, see `https://www.circle.com/transparency`.

[8] Available at `https://docs.polymarket.com/developers/subgraph/overview`.

[9] Subgraph records each transaction twice. In one of these records, the taker ID corresponds to the wallet ID of the CTF Exchange contract. To avoid double counting, we drop the records for which the taker id is the CTF Exchange contract wallet id (0xc5d563a36ae78145c45a50134d48a1215220f80a).

CME 30-Day Federal Funds Futures. We use high-frequency data on CME 30-Day Federal Funds Rate futures from Databento, sampled at 5-minute intervals from October 2024 to September 2025. These contracts are settled based on the average effective federal funds rate for a given calendar month and are widely used to infer market expectations about monetary policy decisions. We use these prices to construct implied probabilities of target rate changes at upcoming FOMC meetings, which serve as a benchmark for comparison with investor expectations on Polymarket.

Foreign Exchange Rates, U.S. Treasury Yields, and Overnight Index Swaps. We use high-frequency data from Refinitiv Tick History on foreign exchange rates, U.S. Treasury yields, and U.S. dollar Overnight Index Swap (OIS) rates, sampled at 1-minute intervals from January to September 2025. The exchange rate sample covers the G9 currencies: the Australian dollar (AUD), the Canadian dollar (CAD), the euro (EUR), the Japanese yen (JPY), the New Zealand dollar (NZD), the Norwegian krone (NOK), the Swedish krona (SEK), the Swiss franc (CHF), and the British pound (GBP), all vis-à-vis the U.S. dollar. Treasury yield and OIS data include maturities of 1 month, 3 months, 1 year, 5 years, 10 years, and 30 years.

Markets and Events. Table 1 lists the Polymarket prediction markets used in our analysis. We group these into three categories: Federal Reserve independence, macroeconomic fundamentals, and FOMC policy decisions.

The central market used to proxy beliefs about political pressure is the binary contract "Jerome Powell out as Fed Chair in 2025?" A long position pays 1 USDC if Powell is removed or resigns before the end of 2025. We interpret this as reflecting an investor's belief that Federal Reserve independence may be compromised.

To capture macroeconomic fundamentals, we use markets covering recession, inflation, and long-term interest rates. Recession risk is measured using the "U.S. recession in 2025?" binary contract, which pays 1 USDC if either the NBER declares a recession in 2025 or if real GDP contracts in two consecutive quarters. Long-term interest rate expectations are captured by the categorical market "How high will 10-year Treasury yield go in 2025?",

which pays 1 USDC if yields meet or exceed specified thresholds. Inflation expectations are proxied through several categorical markets on year-on-year CPI outcomes. The "How high will inflation get in 2025?" market pays 1 USDC if the maximum CPI print observed in any month of 2025 reaches or exceeds the listed value. We supplement this with month-specific markets on February, April, May, June, July, and August inflation, each structured to pay 1 USDC if CPI exceeds the stated threshold for the corresponding month. These markets allow us to align inflation expectations with the timing of FOMC decisions.

Monetary policy expectations are extracted from categorical markets on FOMC rate decisions in March, May, and June 2025. Each contract offers outcome-specific tokens such as "Hold," "+25bps," or "-25bps," with payoffs of 1 USDC per winning outcome based on the actual policy decision announced at the corresponding FOMC meeting. We use wallet-level positions in these contracts to estimate investor-specific monetary policy stance scores.

Market Liquidity. The final column of Table 1 reports total trading volume as a proxy for market liquidity. Liquidity varies substantially across contracts, with FOMC markets consistently attracting the highest participation. For example, the March, May, and June 2025 FOMC markets each saw trading volumes exceeding $75 million, with the September 2025 contract surpassing $190 million. This depth reflects the salience of interest rate decisions and the relatively short time horizon to contract resolution.

In contrast, macroeconomic outcome markets tend to exhibit lower liquidity. The recession risk market reached $9 million in volume, while inflation-related markets ranged from $0.6 to $1 million depending on the month and framing. The long-term Treasury yield market was moderately active, with $3 million in total volume. The Powell dismissal market, used to measure beliefs about political pressure, was among the more liquid non-FOMC contracts, with trading volume around $10 million. Overall, these figures suggest that while macroeconomic markets are less liquid than FOMC contracts, they still provide meaningful cross-sectional variation in expectations for our analysis.

These liquidity patterns are mirrored in participation rates and trading behavior.

Appendix B, Table B.1, shows that FOMC markets attract large numbers of unique agents. For example, over 21,000 agents participated in the January 2025 *+25bps* market. Net positions in these markets, measured in USDC, also exhibit wide dispersion, with standard deviations exceeding 14,000 in some cases, reflecting substantial heterogeneity in beliefs and trading intensity.

Table 1: Polymarket Events and Market Details

	Event	URL	Payout Structure	Volume
Federal Reserve Independence	Jerome Powell out as Fed Chair in 2025?	Link	Binary: $1 if Powell steps down before 2026.	$10 million
Macroeconomic Fundamentals	Will the U.S. enter a recession in 2025?	Link	Binary: $1 if NBER declares recession or two consecutive quarters of negative GDP growth in 2025.	$9 million
	How high will 10-year Treasury yield go in 2025?	Link	Categorical: $1 if the Treasury 10-year yield reaches or is higher than the listed value in 2025.	$3 million
	How high will inflation get in 2025?	Link	Categorical: $1 for bin if any month in 2025 CPI $\geq$ listed value.	$1.2 million
	February Inflation - Annual	Link	Categorical: $1 for bin if corresponding month's CPI $\geq$ listed value.	$0.6 million
	April Inflation - Annual	Link	Categorical: $1 for bin if corresponding month's CPI $\geq$ listed value.	$1 million
	May Inflation - Annual	Link	Categorical: $1 for bin if corresponding month's CPI $\geq$ listed value.	$0.9 million
	June Inflation - Annual	Link	Categorical: $1 for bin if corresponding month's CPI $\geq$ listed value.	$0.6 million
	July Inflation - Annual	Link	Categorical: $1 for bin if corresponding month's CPI $\geq$ listed value.	$0.6 million
	August Inflation - Annual	Link	Categorical: $1 for bin if corresponding month's CPI $\geq$ listed value.	$0.8 million
FOMC	Fed decision in November 2024?	Link	Categorical: Multiple tokens (e.g., "No Change", "+25bps", "-25bps", "-50bps"), $1 payout per winning outcome.	$190 million
	Fed decision in December 2024?	Link	Categorical: Same format as above.	$59 million
	Fed decision in January 2025?	Link	Categorical: Same format as above.	$191 million
	Fed decision in March 2025?	Link	Categorical: Same format as above.	$78 million
	Fed decision in May 2025?	Link	Categorical: Same format as above.	$88 million
	Fed decision in June 2025?	Link	Categorical: Same format as above.	$107 million
	Fed decision in July 2025?	Link	Categorical: Same format as above.	$137 million
	Fed decision in September 2025?	Link	Categorical: Same format as above.	$220 million

Note: Table reports prediction markets on Polymarket used in our analysis. Events cover monetary policy, macroeconomic indicators, and politically salient outcomes. All markets resolve based on publicly verifiable sources such as the Federal Reserve, BLS, and U.S. Treasury. URLs link to corresponding Polymarket event pages. Volume is the total trading volume.

2.3 Polymarket and CME Implied FOMC Probability

FOMC markets are among the most liquid on Polymarket. For example, the March 2025 contract attracted over 27,000 unique users and generated $78 million in cumulative trading volume. These contracts allow traders to bet on discrete FOMC outcomes, such as interest rate hikes, cuts, or no change. For the March 2025 meeting, Polymarket hosted four separate binary markets: (i) a 25 basis point increase, (ii) no change, (iii) a 25 basis point decrease, and (iv) a 50 basis point decrease. Each market offers "Yes" and "No" tokens that pay 1 USDC if the specified outcome occurs.

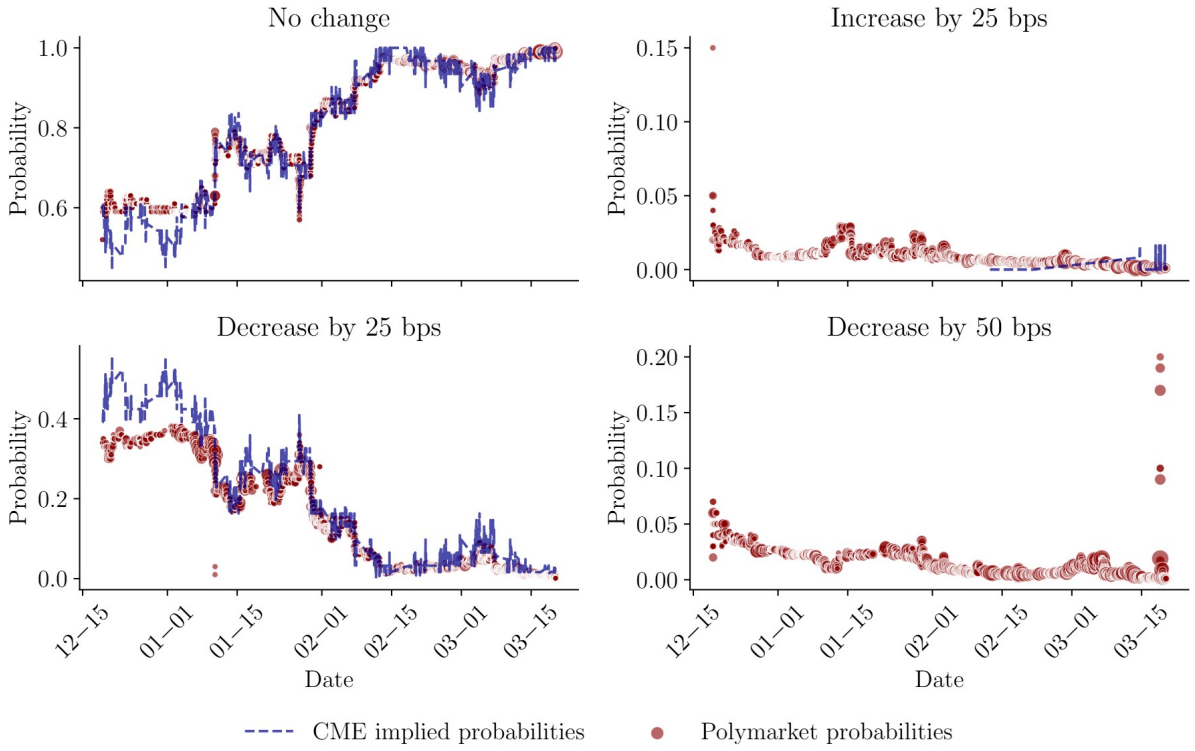
To assess the informational content of Polymarket, we compare its implied probabilities with benchmark estimates derived from CME futures. Specifically, we construct intraday FOMC meeting probabilities at five-minute intervals using CME 30-Day Federal Funds Rate futures, following the methodology of the CME FedWatch Tool.[10] While the official FedWatch Tool reports only daily updates, our implementation uses high-frequency price data from Databento to generate a real-time benchmark.

Figure 2 plots the Polymarket-implied probabilities for each of the four outcomes, based on the price of the corresponding "Yes" tokens, alongside the CME futures-implied probabilities aggregated to match the same outcome categories. The two series exhibit close co-movement throughout the sample period, suggesting that Polymarket reflects similar interest rate expectations as the traditional futures market. Notably, Polymarket-implied probabilities appear less noisy at high frequencies, potentially due to differences in trading mechanisms, liquidity, or trader composition between the two platforms. To further validate this relationship, Appendix C.2 extends the comparison to six FOMC meetings spanning January through September 2025, examining both the probability distributions and the implied expected rate changes. The consistently tight tracking across all meetings confirms that Polymarket serves as a reliable measure of market expectations for FOMC decisions while offering practical advantages for high-frequency empirical analysis, including directly observable probability distributions that eliminate the multi-step calculations required by the CME approach and straightforward computation

[10] A detailed description of the implementation is provided in Appendix C.1.

of expected rate changes via probability-weighted averaging.

Figure 2: CME and Polymarket Implied FOMC probabilities: March 2025 meeting



Notes. The plot shows the CME 30-day federal funds futures–implied FOMC probabilities and the corresponding Polymarket probabilities for the March 2025 meeting. The CME-implied probabilities are calculated following the methodology in Appendix C.1, using 5-minute frequency 30-day federal funds rate futures data. The Polymarket probability is the price of the 'Yes' token in the respective market. Each dark red dot represents a 'Yes' token transaction, with the dot size proportional to the transaction size.

2.4 Monetary Policy Hawk-Dove Scores

We develop a latent variable model to infer monetary policy preferences from agent-level trading behavior in FOMC-related prediction markets on Polymarket. We treat agents' net positions in markets tied to specific interest rate outcomes as revealed beliefs. The core assumption is that an agent's likelihood of taking a position in a given market depends on the alignment between their latent monetary policy stance—captured by a hawk-dove score—and the directional implication of the market. The model follows the framework of Clinton et al. (2004), which uses roll-call voting behavior to infer legislators' latent

policy preferences. This approach has also been applied to study FOMC committee voting behavior in Eijffinger et al. (2018). In our parsimonious setup, an agent's probability of betting in a given FOMC market depends jointly on agent-specific ideological traits and market-specific parameters. By imposing monotonic ordering constraints on market slopes across policy rate categories, we ensure consistent ideological interpretation across FOMC events. This approach allows us to extract heterogeneous monetary policy stances from trading data in a structured and interpretable way.

A FOMC event k, for example the March 2025 meeting, contains multiple markets such as "25-bps rate increase" or "50-bps rate decrease". These contracts allow agents to bet on future FOMC decisions and express expectations about policy rate changes. For each market j under event k, we calculate the net positions for every agent i by aggregating their purchases and sales of "Yes" and "No" tokens. To avoid capturing position unwinding around event resolution, trading data are truncated one day prior to the FOMC meeting date.[11] Using these net positions, we construct an agent-by-market matrix y_{ijk} that reflects each participant's net exposure to policy outcomes for event k.

Latent variable model. For each agent i and FOMC market j at event k, we define a latent utility function

$$U_{ijk} = \alpha_{jk} + \beta_{jk} x_{ik}, \tag{1}$$

where x_{ik} is a latent variable representing agent i's hawk–dove score at event k, α_{jk} is an intercept for market j, and β_{jk} is a slope coefficient capturing the ideological loading of market j.

[11]The advantage of our data is that it captures the dynamic and most up-to-date beliefs of investors. Therefore, we use data from one day prior to the FOMC meeting to measure investors' beliefs before the uncertainty is resolved. However, one could argue that FOMC-related uncertainty may begin to resolve several days before the meeting. In unreported results, we show that our findings remain robust when using alternative cutoff dates a few days before the meeting.

We do not observe this latent utility directly. Instead, we observe a binary indicator:

$$y_{ijk} = \begin{cases} 1, & \text{if agent } i \text{ holds a net positive position in market } j \text{ at event } k, \\ 0, & \text{otherwise.} \end{cases} \tag{2}$$

The probability that agent i takes a net positive position in market j is modeled as a logistic function of latent utility:

$$\Pr(y_{ijk} = 1) = \sigma(U_{ijk}) = \frac{1}{1 + e^{-(\alpha_{jk} + \beta_{jk} x_{ik})}}. \tag{3}$$

Equivalently,

$$\operatorname{logit}\big(\Pr(y_{ijk} = 1)\big) = \alpha_{jk} + \beta_{jk} x_{ik}. \tag{4}$$

The slope parameter β_{jk} captures the ideological orientation of market j. Intuitively, if a user has dovish preferences (a higher x_{ik}), then holding net positive positions in dovish markets (rate cuts) increases their latent utility, which requires β_{jk} to be higher for more dovish markets. We categorize markets into four ordered policy rate categories: 25-bps increase (inc25), no change (nochg), 25-bps decrease (dec25), and 50-bps decrease (dec50). To ensure consistent ideological interpretation, we impose a strictly monotonic ordering constraint on the slope coefficients:

$$\beta_{\text{inc25},k} < \beta_{\text{nochg},k} < \beta_{\text{dec25},k} < \beta_{\text{dec50},k}. \tag{5}$$

This constraint guarantees that as markets become more dovish (moving from rate increases to rate decreases), the loading on the hawk-dove score increases monotonically. In this way, the ordered β_{jk} loadings align observed trading behavior y_{ijk} with the underlying stance x_{ik}, ensuring that agents with higher hawk-dove scores (more dovish) are systematically more likely to take positions in rate decrease markets, while agents with lower scores (more hawkish) favor rate increase markets.

The ordering constraint on β_{jk} is implemented through a parameterization using strictly positive increments: we set $\beta_{\text{inc25},k} = \eta$ where $\eta \sim \mathcal{N}(0, 1)$, and define $\delta_k \sim \text{HalfNormal}(1)$

for $k = 1, 2, 3, 4$ such that

$$\beta_{\text{nochg},k} = \beta_{\text{inc25},k} + \delta_1,$$
$$\beta_{\text{dec25},k} = \beta_{\text{nochg},k} + \delta_2,$$
$$\beta_{\text{dec50},k} = \beta_{\text{dec25},k} + \delta_3.$$

By construction, this ensures the required monotonic ordering while allowing the data to determine the magnitude of differences between categories.

Each agent's latent score x_{ik} is estimated to maximize the joint likelihood of their observed binary choices across all markets within event k. Estimation of x_{ik}, together with market-level intercepts α_{jk} and slope coefficients β_{jk}, is conducted using Markov Chain Monte Carlo (MCMC).[12] We place a mixture-of-Gaussians prior on x_{ik} to capture potential clustering of agents into dovish, hawkish, and centrist groups, while α_{jk} receives a standard normal prior. [13]

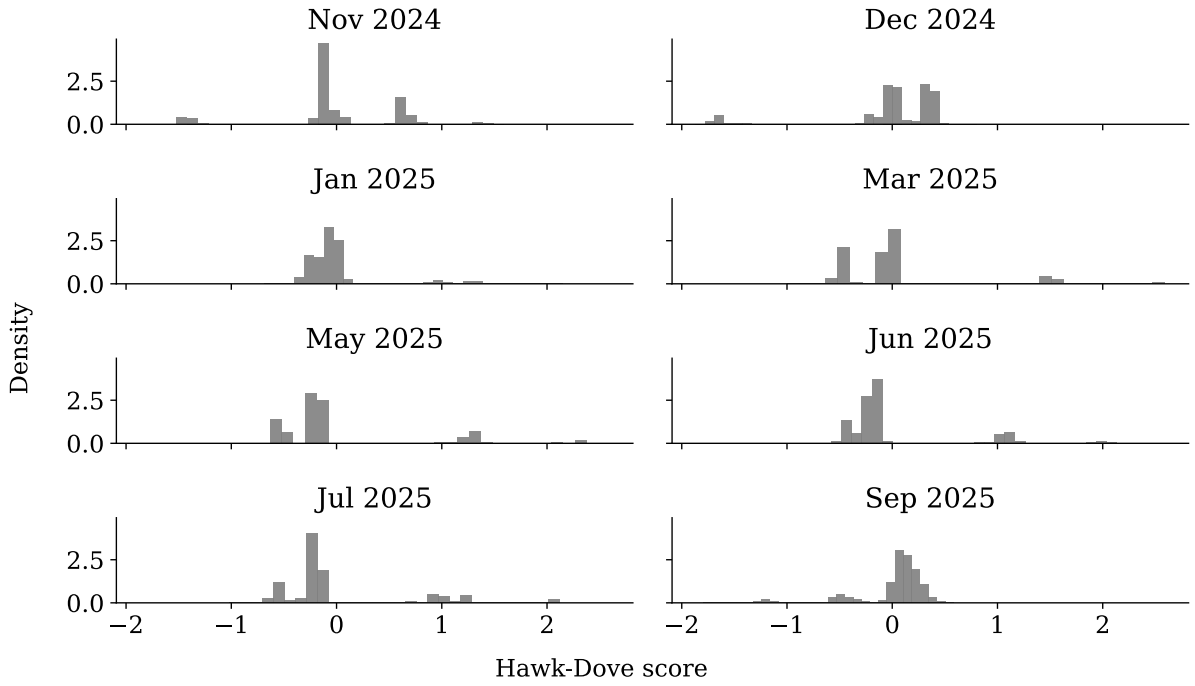
Monetary Policy Stance. The latent variable model allows us to estimate the monetary policy stance of agents who participate in FOMC-related markets. This estimation is based solely on trading behavior in the FOMC markets and does not incorporate any information from agents' activity in other markets, such as those related to CBI or inflation. This framework enables us to later test the underlying channels that shape agents' monetary policy preferences.

Figure 3 shows the distribution of estimated hawk-dove scores across eight FOMC meetings from November 2024 to September 2025. The hawk-dove score reflects agents' monetary policy preferences, with higher scores indicating a more dovish stance and lower scores reflecting a more hawkish stance. The shape of the distributions vary considerably over time, with earlier meetings (e.g., Nov–Dec 2024) showing more polarized views while

[12]We sample from the posterior using the No-U-Turn Sampler (NUTS), a variant of Hamiltonian Monte Carlo, with 500 tuning iterations and 500 posterior draws across 4 parallel chains, setting target acceptance probability to 0.98. Results are robust to alternative number of iterations and posterior draws.

[13]The prior for each x_{it} is a finite mixture of three normals: $\mathcal{N}(-1, 1)$, $\mathcal{N}(1, 1)$, and $\mathcal{N}(0, 1)$, with weights $[0.3, 0.3, 0.4]$. This flexible prior captures clustering into dovish, hawkish, and centrist groups. Market intercepts α_{jt} are drawn from $\mathcal{N}(0, 1)$, and slopes β_{jt} from $\mathcal{N}(0, 1)$. Results are robust to alternative priors.

Figure 3: Hawk-dove Score.



Notes. The plot shows the distribution of hawk-dove scores for the November 2024, December 2024, January 2025, March 2025, May 2025, June 2025, July 2025, and September 2025 FOMC meeting, respectively. A positive hawk-dove score indicates a dovish stance, while a negative score indicates a hawkish stance.

later meetings (e.g., Mar–Jun 2025) exhibit more even distributions.

Table 2: Summary Statistics

	Panel A: Polymarket Agent Summary Statistics							
	N	mean	SD	1%	25%	50%	75%	99%
volume	1299649	27937.66	6360095.34	0.00	207.77	989.86	4062.45	160569.63
profit	1299649	-4714.20	324379.80	-16354.63	-100.40	-15.66	-0.91	200.65
# markets	1299649	15.09	18.75	0.00	3.00	9.00	19.00	100.00
	Panel B: Monetary Policy Stance							
	N	mean	SD	1%	25%	50%	75%	99%
November 2024	15823	0.00	0.56	-1.46	-0.14	-0.09	0.56	1.37
December 2024	16705	0.00	0.53	-1.71	-0.03	0.04	0.34	0.47
January 2025	39643	-0.00	0.38	-0.36	-0.19	-0.07	-0.00	1.36
March 2025	27201	-0.00	0.58	-0.55	-0.44	-0.05	-0.00	2.33
May 2025	16849	-0.00	0.68	-0.61	-0.26	-0.20	-0.15	2.30
June 2025	22451	-0.00	0.56	-0.49	-0.24	-0.18	-0.13	2.02
July 2025	27910	-0.00	0.61	-0.63	-0.25	-0.20	-0.14	2.05
September 2025	31464	0.00	0.37	-1.51	0.02	0.10	0.19	0.40

Notes. Panel A reports the summary statistics for Polymarket agents. We report the number of agents (*N*), the average (*mean*), standard deviation (*SD*), and percentiles of agents' total collateral volume on Polymarket (*volume*), agent's total profit (*profit*), and the number of markets the agent has bet on (*# markets*). Panel B reports summary statistics for agents' monetary policy stance, measured using the hawk-dove score, for the November 2024, December 2024, January 2025, March 2025, May 2025, June 2025, July 2025, and September 2025 FOMC meeting, respectively. In the main analysis, we use the hawk-dove percentile as the primary measure of monetary policy stance. The hawk-dove percentile rescales the raw hawk-dove score to a percentile scale ranging from -50 to 50, where -50 corresponds to the most hawkish 1st percentile and 50 to the most dovish 99th percentile based on the distribution of hawk-dove scores.

Panel A of Table 2 summarizes key characteristics of agents trading on Polymarket. On average, agents participate in approximately 16 markets, with significant heterogeneity across the sample. The median agent stakes collateral equivalent to roughly 8 log-units, and average profitability is close to zero, though the distribution exhibits large dispersion. These statistics highlight both the breadth of market participation and the diversity of trading outcomes among Polymarket users, motivating our focus on wallet-level heterogeneity in beliefs and behavior.

Panel B of Table 2 reports summary statistics for agents' raw hawk and dove scores. The interpretation of these raw scores depends on the FOMC meeting–specific slope parameters β_j. Therefore, in the subsequent analysis, we rescale the hawk-dove scores to a percentile scale ranging from -50 to 50, where -50 corresponds to the most hawkish 1st percentile and 50 to the most dovish 99th percentile, based on the distribution of scores for each FOMC event. This normalization enables consistent comparisons across different

FOMC meetings, regardless of shifts in the underlying distribution over time.

3 Research Hypotheses

3.1 Monetary Policy Expectations and Macroeconomic Fundamentals

The first question we ask is whether investors in these markets process fundamental information when forming interest rate expectations. This is crucial for assessing market efficiency and for establishing whether prediction markets are linked to traditional financial markets in a meaningful way. In principle, forward-looking agents should anticipate policy responses to changes in inflation and output in line with standard monetary policy frameworks. A canonical representation of such behavior is the Taylor rule, which prescribes that the central bank raise (lower) nominal interest rates in response to higher (lower) inflation and output gaps (Taylor, 1993, 2012).

Taylor (2013) supports the view that monetary policy in the U.S. has historically become more rules-based, especially since the mid-1980s. In particular, the early part of the Great Moderation was characterized by a shift from discretionary to more predictable, rule-based policy, and that this shift contributed to greater macroeconomic stability. Importantly, he contends that central bank independence alone is not sufficient to achieve desirable outcomes unless paired with a systematic policy strategy.

At the micro level, Carvalho and Nechio (2014) investigate whether households understand and internalize these policy rules. Using survey data on inflation, unemployment, and interest rate expectations, they find that household beliefs about future policy rates co-move with macroeconomic expectations in a manner consistent with the Taylor rule. This suggests that even non-expert agents anchor their rate forecasts in fundamental indicators, supporting the idea that policy expectations may be shaped by simple rule-of-thumb interpretations of central bank behavior.

We examine whether similar behavior emerges in decentralized prediction markets. In particular, we test whether investor expectations on Polymarket respond systematically to

macroeconomic news—such as changes in inflation, unemployment, or GDP growth—in a manner consistent with Taylor-type policy rules. Since these markets feature real-money incentives and high-frequency updates, they provide a unique lens through which to evaluate whether rule-based monetary policy is embedded in investor beliefs.

> **H1 (Taylor Rule Consistency):** *Investor expectations of future interest rates increase with inflation and output growth, consistent with a Taylor-rule framework.*

Having established whether market participants process fundamentals in a Taylor-rule-consistent way, we next proceed to ask whether political interference shifts these expectations by undermining central bank independence.

3.2 Monetary Policy Expectations and Central Bank Independence

CBI is widely viewed as essential for ensuring credible and effective monetary policy. The literature typically distinguishes between two dimensions of CBI: *goal independence*, where a central bank sets its own objectives, and *instrument independence*, where it retains autonomy over the tools used to achieve mandated goals such as price stability (Walsh, 2008). In the case of the Federal Reserve, only instrument independence applies—Congress mandates the Fed's dual objective of maximum employment and stable prices, but leaves rate-setting and other policy tools at the discretion of the Federal Open Market Committee.

Political pressure on central banks, even those with strong legal independence, has been shown to result in looser monetary policy (Binder, 2021b). Historical studies of the Federal Reserve suggest that its independence was compromised during the Nixon–Burns era (Drechsel, 2024), and that political alignment, as proxied by campaign donations, can influence the voting behavior of FOMC committee members (Pagliuca, 2025). Complementary recent work by Bianchi et al. (2023) shows that political statements by President Trump during his first term, particularly tweets urging the Federal Reserve to cut rates, were associated with immediate declines in interest rate futures. This suggests that market

participants revised monetary policy expectations in real time in response to perceived political pressure, interpreting these statements as credible threats to the Fed's instrument independence.

Recent statements by Donald Trump during his 2025 presidential campaign have renewed concerns about political interference in monetary policy. On multiple occasions, Trump used the Truth Social platform to criticize Fed Chair Jerome Powell and publicly called for lower interest rates. In one post, he wrote: *"This would be a PERFECT time for Fed Chairman Jerome Powell to cut Interest Rates . . . CUT INTEREST RATES, JEROME, AND STOP PLAYING POLITICS!"*[14] These posts echo prior episodes from Trump's first term and have prompted renewed speculation that, following his re-election, he may seek to remove Powell or replace him with a more compliant successor. According to the *Financial Times*, the Trump campaign has raised the possibility of dismissing Powell "for cause"—citing cost overruns in a Fed building renovation project—or demoting him in favor of a governor more amenable to rate cuts.[15] Although institutional constraints may ultimately limit executive action, these developments suggest that markets could rationally revise their expectations toward more accommodative monetary policy in response to perceived threats to CBI.

In response, Chair Powell has sought to reaffirm the Federal Reserve's autonomy. Following a White House meeting in May 2025, the Fed issued a formal statement emphasizing that "the path of policy will depend entirely on incoming economic information" and that decisions will be made "solely on careful, objective, and non-political analysis."[16] Nonetheless, investors may still perceive a risk that political interference could alter policy outcomes, either through direct pressure or anticipated changes in leadership.

> **H2a (CBI and Rate Expectations):** *Investors who bet on Powell's removal expect systematically lower short-term interest rates than those who do not,*

[14] Donald J. Trump, Truth Social, April 4, 2025. Available at: `https://truthsocial.com/@realDonaldTrump/posts/114280322706682564`. For a full list of posts related to political pressure on the Federal Reserve, see Appendix B.

[15] "Trump spooks markets with threat to sack Fed chair Powell," *Financial Times*, July 17, 2025. Available at: `https://www.ft.com/content/18f4a61c-602a-43f2-b204-5a1a4dbd434f`

[16] Board of Governors of the Federal Reserve System (May 29, 2025). "Statement on Chair Powell's meeting with the President," `https://www.federalreserve.gov/newsevents/pressreleases/other20250529a.htm`

consistent with concerns about political pressure on the Federal Reserve.

3.3 Central Bank Independence and Macroeconomic Fundamentals

Finally, we examine whether beliefs about CBI are systematically linked to broader macroeconomic expectations. A longstanding concern in the literature is that elected governments may exert pressure on central banks to pursue looser monetary policy in the short run to boost economic activity ahead of elections. This creates a classic time-inconsistency problem (Kydland and Prescott, 1977; Barro and Gordon, 1983; Rogoff, 1985), where policymakers favor short-term stimulus at the cost of long-run inflation control. Theoretical and empirical work has shown that such political interference can undermine policy credibility and lead to persistently higher inflation (Alesina and Summers, 1993; Cukierman, 1994).

A central bank perceived as lacking independence may be expected to tolerate inflation or maintain accommodative policy for political reasons, especially during election cycles. This loss of credibility can raise long-run inflation expectations and prompt investors to demand higher long-term interest rates as compensation for inflation risk and uncertainty about future policy. Such beliefs would be consistent with the theoretical trade-off between short-run stimulus and long-run price stability under a politically influenced monetary regime.

> **H2b (CBI and Macroeconomic Beliefs):** *Agents who expect lower CBI anticipate looser monetary policy, higher long-run inflation, and elevated long-term interest rates due to diminished policy credibility.*

4 Empirical Evidence

4.1 Monetary Policy Expectations and Macroeconomic Beliefs

4.1.1 Inflation Expectations

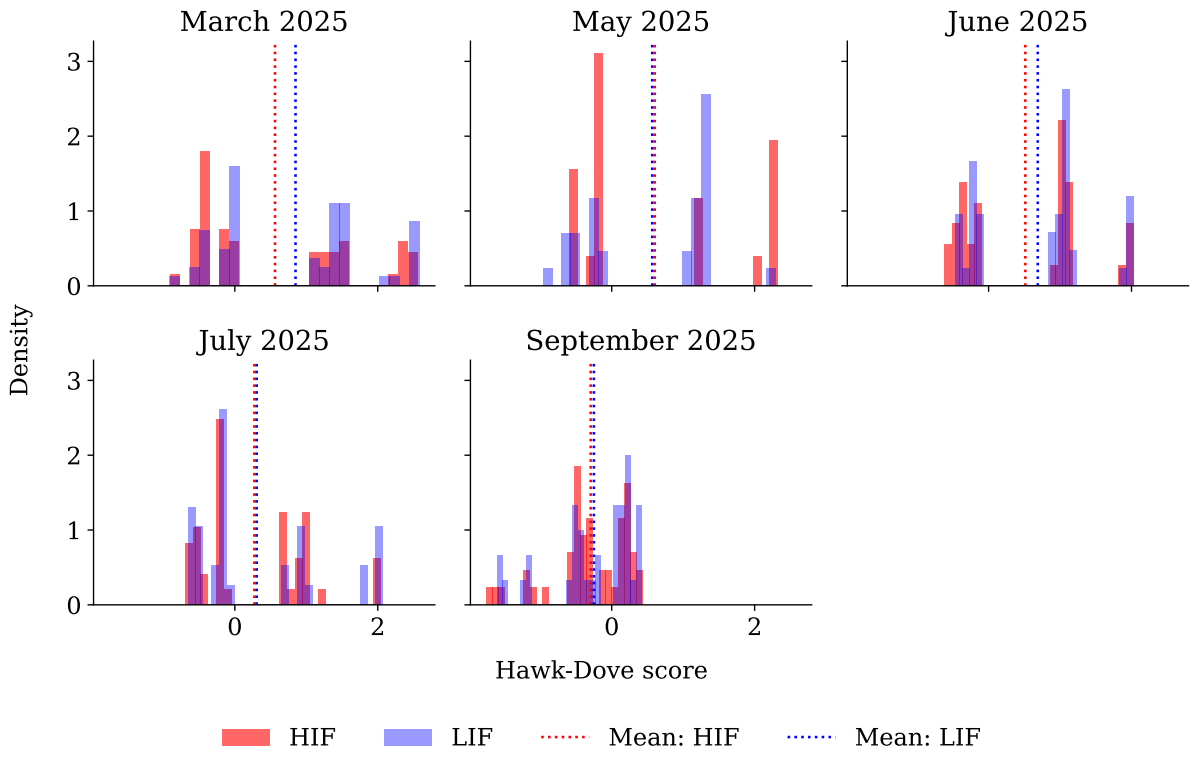
In this section, we examine whether investor expectations about inflation are systematically related to their inferred monetary policy stance. The idea is to test whether agents who expect high inflation tend to adopt a more hawkish stance, and those who expect low inflation tend to be more dovish, consistent with Taylor-rule reasoning. To do so, we use Polymarket contracts predicting either high or low inflation outcomes for the months preceding the March, May, June, July, and September 2025 FOMC meetings.

We define high inflation (*HIF*) as a positive net "Yes" position on contracts predicting February, April, May, June, or August inflation above 3.1%, 2.7%, 2.6%, 2.6%, or 3.0%, respectively. Low inflation (*LIF*) is defined as a "Yes" position on contracts predicting inflation at or below 2.7%, 2.3%, 2.2%, 2.2%, or 2.6% for the same months. These thresholds align with contract definitions on Polymarket and reflect the range of inflation scenarios investors were able to trade on before each FOMC meeting. By matching participation in these inflation markets with hawk-dove scores estimated from FOMC prediction markets, we test whether monetary policy stance differs significantly between high- and low-inflation agents.

Figure 4 plots the distribution of hawk-dove scores for agents with positive net positions on high inflation (*HIF*) and low inflation (*LIF*) outcomes, for each of the FOMC meetings. Each group is defined based on whether an agent held a net "Yes" position in a Polymarket contract predicting above- or below-threshold inflation outcomes for the corresponding reference month. We restrict attention to agents who participated in both FOMC and inflation prediction markets to enable direct mapping between macroeconomic expectations and monetary policy stance.

This analysis serves as a test of **Hypothesis H1**, which posits that agents with stronger inflation expectations should anticipate tighter or looser monetary policy in line with Taylor-rule logic. Specifically, agents betting on high inflation should expect

Figure 4: Hawk-dove Score and Inflation



Notes. The plot shows the distribution of hawk-dove scores for agents with high inflation expectation (*HIF*) and low inflation expectation (*LIF*). *HIF* (*LIF*) is a dummy variable equal to one if a Polymarket agent holds a positive net "Yes" position on high (low) inflation for the relevant month. Specifically, high (low) inflation is defined as: *February* inflation $> 3.1\%$ ($\leq 2.7\%$), *April* inflation $\geq 2.7\%$ ($\leq 2.3\%$), *May* inflation $\geq 2.6\%$ ($\leq 2.2\%$), *June* inflation $\geq 2.6\%$ ($\leq 2.2\%$), and *August* inflation $\geq 3.0\%$ ($\leq 2.6\%$) corresponding to the FOMC meeting months of March, May, June, July, September 2025, respectively. A positive hawk-dove score indicates a more dovish stance, while a negative score indicates a more hawkish stance.

more hawkish monetary policy, while those betting on low inflation should expect a more dovish stance. Visually, Figure 4 shows that agents in the *LIF* group have significantly higher hawk-dove scores (i.e., more dovish expectations) relative to the *HIF* group for the March and June 2025 meetings. However, this pattern does not hold for May, July, and September 2025 meeting, where the average scores of the two groups are similar.

To formally test this relationship, we estimate the following specification:

$$HawkDove_{i,t} = \alpha + \beta_1 \cdot HIF_{i,t} + \beta_2 \cdot LIF_{i,t} + \beta_3 \cdot SOP_i + \beta_4 \cdot (HIF_{i,t} \times SOP_i) + \beta_5 \cdot (LIF_{i,t} \times SOP_i) + \gamma_1 \log(volume_i) + \gamma_2 \cdot profit_i + \gamma_3 \cdot \#markets_i + \varepsilon_{i,t} \quad (6)$$

Table 3 presents the results. We find that the coefficient on *LIF* is consistently positive and statistically significant across March, June and July FOMC meeting, indicating that agents who expect low inflation are also more dovish in their monetary policy beliefs, relative to agents that did not participate in the inflation market. By contrast, the coefficient on *HIF* is generally smaller and only significant in September, with inconsistent signs across meetings. These results support Hypothesis H1 by showing that inflation expectations, particularly on the dovish side, are reflected in trading behavior. However, the relatively muted effect of high inflation bets suggests that not all inflation expectations are fully priced into monetary policy forecasts on decentralized markets. The evidence suggests that beliefs about low inflation are generally associated with expectations of looser monetary policy.

Table 3: Monetary Policy Stance and Inflation

	March 2025		May 2025		June 2025		July 2025		September 2025	
HIF	0.555	-2.653	9.714	4.529	4.488	4.597	8.076	9.691*	-14.373***	-10.993**
	(5.840)	(6.031)	(7.156)	(6.251)	(6.491)	(6.993)	(5.019)	(5.476)	(4.843)	(5.068)
LIF	22.479***	20.680***	12.272**	6.398	21.475***	21.235***	7.070	10.769*	-6.843	-3.986
	(3.950)	(4.192)	(5.999)	(6.230)	(4.681)	(4.827)	(5.831)	(5.909)	(5.727)	(6.136)
$HIF \times SOP$		31.064***		0.000		17.089**		7.340		-13.941**
		(8.449)		(0.000)		(7.634)		(7.923)		(5.757)
$LIF \times SOP$		1.441		19.850***		4.555		-37.396***		-11.546
		(11.667)		(6.947)		(5.720)		(6.051)		(8.709)
log(volume)		0.417***		1.728***		-1.805***		0.066		-0.901***
		(0.112)		(0.128)		(0.113)		(0.107)		(0.096)
profit		0.000*		0.000***		-0.000		-0.000		-0.000
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
#markets		-0.002		-0.019*		0.123***		-0.058***		0.018**
		(0.009)		(0.010)		(0.010)		(0.008)		(0.007)
SOP		9.012***		7.511***		9.042***		5.509***		-3.473**
		(2.622)		(2.538)		(1.347)		(1.355)		(1.429)
const	-0.049	-3.278***	-0.030	-13.038***	-0.044	9.903***	-0.020	1.276	0.036	6.670***
	(0.175)	(0.804)	(0.222)	(0.855)	(0.193)	(0.758)	(0.173)	(0.823)	(0.163)	(0.691)
R-squared Adj.	0.001	0.003	0.000	0.019	0.001	0.017	0.000	0.003	0.000	0.004
N	27205	27205	16855	16855	22457	22457	27916	27916	31471	31471

Notes. The table reports coefficients from regressions of the hawk-dove percentile on agents' stance toward inflation, along with a set of control variables. *HIF* (*LIF*) is a dummy variable equal to one if a Polymarket agent holds a positive net "Yes" position on high (low) inflation for the relevant month. Specifically, high (low) inflation is defined as: *February* inflation $> 3.1\%$ ($\leq 2.7\%$), *April* inflation $\geq 2.7\%$ ($\leq 2.3\%$), *May* inflation $\geq 2.6\%$ ($\leq 2.2\%$), *June* inflation $\geq 2.6\%$ ($\leq 2.2\%$), and *August* inflation $\geq 3.0\%$ ($\leq 2.6\%$), corresponding to the FOMC meeting months of March, May, June, July, and September 2025, respectively. *SOP* is a dummy variable indicating whether a Polymarket agent is a sophisticated investor, defined as being in the top 1% in terms of profit on Polymarket and having invested in more than five markets. *log(volume)* is the log of an agent's total collateral volume on Polymarket. *profit* is the agent's total profit, and *# markets* is the number of markets the agent has bet on. White heteroscedasticity-robust standard errors are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% significance levels, respectively.

4.1.2 Recession Risk

We now turn to expectations about recession risk as a second macroeconomic belief relevant to monetary policy stance. If agents anticipate a recession, they may reasonably expect the Federal Reserve to adopt a more accommodative policy stance, consistent with Taylor-rule logic. To test this, we examine whether agents' positions in a Polymarket contract predicting a U.S. recession in 2025 are systematically associated with their inferred hawk-dove scores.

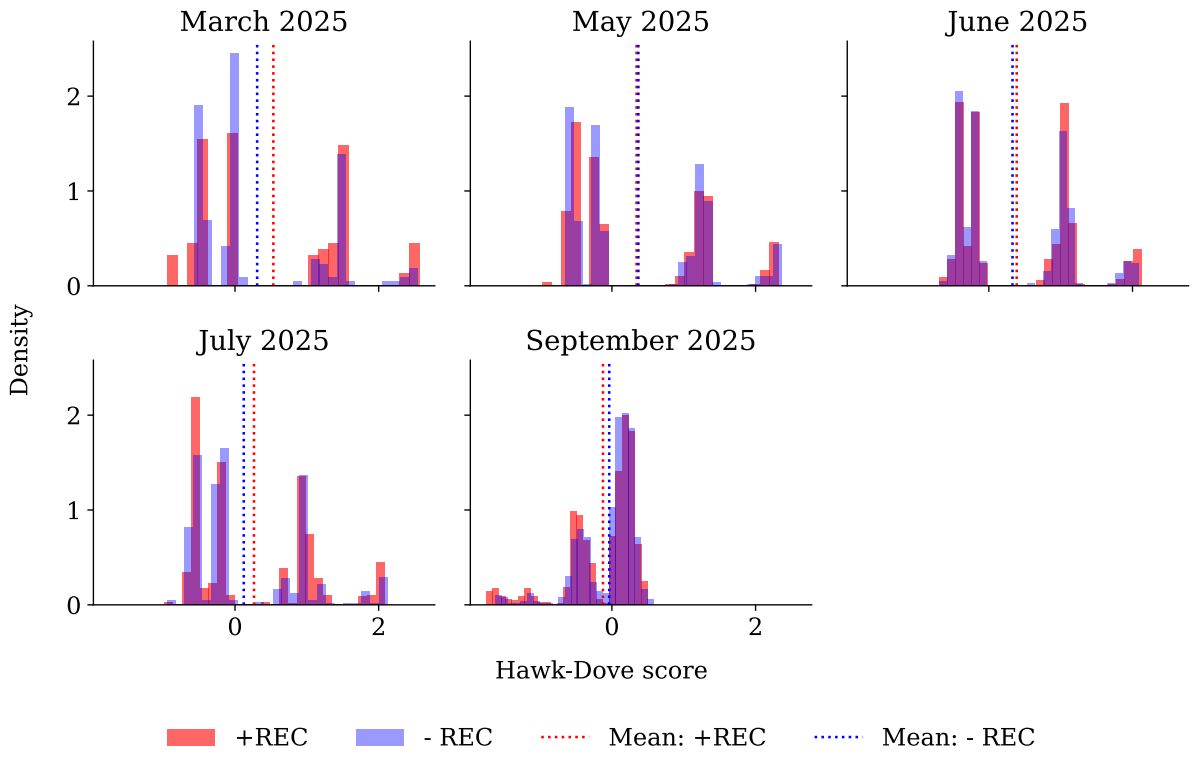
Figure 5 plots the distribution of hawk-dove scores for agents who took a positive (*+REC*) or negative (*-REC*) net 'Yes' position in the Polymarket contract *'Will the U.S. enter a recession in 2025?'*, for each of the March, May, June, July, and September 2025 FOMC meetings. A higher hawk-dove score corresponds to more dovish monetary policy expectations. The figure includes only the subset of agents who traded in both at least one FOMC prediction market and the recession risk market, thereby allowing us to match their macroeconomic beliefs to their monetary policy stance.

This analysis provides a visual test of **Hypothesis H1**, which posits that agents who anticipate a recession—an indicator of weak macroeconomic fundamentals—should expect looser monetary policy consistent with Taylor-rule logic. However, in contrast to the Fed independence results, we observe only modest differences in hawk-dove scores between *+REC* and *-REC* agents across all three meetings. The average scores of the two groups are statistically indistinguishable from each other, suggesting no clear systematic relationship between beliefs about macroeconomic outcomes and interest rate expectations in this sample.

These results imply that, at least for the most active macroeconomic contract on Polymarket, investor forecasts of monetary policy are not tightly anchored to contemporaneous expectations about the business cycle. This casts doubt on the extent to which Taylor-rule-type reasoning drives behavior in decentralized prediction markets, and highlights the importance of other factors—such as political pressure—in shaping monetary policy expectations.

To formally test whether macroeconomic expectations shape monetary policy beliefs,

Figure 5: Hawk-dove Score and Recession Risk



Notes. The plot shows the distribution of hawk-dove scores for agents with a positive (+REC) or negative (-REC) net 'Yes' position in the market 'US recession in 2025?' as of the corresponding FOMC meeting date—for the March, May, June, July, and September 2025 FOMC meetings, respectively. A positive hawk-dove score indicates a more dovish stance, while a negative score indicates a more hawkish stance.

we estimate the following specification:

$$HawkDove_{i,t} = \alpha + \beta_1 \cdot +REC_{i,t} + \beta_2 \cdot \text{-}REC_{i,t} + \beta_3 \cdot SOP_i + \beta_4 \cdot (+REC_{i,t} \times SOP_i) + \beta_5 \cdot (\text{-}REC_{i,t} \times SOP_i) + \gamma_1 \log(volume_i) + \gamma_2 \cdot profit_i + \gamma_3 \cdot \#markets_i + \varepsilon_{i,t} \quad (7)$$

The key explanatory variables are $+REC$ and $-REC$, which indicate whether an agent holds a net "Yes" or "No" position, respectively, in the Polymarket contract *"Will the U.S. enter a recession in 2025?"* as of the corresponding FOMC meeting. We focus on this market due to its high liquidity and large overlap with agents who participate in FOMC prediction markets. As in the previous section, SOP_i identifies sophisticated investors, and we include controls for wallet-level trading characteristics.

Table 4 presents regression results examining whether monetary policy stances are

associated with expectations about broader economic fundamentals, specifically the likelihood of a U.S. recession in 2025. Both $+REC$ and $-REC$ coefficients are consistently positive and statistically significant. These results suggest that while agents who trade on recession-related markets tend to be more dovish, recession expectations themselves may not be the primary driver of monetary policy stance. Notably, both agents who expect a recession and those who do not exhibit more dovish stance, indicating that perceptions of recession risk are not the main determinant of agents' monetary policy beliefs. Figure 5 shows the distribution of estimated hawk-dove scores for agents with positive and negative exposures to recession risk. The two distributions are highly similar, reinforcing the idea that recession beliefs alone do not systematically differentiate agents' monetary policy preferences.

Table 4: Monetary Policy Stance and Recession Risk

	March 2025		May 2025		June 2025		July 2025		September 2025	
$+REC$	11.388***	10.134***	4.273**	1.876	7.627***	7.161***	3.470**	6.084***	-3.174**	-2.096
	(3.446)	(3.535)	(1.672)	(1.695)	(1.655)	(1.715)	(1.584)	(1.640)	(1.321)	(1.361)
$-REC$	6.549**	5.081*	5.615***	3.150*	5.228***	4.470**	-0.301	2.006	-0.272	1.218
	(2.576)	(2.629)	(1.783)	(1.833)	(1.747)	(1.819)	(1.459)	(1.507)	(1.394)	(1.428)
$+REC \times SOP$		8.383		-24.723*		-7.367		-15.456*		-3.187
		(12.538)		(13.325)		(11.182)		(9.028)		(8.537)
$-REC \times SOP$		22.720***		-1.960		24.217***		10.225		-11.548
		(5.359)		(9.593)		(5.619)		(10.214)		(8.043)
$log(volume)$		0.418***		1.724***		-1.821***		0.065		-0.913***
		(0.112)		(0.128)		(0.113)		(0.107)		(0.096)
$profit$		0.000*		0.000***		-0.000		-0.000		-0.000
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
$\#markets$		-0.005		-0.023**		0.113***		-0.063***		0.019**
		(0.009)		(0.011)		(0.010)		(0.008)		(0.008)
SOP		9.388***		9.192***		8.815***		5.807***		-3.337**
		(2.632)		(2.614)		(1.362)		(1.361)		(1.460)
$const$	-0.088	-3.232***	-0.246	-13.001***	-0.261	10.159***	-0.060	1.333	0.082	6.754***
	(0.175)	(0.805)	(0.225)	(0.857)	(0.194)	(0.761)	(0.174)	(0.823)	(0.165)	(0.693)
R-squared Adj.	0.001	0.002	0.001	0.019	0.002	0.017	0.000	0.004	0.000	0.004
N	27205	27205	16855	16855	22457	22457	27916	27916	31471	31471

Notes. The table reports coefficients from regressions of the hawk-dove percentileon agents' stance toward Federal Reserve independence, along with a set of controls. $+REC$ ($-REC$) is a dummy variable indicating whether a Polymarket agent has positive (negative) net yes position on market 'US recession in 2025?' as of the corresponding FOMC meeting date (March, May, June, July or September 2025). SOP is a dummy variable indicating whether a Polymarket agent is a sophisticated investor, defined as being in the top 1% in terms of profit on Polymarket and having invested in more than five markets. *log(volume)* is the log of an agent's total collateral volume on Polymarket. *profit* is the agent's total profit, and $\#$ *markets* is the number of markets the agent has bet on. White heteroscedasticity-robust standard errors are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% significance levels, respectively.

While Table 4 shows that agents who trade in the recession market exhibit more dovish monetary policy stances on average, it does not reveal a clear directional bias between

those who expect a recession ($+REC$) and those who do not ($-REC$). One limitation of this approach is that it relies on cross-sectional comparisons across agents with potentially heterogeneous priors. That is, differences in hawk-dove scores may reflect unobserved individual beliefs about the broader economy—such as inflation expectations, labor market assessments, or other macro signals—rather than the causal impact of recession risk alone.

In other words, agents who take opposing views on recession risk may do so not because of different reactions to identical information, but because they possess different information sets or interpret signals through different belief systems. This can attenuate or obscure the estimated relationship between macroeconomic expectations and monetary policy stance.[17]

To overcome this limitation, we next turn to a case study that leverages within-agent variation. In particular, we examine how agents' monetary policy expectations respond when their perceived recession risk changes due to a discrete, observable event: the imposition of new tariffs during the "Liberation Day" trade dispute in April 2025. This within-agent design holds constant individual priors and isolates the causal effect of updated recession risk beliefs on monetary policy stance.

4.1.3 Case Study: Liberation Day Tariffs and Recession Risk

On April 2, 2025—branded by the White House as 'Liberation Day tariffs'—President Trump signed Executive Order 14257, imposing 10% baseline tariff on U.S. imports and "reciprocal" tariffs (up to 50% or more) on imports from roughly 60 targeted countries. Panel A of Figure 6 shows the market-implied probability of a U.S. recession in 2025 from Polymarket. Immediately following the announcement, the market implied probability of recession spiked sharply—reaching as high as 65% in the days after the 'Liberation day'. In this part, we use the Liberation Day tariffs as an exogenous shock to recession risk to identify the effect of perceived recession risk on agents' monetary policy stance.

We estimated agents' monetary policy stance before and after the Liberation Day

[17] Formally, suppose agent i has hawk-dove score $score_i = \alpha_i + \beta \cdot recession\ risk_i$, while agent j has $score_j = \alpha_j + \beta \cdot recession\ risk_j$. If $\alpha_i \neq \alpha_j$, the difference in scores reflects both the treatment effect β and the difference in priors $(\alpha_i - \alpha_j)$. Only under the assumption that priors are identical or uncorrelated with the recession belief can the observed difference isolate β.

tariff. Panel B of Figure 6 compares the distribution of the hawk-dove score on March 29, 2025 and on April 7, 2025 for the May 2025 FOMC meeting. The figure shows a modest outward shift in the distribution following the tariff announcement, indicating more polarized views among agents, particularly in the tail. This divergence in tail behavior reflects heterogeneity in how agents interpret the macroeconomic consequences of the tariff shock.

To explain the bimodal distribution following the Liberation Day tariffs, market commentators have noted[18] that the directional impact on monetary policy expectations depends on how agents weigh recession risks relative to inflationary pressures. Some may anticipate a downturn due to increased trade barriers and adopt a more dovish stance, consistent with a Taylor rule response to declining output. Others may emphasize the inflationary effects of tariffs, particularly on imported goods, and therefore adopt a more hawkish stance. The polarization of hawk-dove scores observed in Panel B is consistent with this interpretation.

To formally test whether changes in perceived recession risk causally affect monetary policy expectations, we estimate the following specification:

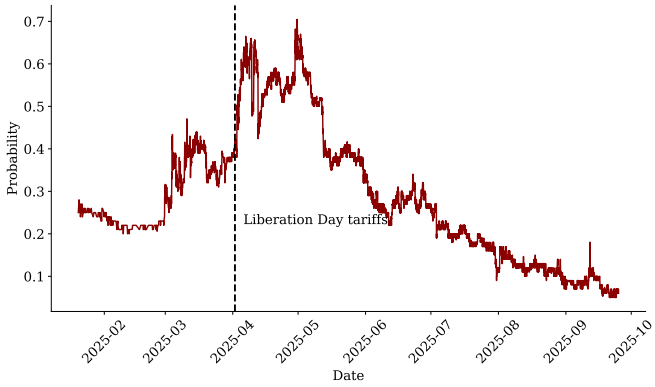
$$\Delta HawkDove_i = \alpha + \beta_1 \cdot \Delta REC_i + \beta_2 \cdot (\Delta REC_i \times SOP_i) + \gamma_1 \log(volume_i) + \gamma_2 \cdot profit_i + \gamma_3 \cdot \#markets_i + \beta_3 \cdot SOP_i + \varepsilon_i \quad (8)$$

The dependent variable, $\Delta HawkDove_i$, is the change in hawk-dove percentile for agent i between March 29 and April 7, 2025, covering the period around the Liberation Day tariff announcement. A positive value reflects a shift toward a more dovish monetary policy stance. The key explanatory variable, ΔREC_i, is a binary indicator equal to one if the agent increased their net "Yes" exposure in the "U.S. recession in 2025?" prediction market over this interval, indicating an upward revision in their recession probability. The interaction term $\Delta REC_i \times SOP_i$ tests whether this relationship differs across sophisticated agents, where SOP_i is a dummy equal to one for agents in the top 1% of profitability and

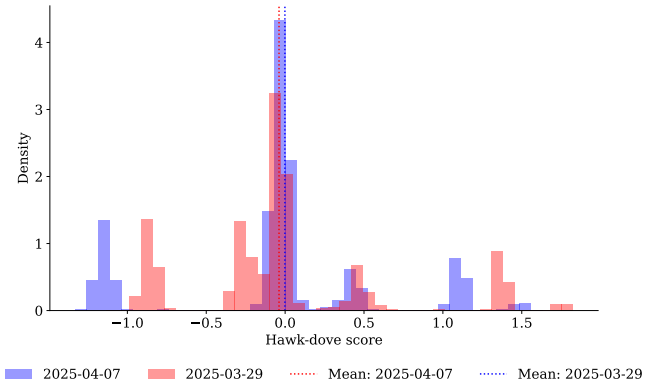
[18] See *The Federal Reserve and Liberation Day*, EFG International (2025). Available at: `https://www.efginternational.com/us/insights/2025/The-Federal-Reserve-and-Liberation-Day.html`

Figure 6: Liberation Day Tariff and Recession Risk

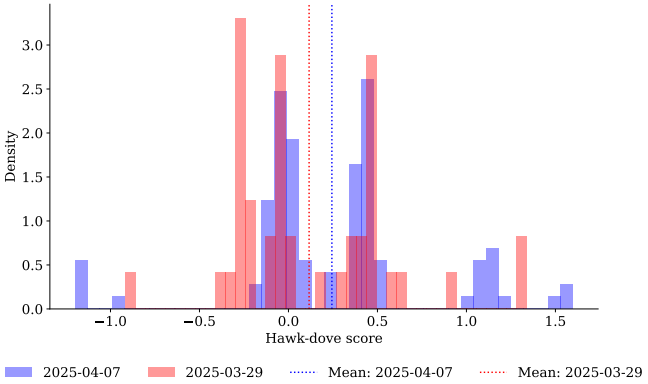
Panel A: Market-Implied Recession Probability from Polymarket



Panel B: Hawk-Dove Scores Distribution Pre- and Post-Tariff Announcement



Panel C: Hawk-Dove Score Distribution of Recession-Sensitive Agents



Notes. This figure shows how the announcement of Liberation Day tariffs on April 2, 2025, affected market expectations of recession risk and agents' monetary policy stance. Panel A plots the price of the "Yes" token in the narket 'U.S. recession in 2025?' Panel B compares the distribution of hawk-dove scores across all agents before (March 29, 2025) and after (April 7, 2025) the tariff event, for the May 2025 FOMC meeting. Panel C shows the distribution of hawk-dove scores for agents who priced in recession risk—defined as those with increased net positive positions in the 'U.S. recession in 2025' market following the tariffs— before (March 29, 2025) and after (April 7, 2025)

who have traded in more than five markets. We also control for wallet-level characteristics: the log of total collateral volume, cumulative profit, and number of distinct markets traded.

This specification leverages within-agent variation by tracking changes in monetary policy stance for the same individual, thereby holding fixed unobservable priors and mitigating omitted variable bias.

Table 5: Recession Risk Perception and Monetary Policy Stance

	Changes in Monetary Policy Stance	
ΔREC	8.915**	9.690**
	(4.214)	(4.327)
$\Delta REC \times SOP$		-18.967***
		(5.320)
$log(volume)$		-0.075
		(0.131)
$profit$		0.000**
		(0.000)
$\#markets$		0.010
		(0.011)
SOP		0.019
		(3.179)
$const$	-1.739***	-1.460
	(0.248)	(0.920)
R-squared Adj.	0.002	0.002
N	5618	5614

Notes. The table reports coefficients from regressions of the change in hawk-dove percentile between March 29, 2025, and April 7, 2025, surrounding the announcement of Liberation Day tariffs, for the May 2025 FOMC meeting. ΔREC is a dummy variable equal to 1 if a Polymarket agent increased their net "Yes" position in the market 'U.S. recession in 2025?' over this period. *SOP* is a dummy variable indicating whether a Polymarket agent is a sophisticated investor, defined as being in the top 1% in terms of profit on Polymarket and having invested in more than five markets. *log(volume)* is the log of an agent's total collateral volume on Polymarket. *profit* is the agent's total profit, and *# markets* is the number of markets the agent has bet on. White heteroscedasticity-robust standard errors are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% significance levels, respectively.

Table 5 presents regression results testing whether agents who perceived greater recession risk following the Liberation Day tariffs became more dovish in their monetary policy stance. The coefficient on ΔREC, which captures agents who increased their net "Yes" positions in the "U.S. recession in 2025?" market between March 29 and April 7, is positive in both specifications, consistent with the idea that heightened recession concerns

are associated with a shift toward a more dovish stance.

These findings support the interpretation that recession risk beliefs influence monetary policy stance, especially when identified through within-agent variation that accounts for unobservable differences in priors or information sets. Although the average effect across all agents is modest and statistically insignificant, the significant interaction term indicates that more informed agents adjusted their expectations in response to the tariff shock in a manner consistent with macroeconomic fundamentals. This behavior aligns with standard monetary policy reaction functions and provides evidence in support of **Hypothesis H1**, which posits that investor expectations of future interest rates respond to macroeconomic news in a Taylor-rule-consistent manner. The result also complements survey-based evidence in Carvalho and Nechio (2014) that informed individuals form expectations more in line with textbook macroeconomic models.

4.2 Monetary Policy Expectations and CBI

Having established that investor expectations reflect macroeconomic fundamentals, we next examine how they respond to political pressures that threaten central bank independence. Our analysis begins with an intra-day case study of the events of 16 July 2025, when President Trump reportedly waved a draft termination letter for Federal Reserve Chair Jerome H. Powell during a meeting with House Republicans in the Oval Office. At 13:11 PM, Representative Anna Paulina Luna posted on social media that President Trump was "firing" Powell, referencing the existence of the draft letter.[19]

This news immediately triggered a sharp response across multiple Polymarket contracts. As shown in the Panel A of Figure 7, the probability of Powell being removed as Fed Chair surged, accompanied by a synchronized spike in the implied probabilities of both a 25 bps and 50 bps rate cut at the upcoming July FOMC meeting. These patterns provide direct, time-stamped evidence that market participants update their monetary policy expectations in real time in response to perceived threats to CBI. Although the effects partially dissipate later in the day, the event illustrates how political shocks can rapidly influence beliefs about future interest rates. Other traditional financial markets, also reacted to the CBI shock. Dollar exchange rate depreciated, 3-month treasury yields decreased, the treasury spread spikes up, while the equity market drops initially and recovers.

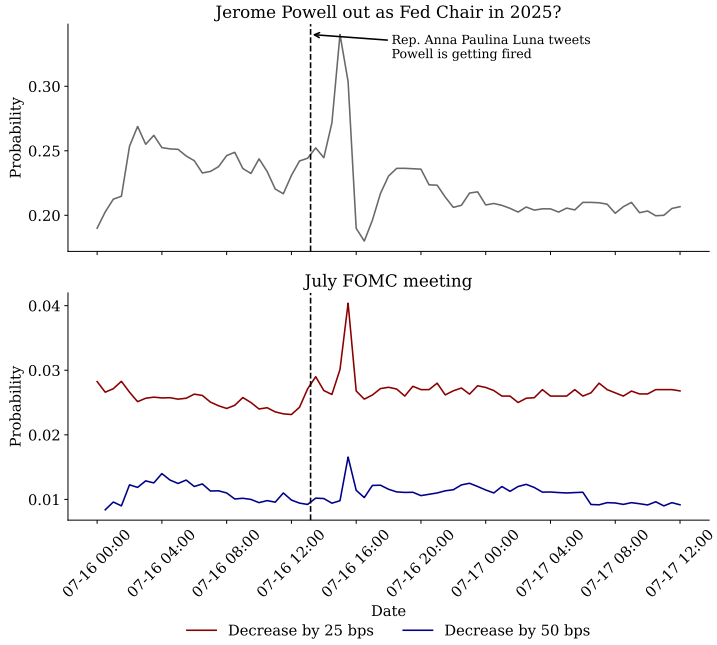
Panel B of Figure 7 shows that traditional financial markets responded in a manner consistent with expectations of compromised central bank independence. The dollar depreciated by approximately 9 basis points against major currencies, reflecting anticipated monetary easing. The 3-month Treasury yield declined modestly, consistent with expectations of near-term rate cuts. The Treasury yield spread (10-year minus 3-month) widened by roughly 0.5 basis points, indicating that while markets priced in near-term accommodation, they simultaneously anticipated higher long-run inflation risk—precisely the pattern predicted by time-inconsistency models of politically pressured monetary policy. Equity markets exhibited a more complex response: the S&P 500 initially declined

[19] https://x.com/RepLuna/status/1945291045744378153

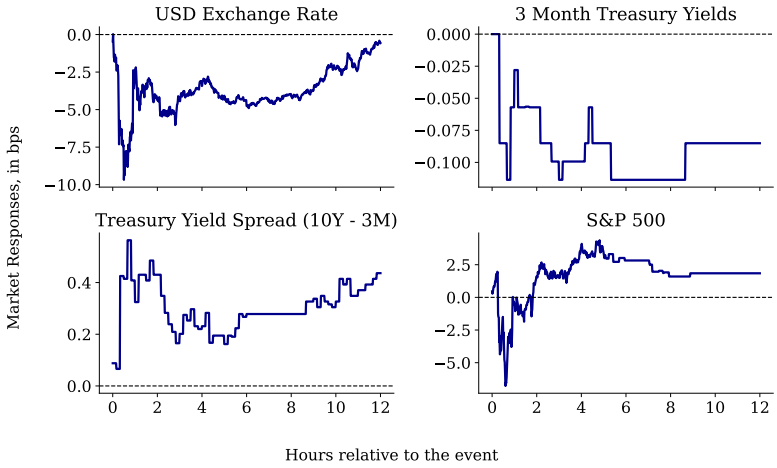
by approximately 5 basis points and subsequently recovered.

Figure 7: Trump's Draft Firing Letter and Market Responses

Panel A: Polymarket Responses



Panel B: Foreign Exchange, Treasury Yields, and Equity Market Responses



Notes. This figure displays market responses to the news of President Trump's draft letter to remove Jerome H. Powell as Chair of the Federal Reserve. Panel A shows Polymarket-implied probabilities for the market titled "Jerome Powell out as Fed Chair in 2025?" (upper panel), and for 25-basis-point and 50-basis-point rate cuts at the July 2025 FOMC meeting (lower panel). The vertical dashed line marks July 16, 2025, at 13:11 PM, when Rep. Anna Paulina Luna tweeted that President Trump was "firing" Jerome H. Powell (`https://x.com/RepLuna/status/1945291045744378153`). The tweet referenced a reported event in which President Trump waved a draft letter firing Powell during a meeting in the Oval Office with House Republicans. Panel B shows the responses of key financial markets over a 12-hour window following the event: the USD exchange rate, 3-month U.S. Treasury yields, the Treasury yield spread (10-year minus 3-month), and the S&P 500 index. All responses are measured in basis points.

We now turn to hawk-dove scores to examine investor-level expectations of monetary policy. These scores are derived from agents' trading behavior in FOMC rate markets and reflect the latent monetary policy stance implied by their portfolio positions. As previously described in Section 2, we normalize each agent's score to a percentile scale from -50 (most hawkish) to $+50$ (most dovish), based on the cross-sectional distribution of positions at each FOMC event. This approach allows for consistent comparison of investor beliefs across time, accounting for changes in the overall distribution of expectations. By linking these scores to directional bets on CBI, we can test whether beliefs about the Fed's institutional autonomy are systematically associated with monetary policy stance.

Figure 8 plots the distribution of hawk-dove scores for agents who took a positive (*+FJP*) or negative (*-FJP*) net 'Yes' position in the Polymarket contract *'Will Trump remove Jerome Powell in 2025?'*, for each of the March, May, and June 2025 FOMC meetings. A higher hawk-dove score corresponds to more dovish monetary policy expectations. The figure includes only the subset of agents who both traded in at least one FOMC prediction market and held a directional position in the Powell dismissal market, thereby allowing us to match their views on Federal Reserve independence to their monetary policy stance.

In each month, the average hawk-dove score is higher for agents who bet in favor of Powell's removal, indicating that these *+FJP* agents tend to hold more dovish interest rate expectations than those betting against it (*-FJP* agents). This visual pattern provides preliminary evidence in support of **Hypothesis H2a**, suggesting that expectations about political interference may systematically shape investor beliefs about future interest rates.

While the histogram offers an intuitive starting point for analyzing this relationship, it does not account for confounding investor-level characteristics such as trading volume, profitability, or sophistication. To address this, we now turn to a formal regression framework that tests whether belief in Powell's removal predicts a more dovish monetary policy stance after conditioning on these factors.

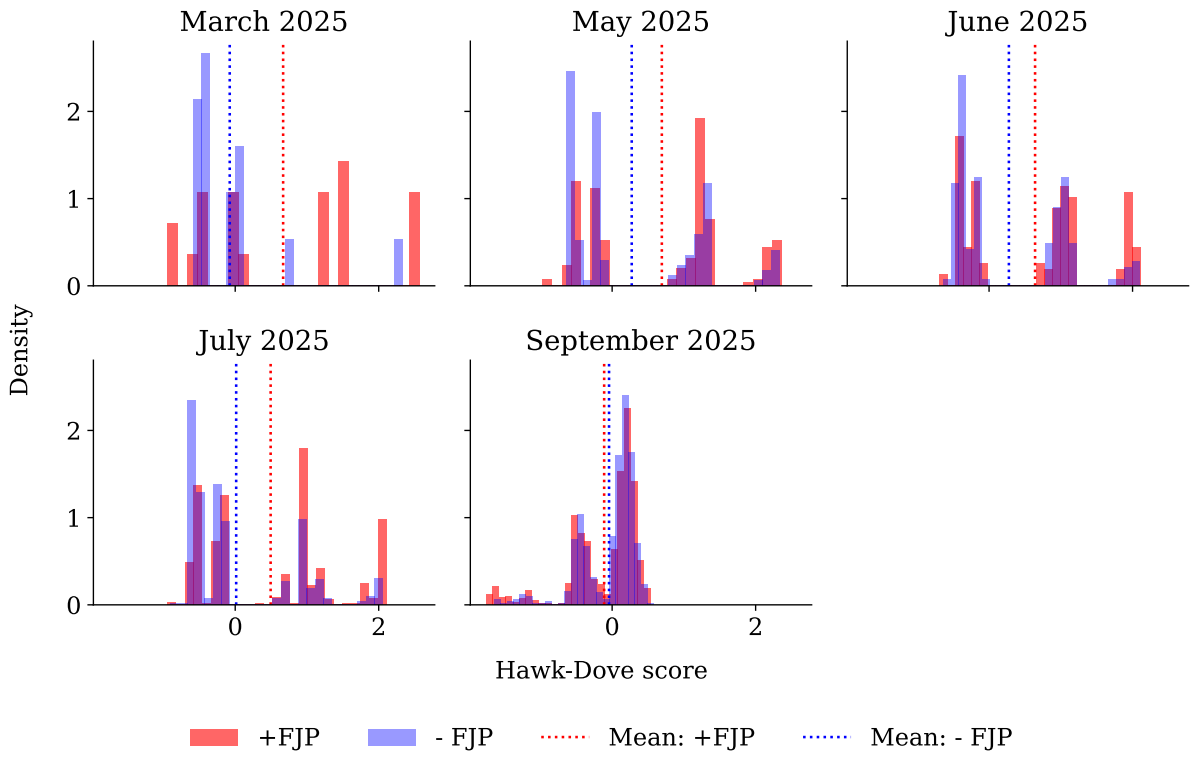
To formally test the link between expectations about Federal Reserve independence

and interest rate forecasts, we estimate the following specification:

$$\begin{aligned} \textit{HawkDove}_{i,t} = \alpha + \beta_1 \cdot \textit{+FJP}_{i,t} + \beta_2 \cdot \textit{-FJP}_{i,t} + \beta_3 \cdot \textit{SOP}_i + \beta_4 \cdot (\textit{+FJP}_{i,t} \times \textit{SOP}_i) + \beta_5 \cdot (\textit{-FJP}_{i,t} \times \textit{SOP}_i) \\ + \gamma_1 \log(\textit{volume}_i) + \gamma_2 \cdot \textit{profit}_i + \gamma_3 \cdot \#\textit{markets}_i + \varepsilon_{i,t} \quad (9) \end{aligned}$$

The dependent variable, $\textit{HawkDove}_{i,t}$, is the hawk-dove percentile score of wallet i at FOMC meeting t, based on latent ideological estimates from trading activity. The key explanatory variable, $+FJP$, indicates whether an agent holds a positive net "Yes" position in the market "Will Trump remove Jerome Powell in 2025?" at the time of the meeting. The variable $-FJP$ is a dummy indicating a net "No" position. $\textit{SOP}_i$ is a dummy equal to 1 for sophisticated agents—defined as those in the top 1% by profit and with trades in more than five markets. We also include controls for the log of total collateral volume, total profit, and number of distinct markets the agent has traded in.

Figure 8: Hawk-dove Score and Federal Reserve Independence



Notes. The plot shows the distribution of hawk-dove scores for agents with a positive (+FJP) or negative (-FJP) net 'Yes' position in the market 'Will Trump remove Jerome Powell in 2025?' as of the corresponding FOMC meeting date—for the March, May, June, July, and September 2025 FOMC meetings, respectively. A positive hawk-dove score indicates a more dovish stance, while a negative score indicates a more hawkish stance.

Table 6: Monetary Policy Stance and Federal Reserve Independence

	March 2025		March 2025 (No Hedger)		May 2025		May 2025 (No Hedger)		June 2025			June 2025 (No Hedger)		July 2025	July 2025 (No Hedger)		September 2025		September 2025 (No Hedger)	
$+FJP$	12.195	8.497	13.051	10.820	16.417***	14.418***	25.506***	24.484***	16.274***	15.971***	27.163***	26.106***	11.960***	13.872***	26.733***	28.372***	-1.295	-0.114	23.213***	23.762***
	(8.601)	(8.871)	(14.181)	(14.402)	(2.448)	(2.521)	(2.591)	(2.685)	(2.950)	(3.026)	(3.543)	(3.663)	(1.416)	(1.442)	(1.459)	(1.469)	(1.275)	(1.323)	(1.508)	(1.529)
$-FJP$	-7.692	-9.427	-30.499***	-31.847***	1.490	-2.904	-16.888***	-20.768***	0.181	-0.089	-20.352***	-24.001***	-7.857***	-5.870***	-24.613***	-22.651***	-0.082	1.985	-14.336***	-12.969***
	(8.494)	(8.535)	(3.417)	(3.633)	(2.978)	(3.085)	(4.544)	(4.606)	(3.242)	(3.461)	(3.977)	(3.864)	(1.699)	(1.742)	(1.771)	(1.785)	(1.391)	(1.421)	(2.147)	(2.192)
$+FJP \times SOP$		23.267**		-0.000		-32.646**		-0.000***		15.451**		14.243***		-4.928		-8.018		6.103		10.872*
		(9.205)		(0.000)		(15.641)		(0.000)		(7.384)		(3.902)		(8.592)		(13.756)		(6.948)		(5.955)
$-FJP \times SOP$		-0.000***		0.000		16.319*		23.943*		12.982		33.103***		16.344*		24.142*		-25.750***		-9.672
		(0.000)		(0.000)		(9.523)		(14.302)		(9.330)		(11.871)		(9.908)		(14.661)		(7.357)		(15.417)
$log(volume)$		0.440***		0.432***		1.724***		1.751***		-1.816***		-1.829***		0.049		0.033		-0.923***		-0.954***
		(0.112)		(0.112)		(0.127)		(0.128)		(0.113)		(0.114)		(0.107)		(0.108)		(0.096)		(0.098)
$profit$		0.000*		0.000**		0.000***		0.000***		-0.000		-0.000*		-0.000		0.000		-0.000		-0.000
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
$\#markets$		-0.000		-0.000		-0.023**		-0.023**		0.120***		0.121***		-0.063***		-0.060***		0.016**		0.020***
		(0.009)		(0.009)		(0.010)		(0.010)		(0.010)		(0.010)		(0.008)		(0.008)		(0.007)		(0.008)
SOP		10.174***		10.187***		7.872***		7.804***		8.777***		8.799***		5.312***		5.319***		-3.367**		-3.330**
		(2.556)		(2.556)		(2.609)		(2.609)		(1.362)		(1.362)		(1.370)		(1.370)		(1.459)		(1.460)
$const$	-0.004	-3.489***	-0.004	-3.431***	-0.189	-13.010***	-0.189	-13.217***	-0.101	10.046***	-0.101	10.106***	-0.143	1.392*	-0.143	1.439*	0.039	6.848***	0.039	6.990***
	(0.175)	(0.805)	(0.175)	(0.806)	(0.223)	(0.854)	(0.223)	(0.858)	(0.193)	(0.759)	(0.193)	(0.760)	(0.174)	(0.824)	(0.174)	(0.827)	(0.165)	(0.695)	(0.165)	(0.707)
R-squared Adj.	0.000	0.002	0.000	0.002	0.003	0.021	0.006	0.024	0.002	0.018	0.004	0.020	0.005	0.009	0.017	0.020	-0.000	0.004	0.008	0.012
N	27205	27205	27182	27182	16855	16855	16688	16688	22457	22457	22305	22305	27916	27916	27422	27422	31471	31471	30594	30594

Notes. The table reports coefficients from regressions of the hawk-dove percentileon agents' stance toward Federal Reserve independence, along with a set of controls. In the column labeled '(no hedgers),' we exclude hedge traders, defined as (a) agents who voted YES on Trump firing Powell and NO (or YES on No Change) on a rate cut, and (b) agents who voted NO on Trump firing Powell and YES on a rate cut (or NO on No Change). *+FJP* (*-FJP*) is a dummy variable indicating whether a Polymarket agent has positive (negative) net yes position on market 'Will Trump remove Jerome Powell in 2025?' as of the corresponding FOMC meeting date (March, May, June, July or September 2025). *SOP* is a dummy variable indicating whether a Polymarket agent is a sophisticated investor, defined as being in the top 1% in terms of profit on Polymarket and having invested in more than five markets. *log(volume)* is the log of an agent's total collateral volume on Polymarket. *profit* is the agent's total profit, and *# markets* is the number of markets the agent has bet on. White heteroscedasticity-robust standard errors are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% significance levels, respectively.

Table 6 presents regression results from estimating equation (9). Across all three FOMC meetings from March 2025 to June 2025, the coefficients on $+FJP$ are positive and statistically significant, while the coefficients on $-FJP$ are positive only for the May 2025 meeting.

This pattern suggests that agents who expect Trump to replace Powell as Fed Chair tend to hold significantly more dovish policy expectations, consistent with **Hypothesis H2a**. The coefficients on $+FJP$ are positive and statistically significant across all meetings, indicating that belief in Powell's removal is associated with systematically lower interest rate expectations. The interaction terms with SOP further show that this effect is particularly pronounced among more sophisticated agents in the March and May meetings. Controls for trading characteristics confirm that more active and profitable agents express stronger directional expectations.

Importantly, the relationship between dovish stance and belief in Powell's removal remains statistically significant even after controlling for informed or sophisticated trading behavior, which we test in even-numbered columns in Table 6. While the sign and magnitude of interaction effects vary across meetings, the main effect of $+FJP$ remains robust. This suggests that although sophisticated agents may moderate the link between Fed independence and policy beliefs, they are not the main source of the observed dovish bias. Instead, the results point to a broader mechanism whereby expectations of political interference undermine confidence in the Fed's autonomy, shaping investor beliefs about future monetary policy.

Figure 9 illustrates the estimated difference in monetary policy stance between agents who bet in favor of Powell's removal ($+FJP$) and those who bet against it ($-FJP$) across the March, May, and June 2025 FOMC meetings. The figure plots the point estimates and 95% confidence intervals for the difference in Hawk-Dove scores, offering a direct visual test of **Hypothesis H2a**, which posits that investors betting in favor of Powell's dismissal exhibit systematically more dovish interest rate expectations. These results reinforce the idea that perceived threats to CBI are reflected in investor beliefs about future interest rates.

We find no statistically significant difference in monetary policy stance between *+FJP* and *-FJP* agents for the March meeting. However, beginning in the May 2025 FOMC meeting and continuing into the June 2025 FOMC meeting, a clear and statistically significant dovish bias emerges among *+FJP* agents. In May, the difference in Hawk-Dove scores is approximately $15.040 - 8.493 = 6.547$ percentile points, while in June it widens further to $11.606 - (-3.762) = 15.368$ percentile points (see Table 6). These results provide strong support for Hypothesis H2a and suggest that investor expectations systematically incorporate concerns over Federal Reserve independence.

To examine whether the dovish bias among *+FJP* agents reflects alternative mechanisms, we first consider the possibility of hedging trades. Appendix D shows that most wallets take directional positions rather than offsetting Powell-removal and FOMC bets, and that our results strengthen when excluding the small set of potential hedgers. We then turn to partisan identity. Appendix **??** tests whether monetary policy expectations differ systematically by political orientation. We find that the effect of Fed independence beliefs persists even after controlling for support for Donald Trump using positions in the presidential election market, suggesting that the channel we identify is not driven by partisan bias.

4.3 CBI and Macroeconomic Beliefs

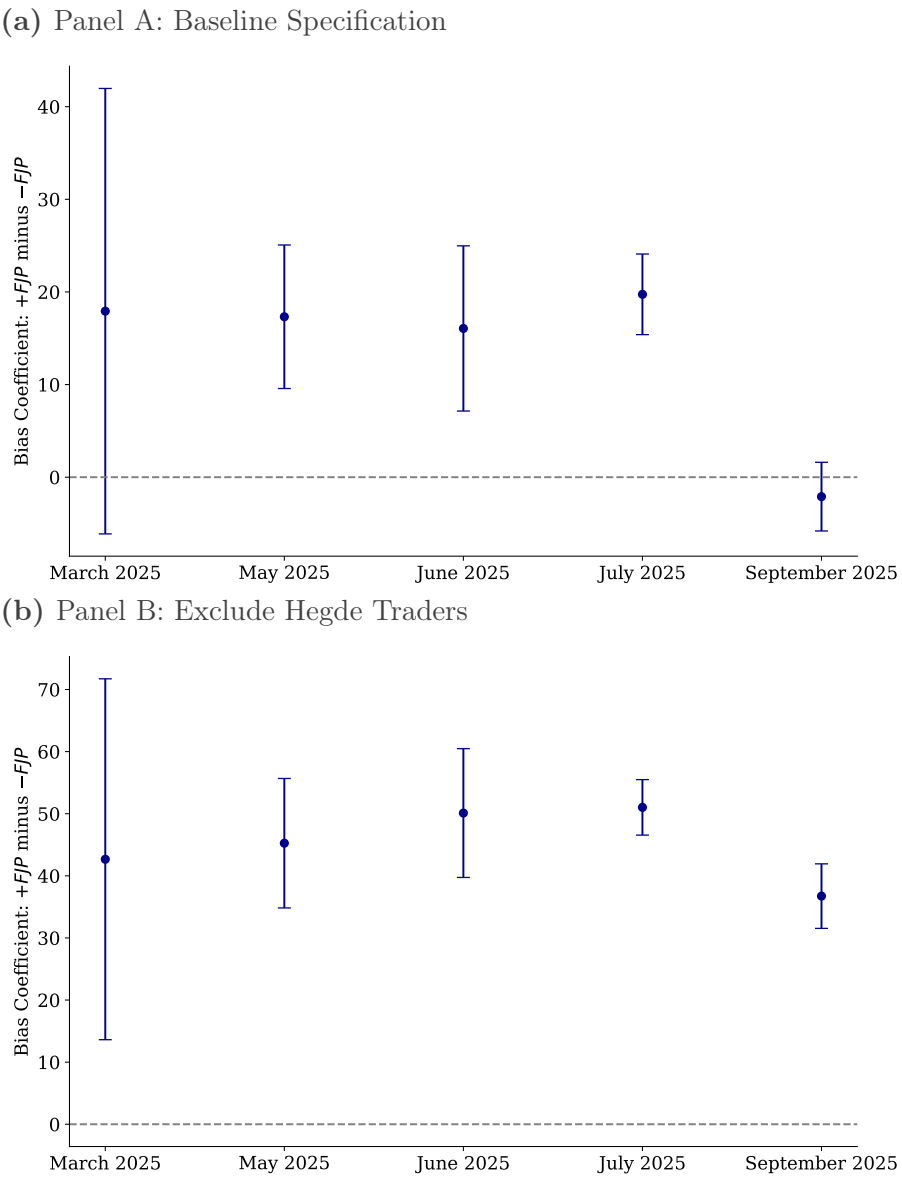
To assess whether beliefs about CBI are systematically linked to agents' broader macroeconomic expectations, we regress trading behavior in key macro-related markets on beliefs about Federal Reserve leadership. Specifically, we examine whether agents betting that President Trump will remove Jerome Powell (*+FJP*) or not (*-FJP*) also take consistent positions in markets related to long-term interest rates, recession risk, and inflation.

We estimate the following regression:

$$\log^*(\text{Position}_{im}) = \alpha + \beta_1(+FJP_i) + \beta_2(-FJP_i) + \gamma' X_i + \epsilon_{im}, \tag{10}$$

where $\log^*(\text{Position}_{im})$ is the sign-preserving logarithm of agent i's net "Yes" position in

Figure 9: Bias Coefficient: Monetary Policy Stance and Fed Independence



Notes. These figures show the estimated bias coefficient—defined as the difference between the coefficients for *+FJP* and *–FJP* from the baseline specification (Panel A) and from the specification excluding hedge traders (Panel B) in Table 6—for the March, May, June, July, and September 2025 FOMC meetings. Vertical bars represent 95% confidence intervals calculated using the Delta method.

market group m. We run separate regressions for five outcome variables: (i) high 10-year Treasury yields, (ii) U.S. recession risk in 2025, (iii) low inflation in 2025 ("No" on inflation exceeding 3%), (iv) low inflation in June 2025 ("Yes" on monthly CPI $\leq 2.2\%$), and (v) high inflation in June 2025 ("Yes" on CPI $\geq 2.6\%$).[20] The main explanatory variables are indicators for *+FJP* and *-FJP*, and the control vector X_i includes wallet-level trading

[20]See notes to Table 7 for market definitions.

characteristics and a dummy for sophisticated investors (*SOP*).

Table 7 presents the results. We find that agents expecting Powell's removal (*+FJP*) are significantly more likely to take long positions in high 10-year Treasury yield and recession risk markets. These results are consistent with expectations of diminished monetary policy credibility and macroeconomic instability under reduced CBI, supporting **Hypothesis H2b**. Conversely, *-FJP* agents are significantly less likely to expect either outcome.

In inflation markets, we observe a more nuanced pattern. For both annual and monthly inflation markets focused on low inflation outcomes, *-FJP* agents are significantly more likely to increase net "Yes" positions. This suggests that agents who do not expect Powell's removal are also more confident that inflation will remain contained. These beliefs are broadly consistent with theories on political interference and monetary policy, where political interference is expected to result in higher inflation due to reduced policy credibility. The fact that *+FJP* agents do not strongly bet on high inflation outcomes suggests limited support for a widespread inflationary shock. One possible interpretation is that inflation expectations remain anchored, or that inflationary concerns are offset by other macroeconomic risks.

Indeed, the lack of systematic bias in high inflation markets contrasts with the clear divergence in low inflation beliefs. This asymmetry may reflect a more complex macroeconomic outlook among investors. For example, recession risk driven by geopolitical factors or protectionist trade policies (e.g., Trump tariffs) may dampen inflation expectations despite concerns over central bank independence. A limitation of our analysis is that while we capture systematic differences in beliefs between *+FJP* and *-FJP* agents, these differences may also reflect expectations about broader Trump-era economic policy—such as fiscal stimulus, trade conflict, or geopolitical instability—rather than political pressure on the Federal Reserve alone. Among sophisticated investors, we find some evidence of heterogeneity. The interaction term between *+FJP* and *SOP* is significantly negative in both high yield and high inflation markets, suggesting that informed agents may expect a different transmission mechanism—perhaps anticipating preemptive easing, yield curve

management, or policy accommodation that offsets inflationary pressure.

Taken together, these findings suggest that investors associate reduced CBI with higher long-term rates and greater macroeconomic instability. However, they do not expect these risks to necessarily translate into elevated inflation.

Table 7: Central Bank Independence and Macroeconomic Fundamentals

	High 10 Year Yield		Recession Risk (2025)		Low Inflation (2025)		Low Inflation (August 2025)		High Inflation (August 2025)	
$+FJP$	0.355**	0.609***	0.342***	0.404***	-0.322**	-0.608***	-0.067	-0.618	-0.852**	-1.000***
	(0.181)	(0.197)	(0.128)	(0.132)	(0.155)	(0.167)	(0.446)	(0.457)	(0.335)	(0.348)
$-FJP$	-0.910***	-0.672***	-0.673***	-0.572***	-0.091	-0.388**	0.981**	0.259	-0.220	-0.331
	(0.179)	(0.192)	(0.134)	(0.138)	(0.153)	(0.168)	(0.453)	(0.466)	(0.340)	(0.355)
$+FJP \times SOP$		-0.544		-0.229		1.540**		-0.320		0.253
		(0.740)		(0.821)		(0.635)		(1.537)		(1.170)
$-FJP \times SOP$		-0.177		0.734		1.715**		-1.388		-0.649
		(0.960)		(1.096)		(0.745)		(1.812)		(1.379)
$log(volume)$		-0.044**		0.026*		0.028		0.188***		0.015
		(0.017)		(0.015)		(0.017)		(0.049)		(0.037)
$profit$		0.000		0.000***		0.000		-0.000***		-0.000***
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
$\#markets$		-0.001		-0.002**		0.002**		0.003		0.002
		(0.001)		(0.001)		(0.001)		(0.004)		(0.003)
SOP		0.464		0.131		-0.370		-0.336		0.574
		(0.374)		(0.237)		(0.277)		(0.584)		(0.445)
$const$	-0.035*	0.321***	0.334***	0.221**	0.001	-0.296**	0.230**	-1.653***	0.184**	-0.118
	(0.020)	(0.115)	(0.033)	(0.103)	(0.024)	(0.116)	(0.117)	(0.369)	(0.088)	(0.281)
R-squared Adj.	0.004	0.005	0.003	0.008	0.001	0.007	0.005	0.103	0.009	0.082
N	7557	7557	9540	9540	3355	3355	511	511	511	511

Notes. The table reports coefficients from regressions in which the dependent variable is the sign-preserving logarithm of an agent's net "Yes" position in two groups of markets: (i) high 10-year Treasury yields (aggregated across markets such as "Will the 10-year Treasury yield hit 5.5% (or higher) in 2025?"), (ii) recession risk ("U.S. recession in 2025?"), (iii) low inflation (2025), proxied by the net "No" position in the market "Will inflation reach more than 3% in 2025?", (iv) low inflation (August 2025) proxied by the net "Yes" position in the market "Annual inflation increase by $\leq 2.6\%$ in August 2025?", and (v) high inflation (August 2025) proxied by the net "Yes" position in the market "Annual inflation increase by $\geq 3.0\%$ in August 2025?". Each specification relates these transformed positions to the central-bank-independence indicator, controlling for the full set of covariates described in the main text. *+FJP* (*–FJP*) is a dummy variable equal to one if a Polymarket agent holds a positive net "Yes" position in the market "Will Trump remove Jerome Powell in 2025?". *SOP* is a dummy variable indicating whether a Polymarket agent is a sophisticated investor, defined as being in the top 1% in terms of profit on Polymarket and having invested in more than five markets. *log(volume)* is the log of an agent's total collateral volume on Polymarket. *profit* is the agent's total profit, and *# markets* is the number of markets the agent has bet on. Standard errors are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% significance levels, respectively. McFadden's $R2$ is reported.

4.4 Trump Social Media Post and CBI

The preceding analysis has established that investor expectations about central bank independence are systematically associated with more dovish monetary policy beliefs and altered macroeconomic expectations. However, these cross-sectional patterns, while informative, cannot fully address concerns about reverse causality or omitted variable bias.

To overcome this identification challenge, we exploit President Trump's public statements on Truth Social as exogenous shocks to perceived central bank independence. As documented in Table B.3, President Trump repeatedly criticized Powell throughout 2025, calling for rate cuts and threatening his removal. These social posts were unexpected in timing and content, providing plausibly exogenous source of variation in market beliefs about CBI. By examining high-frequency responses to these events, we can trace out the causal effect of perceived threats to Fed autonomy on asset prices and policy expectations.

Our identification strategy proceeds in two steps. First, following (Gürkaynak et al., 2005) we construct a high-frequency measure of shocks to perceived central bank independence using Polymarket's 'Jerome Powell out as Fed Chair in 2025?' contract. Specifically, for each Trump post criticizing Powell or calling for rate cuts (catalogued in Table B.3), we define the CBI shock as:

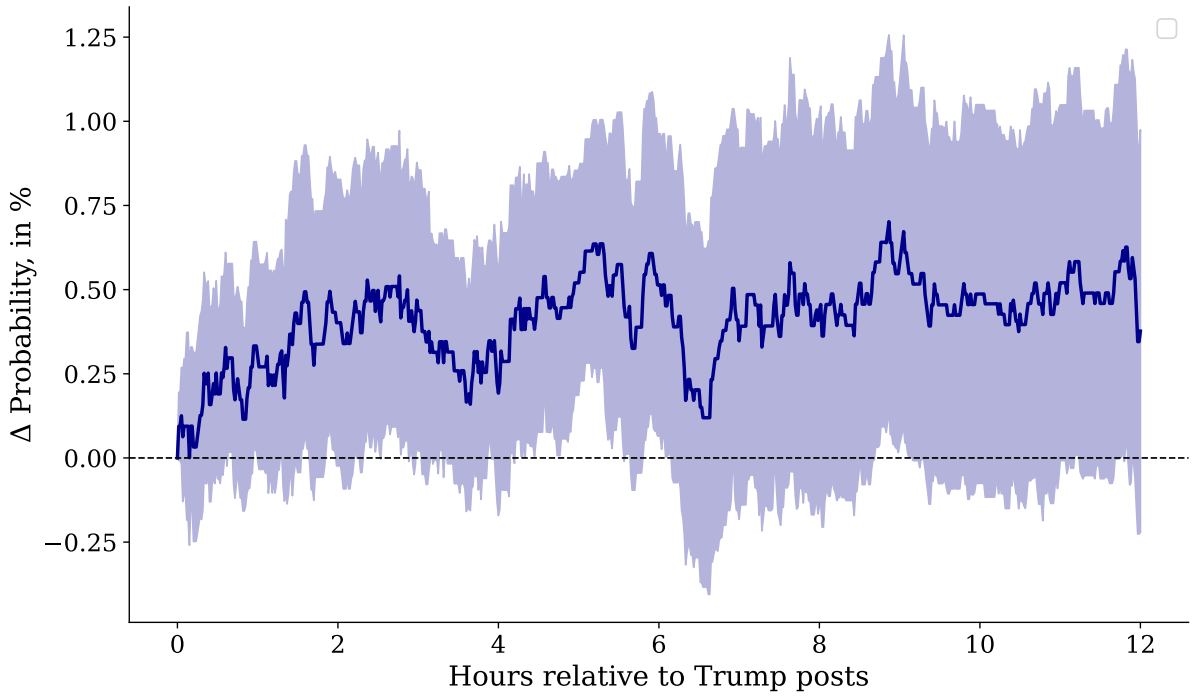
$$\theta_t^{CBI} = p_{t+50}^{\text{FJP}} - p_{t-10}^{\text{FJP}}. \tag{11}$$

where p_t^{FJP} denotes the price of the 'Yes' token (i.e., the market-implied probability that Powell will be removed) at time t. The shocks θ_t^{CBI} captures the 60-minute change in this probability centered around Trump's post at time t. We use a 10-minute pre-window and 50-minute post-window to allow the market to incorporate information while minimizing contamination from other events.

This specification imposes several identifying assumptions. Most importantly, we assume that within narrow event windows, Trump's posts represent the dominant source of new information about CBI, and that any resulting price movements can be attributed

to updated beliefs about Fed autonomy rather than to other unrelated macro news. Given the unpredictable nature of the President's social media posts (Bianchi et al., 2023), we expect this to be a reasonable assumption. We further assume that the President's social media posts do update markets' beliefs about CBI. Figure 10 provides visual evidence supporting this assumption: the figure plots the long-run impulse response of the Powell-removal probability on Polymarket following Trump's social media posts. The probability spikes sharply within minutes of the post, before partially mean-reverting over subsequent hours, indicating the significant impact the President's social media posts have on CBI.

Figure 10: Trump Social Media posts and CBI



Notes. This figure shows the responses of Polymarket-implied probabilities for the market "Jerome Powell out as Fed Chair in 2025?" to Trump's posts on Truth Social. Probabilities are in percentage points. Shaded areas indicate 95% confidence intervals, based on heteroskedasticity-autocorrelation robust standard errors. The sample period is from 2025-01-30 to 2025-09-25.

Then, we estimate the dynamic causal effect of these CBI shocks on a range of outcome variables using long difference local projections:

$$\Delta y_{i,t+h} = y_{i,t+h} - y_{i,t} = \alpha_i^h + \beta^h \cdot \theta_t^{CBI} + \epsilon_{i,t+h} \tag{12}$$

where $\Delta y_{i,t+h}$ denotes the change in the outcome variable y_i (e.g., FOMC-implied rate probabilities, Treasury yields, exchange rates, or equity prices) from time t to $t+h$, and β^h is the long-run impulse response coefficient of interest, capturing the cumulative change in the asset price..

FOMC Market Responses. The CBI shocks coincide with immediate adjustments in FOMC rate expectations. Figure 11 shows market-implied probabilities for upcoming FOMC meetings—June, July, and September 2025. Across all three meetings, the probability of 25 bps rate cuts systematically increases sharply following Trump's posts, while the probability of no change moves in the opposite direction in similar magnitude. The effects are most pronounced for the July meeting (Panel B), which occurred during the peak of Trump's public campaign against Powell. Here, the estimated impulse responses suggest that a 1 percentage point increase in Powell-removal probability raises the likelihood of a 25 bps cut by approximately 1.5–2 percentage points within 12 hours. Notably, the September meeting (Panel C) shows the largest and most persistent effects.

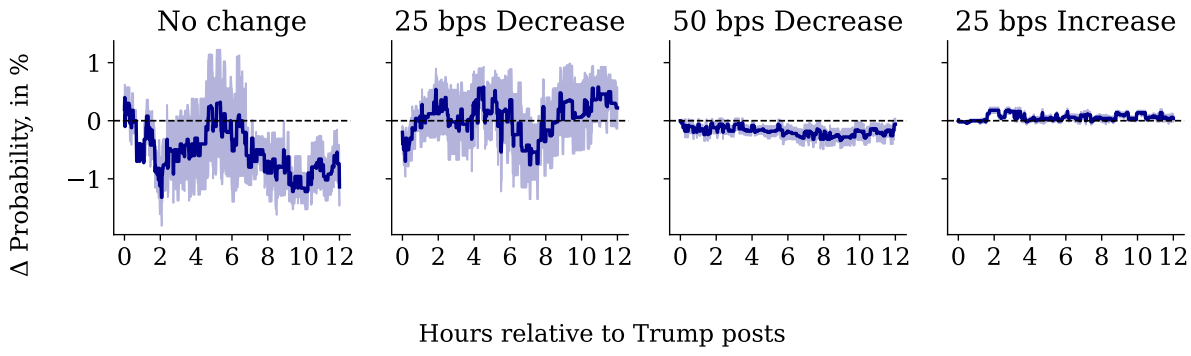
Foreign Exchange Markets. The top-left panel of Figure 12 shows that CBI shocks are associated with dollar depreciation. A 1 percentage point increase in Powell-removal probability corresponds to roughly a 10 basis point decline in the dollar exchange rate. This is consistent with expectations of looser monetary policy: if markets anticipate that Powell's removal will lead to lower U.S. interest rates, dollar-denominated assets become less attractive, prompting capital outflows and currency depreciation. Figure E.1 confirms that this pattern holds broadly across bilateral dollar exchange rates against all G9 currencies.

Treasury Yields and Spread. The top-right panel of Figure 12 shows the response of short-term Treasury yields. The 3-month yield declines modestly but not significantly in the immediate aftermath of Trump's posts, consistent with expectations of near-term rate cuts. By contrast, the 10-year minus 3-month spread (bottom-left panel) increases significantly, rising by approximately 2 basis points over a 12-hour window. This steepening

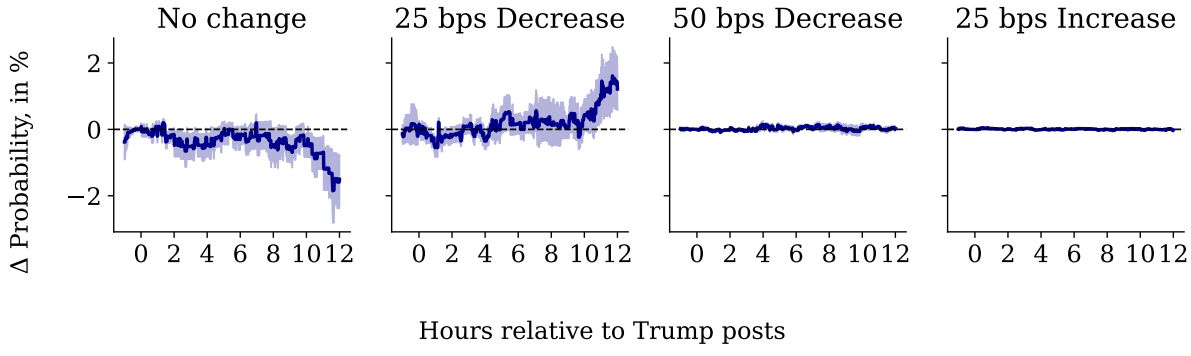
of the yield curve is precisely the pattern predicted by time-inconsistency models: political pressure to cut rates today raises long-run inflation expectations, pushing up longer-term nominal yields even as short-term rates fall. Appendix Figure E.2 confirms that this pattern holds broadly across the maturity spectrum. The fact that this pattern emerges at high frequency—within hours of Trump's posts—suggests that bond market participants immediately priced the long-run credibility implications of political interference. In addition, in Appendix Figures E.3 and E.4, we document that OIS rates and the OIS-Treasury spread do not systematically react to CBI shocks.

Figure 11: Trump Social Media posts and FOMC

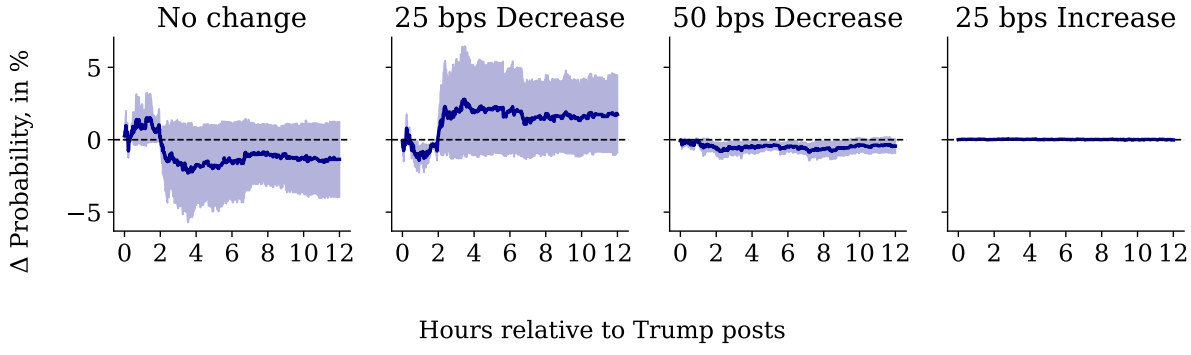
Panel A: June 2025



Panel B: July 2025

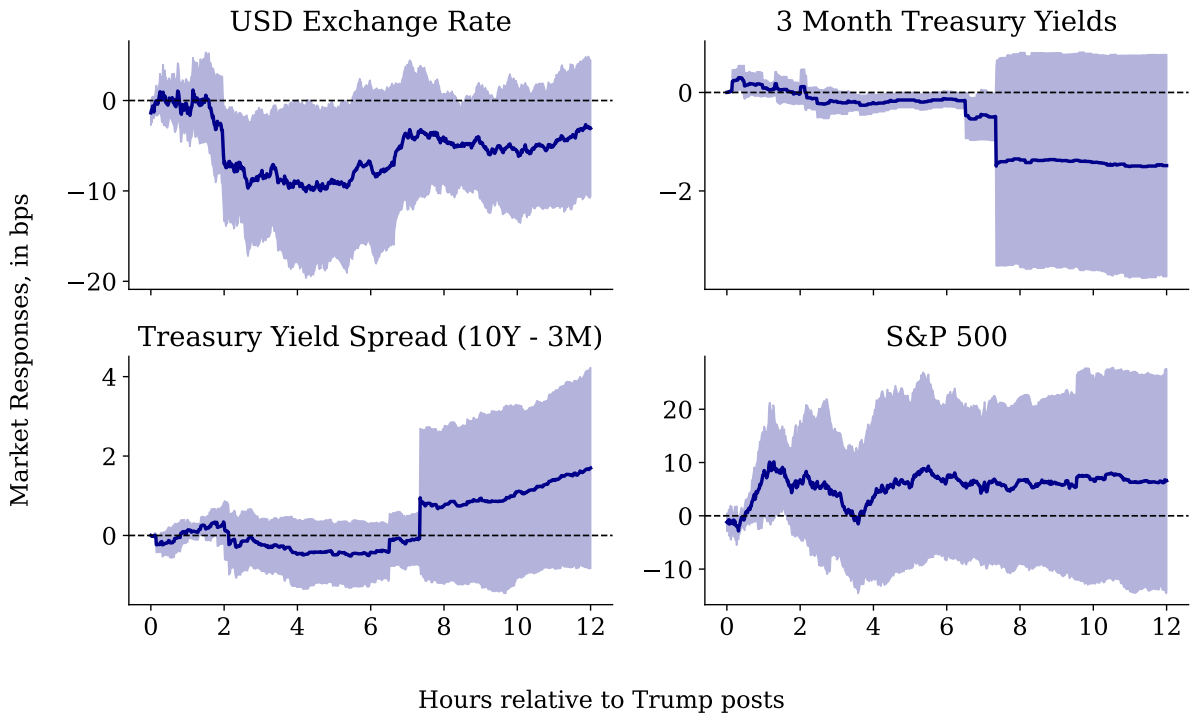


Panel C: September 2025



Notes. These figures show the responses of Polymarket-implied probabilities for Federal Reserve rate decisions to Trump's posts on Truth Social regarding the potential replacement of Jerome Powell as Fed Chair in 2025. The three panels examine three FOMC meetings in 2025: Panel A (June 2025), Panel B (July 2025), and Panel C (September 2025). Probabilities are expressed in percentage points. Shaded areas represent 95% confidence intervals, based on heteroskedasticity- and autocorrelation-robust standard errors. The sample period is from 2025-06-17 to 2025-07-28 for the June FOMC, 2025-05-06 to 2025-06-16 for the July FOMC, and 2025-07-29 to 2025-09-15 for the September FOMC.

Figure 12: Trump Social Media posts, Foreign Exchange, Yields, and Equity



Notes. These figures show the market responses to Trump's posts on Truth Social regarding the potential replacement of Jerome Powell as Fed Chair in 2025. Each figure reports the response in a key financial market: (i) the USD exchange rate (measured as the equally weighted average of the log price of AUD, CAD, CHF, EUR, GBP, JPY, NOK, NZD, and SEK per USD), (ii) the 3-month U.S. Treasury yield, (iii) the Treasury yield spread (defined as the difference between the 10-year and 3-month U.S. Treasury yields), and (iv) the S&P 500 (proxied by the ishares S&P 500 core ETF). Responses are in basis points. Shaded areas denote 95% confidence intervals, based on heteroskedasticity- and autocorrelation-robust standard errors. The sample period is from 2025-01-30 to 2025-09-25.

5 Conclusion

This paper studies how beliefs about central bank independence influence investor expectations of monetary policy and macroeconomic outcomes. We use high-frequency, wallet-level data from Polymarket, a decentralized blockchain-based prediction platform. From trading behavior in FOMC rate prediction markets, we construct individual scores capturing monetary policy expectations. We link these scores to beliefs about political pressure, using positions in a market on whether Donald Trump will remove Fed Chair Jerome Powell.

Our analysis speaks to three core questions. First, do interest rate expectations respond to macroeconomic fundamentals, such as changes in inflation expectations and recession risk, in a manner consistent with Taylor-rule logic? Second, do investors who expect political pressure on the Federal Reserve also expect looser monetary policy in the short run? Third, are beliefs about CBI associated with longer-run macroeconomic expectations, specifically higher long-term interest rates, inflation risk, and downside growth risk in line with theories of time-inconsistent policy?

We find evidence consistent with all three. Investor expectations about policy rates respond systematically to macroeconomic fundamentals. Agents forecasting lower inflation consistently hold more dovish monetary policy views, while shifts in perceived recession risk, particularly following the April 2025 "Liberation Day" tariffs, are associated with more dovish policy expectations among sophisticated investors. These findings parallel survey-based evidence (Carvalho and Nechio, 2014) and indicate that even in decentralized prediction markets, policy expectations are anchored in fundamental indicators.

We also show that investors who anticipate Powell's removal exhibit systematically more dovish stance scores, consistent with concerns that political pressure lowers expected short-term interest rates. These differences persist after controlling for wallet-level characteristics such as trading volume, profitability, and collateral use, providing investor-level evidence that threats to CBI shape monetary policy expectations.

Finally, we find that beliefs about Powell's removal are linked to broader macroeconomic expectations. Investors who expect Powell's dismissal price in higher long-term Treasury

yields and greater downside growth risk, as if diminished independence reduces credibility and increases uncertainty about the long-run policy stance. Inflation expectations also differ across belief groups: those who do not expect Powell's removal are more likely to assign probability to low inflation outcomes, whereas those who anticipate his dismissal are less likely to price downside inflation risk. These results are consistent with theories of time inconsistency (Kydland and Prescott, 1977; Barro and Gordon, 1983; Rogoff, 1985), in which short-term political pressure to cut rates is ultimately associated with higher long-term inflation and elevated nominal yields.

Taken together, our results suggest that beliefs about central bank independence shape both near-term policy expectations and longer-term macroeconomic outlooks. From a methodological standpoint, our study shows how Polymarket provides an informative setting to study individual investor beliefs using real-time, high-frequency data. Its blockchain-based transparency allows us to link measures of monetary policy expectations to beliefs about central bank independence at the individual wallet level, revealing heterogeneity not observable in aggregate data.

From a policy perspective, our findings highlight the importance of preserving central bank autonomy as a foundation for credible monetary policy and stable macroeconomic expectations.

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Appendix

A Polymarket: Supplementary Material

Polymarket's Central Limit Order Book (CLOB), operates on a hybrid-decentralized model where an off-chain operator manages order matching and organization, while trade settlement and execution occur on-chain non-custodially.

The off-chain operator in Polymarket is essentially the matching engine and order book manager (i.e. an off-chain service provided by the platform). This operator is the off-chain component responsible for receiving and organizing user orders, matching buyers and sellers, and scheduling trades. It provides the functionality of a centralized exchange's order book without taking custody of assets.

This on-chain component is underpinned by a Conditional Tokens Framework (CTF) Exchange contract designed for binary markets [21], facilitating atomic swaps between binary outcome tokens (ERC1155 outcome tokens) and collateral tokens (ERC20 collateral tokens). The CTF Exchange contract supports operations such as minting and merging complementary tokens, which allows 'unification' of order books such that orders are matched with a outcome token and its complement token.

In the rest part of this section, we outline the key aspects of the CTF Exchange contract.

Assets/Tokens

- A: ERC1155 outcome token, 'Yes' outcome token.
- A': ERC1155 outcome token, complement of A ,'No' outcome token.
- C: ERC20 collateral token, USDC.

[21] See `https://github.com/Polymarket/ctf-exchange/blob/main/docs/Overview.md` for the Polymarket official document on the CTF exchange contract.

Relationship between Outcome Tokens and an Collateral Token.

$$A + A' = C$$

1 unit of outcome token A and 1 unit of its complement A' can always be merged into 1 unit of collateral token C. 1 unit of C can always be split into 1 unit of A and 1 of its complement A'.

Three matching scenarios could happen under the CTF exchange contract, called Normal, Mint, and Merge.

Scenario 1 - Normal [22]

- Maker order: participant 1 buy 100 outcome token A at \$0.50 with 50 collateral token C.
- Taker order: participant 2 sell 50 outcome token A at \$0.50.
- Match operations:
  1. Transfer 50 A from participant 2 to CTF Exchange.
  2. Transfer 25 C from participant 1 to CTF Exchange.
  3. Transfer 50 A from CTF Exchange to participant 1.
  4. Transfer 25 C from CTF Exchange to participant 2.
- Net Transfer:
  1. Transfer 50 A from participant 2 to participant 1;
  2. Transfer 25 C from participant 1 to participant 2.

Scenario 2 - Mint [23]

[22] See `https://polygonscan.com/tx/0xd91ef1f997b52821bb73958f62bcbdc36827a6632ffab7cbf0a7f48b1cf421f6` for an example of a Normal match scenario.

[23] See `https://polygonscan.com/tx/0xfed830660fd8896d5b53027f18dec0a61f9ce5c9c26e13b3cd867e5a28d6c4e5` for an example of a Mint match scenario.

- Maker order: participant 1 buy 100 outcome token A at \$0.50 with 50 collateral token C.
- Taker order: participant 2 buy 50 complement outcome token A' at \$0.50 with 25 collateral token C.
- Match operations:
    1. Transfer 25 C from participant 1 to CTF Exchange.
    2. Transfer 25 C from participant 2 to CTF Exchange.
    3. Mint 50 outcome token sets with 50 collateral tokens (50 C = 50 A + 50 A')
    4. Transfer 50 A from CTF Exchange to participant 1.
    5. Transfer 50 A' from CTF Exchange to participant 2.
- Net Transfer:
    1. Participant 1 and participant 2 both transfer 25 C to CTF Exchange.
    2. Participant 1 receive 50 A from CTF Exchange and participant 2 receive 50 A' from CTF Exchange.

Scenario 3 - Merge [24]

- Maker order: participant 1 sell 50 outcome token A at \$0.50.
- Taker order: participant 2 sell 100 complement outcome token A' at \$0.50.
- Match operations:
    1. Transfer 50 A from participant 1 to CTF Exchange.
    2. Transfer 50 A' from participant 2 to CTF Exchange.
    3. Merge 50 outcome token sets into 50 collateral tokens (50 A + 50 A' = 50 C)
    4. Transfer 25 C from CTF Exchange to participant 1.

[24] See `https://polygonscan.com/tx/0x4c2cc98fc2277cf13d09001556112782d285649420a59b8720307cf7efbb2776` for an example of a Merge match scenario.

5. Transfer 25 C from CTF Exchange to participant 2.

- Net Transfer:

1. Participant 1 transfer 50 A to CTF Exchange and participant 2 transfer 50 A' to CTF Exchange.
2. Participant 1 and participant 2 both receive 25 C from CTF Exchange.

B Additional Statistics

B.1 Summary Statistics: Net Positions of Different Markets

Table B.1: Summary Statistics: Net Positions

Event	Market	N	Mean	SD	1%	25%	50%	75%	99%
Jerome Powell out as Fed Chair in 2025?	Yes/No	3266	0.00	8003.40	-10163.62	-10.00	4.00	51.94	9512.21
Will the U.S. enter a recession in 2025?	Yes/No	8926	0.00	3910.22	-2071.65	-2.77	0.00	7.25	2391.17
10Y Treasury Yield	$\geq 5.5\%$	120	-0.00	1742.92	-5130.64	-21.52	-2.08	6.25	6722.29
	$\geq 5.7\%$	878	0.00	853.14	-428.25	-0.85	0.00	0.96	167.99
	$\geq 6.0\%$	381	0.00	721.90	-1498.51	-2.81	0.00	0.67	275.40
2025 Annual Inflation	$\geq 3\%$	260	0.00	4361.95	-7566.71	-11.69	1.19	17.33	9844.36
February 2025 Inflation	$\leq 2.7\%$	486	-0.00	332.28	-1076.59	-1.09	-0.19	-0.01	1264.19
	$\geq 3.1\%$	356	0.00	412.12	-1156.48	-1.90	-0.10	1.06	1096.80
April 2025 Inflation	$\leq 2.3\%$	265	0.00	595.49	-2223.49	-5.60	0.23	10.60	1504.37
	$\geq 2.7\%$	531	-0.00	404.69	-927.55	-9.28	-0.11	4.54	457.21
May 2025 Inflation	$\leq 2.2\%$	310	0.00	1115.41	-3162.53	-10.42	-0.40	2.34	5260.84
	$\geq 2.6\%$	170	0.00	1371.72	-3042.30	-20.78	-0.45	6.79	4266.06
June 2025 Inflation	$\leq 2.2\%$	203	0.00	487.77	-1361.73	-5.00	-0.05	0.11	795.34
	$\geq 2.6\%$	214	-0.00	989.44	-2317.54	-17.33	-0.20	18.61	3603.91
August 2025 Inflation	$\leq 2.6\%$	228	-0.00	1333.16	-4953.12	-25.82	-0.53	5.33	3651.79
	$\leq 3.0\%$	155	0.00	1493.81	-6951.66	-22.57	-0.24	42.57	5789.12
November 2024 FOMC	+25bps	8856	-0.00	2324.40	-200.09	0.02	0.09	0.32	188.64
	−25bps	3657	-0.00	6642.35	-2483.86	-1.24	0.20	2.57	2373.20
	−50bps	3274	0.00	5489.70	-5222.12	-0.02	0.19	20.00	5394.60
	No change	2176	-0.00	6973.06	-5355.79	0.00	3.09	42.07	6738.93
December 2024 FOMC	+25bps	4860	-0.00	1553.78	-421.95	0.01	0.05	0.25	853.11
	−25bps	8195	-0.00	3467.89	-925.67	-1.68	0.66	6.53	1376.75
	−50bps	3634	0.00	3700.33	-1622.00	-0.03	0.10	30.38	3509.36
	No change	2784	-0.00	4042.95	-1660.17	-0.00	5.00	43.11	4252.78
January 2025 FOMC	+25bps	21086	0.00	2423.64	-53.74	-0.02	-0.01	0.13	746.26
	−25bps	5323	0.00	14212.14	-735.43	-0.09	-0.02	4.99	8163.27
	−50bps	16876	-0.00	2288.59	-49.74	-0.02	-0.00	0.01	508.02
	No change	12849	-0.00	19323.58	-1920.58	-5.19	0.07	1.70	1309.19
March 2025 FOMC	+25bps	5908	-0.00	2656.73	-330.16	-0.02	0.00	0.37	974.85
	−25bps	4650	0.00	23708.51	-2053.81	-0.17	0.06	21.48	9675.96
	−50bps	9546	0.00	5402.51	-1126.99	-0.04	0.00	0.56	1638.12
	No change	12579	-0.00	14759.01	-1066.16	-3.63	0.05	1.18	651.85
May 2025 FOMC	+25bps	5251	-0.00	2475.08	-233.69	-0.01	0.03	0.47	494.05
	−25bps	3833	0.00	33369.33	-4913.41	-0.07	2.02	42.48	32454.91
	−50bps	5326	0.00	6595.93	-1034.08	-0.15	-0.00	1.55	4355.58
	No change	4912	-0.00	27735.55	-9726.31	-5.19	0.07	1.13	10827.04
June 2025 FOMC	+25bps	6749	-0.00	3789.33	-81.47	-0.02	0.00	0.25	468.03
	−25bps	5637	-0.00	19162.50	-2939.11	-0.06	0.13	28.03	10992.45
	−50bps	7624	-0.00	3387.36	-566.08	-0.14	-0.02	0.35	947.60
	No change	5513	0.00	25651.15	-16825.46	-8.03	0.13	5.00	11279.53
July 2025 FOMC	+25bps	10223	-0.00	2067.30	-86.04	-0.02	-0.00	0.18	196.67
	−25bps	6434	-0.00	27826.26	-1520.44	-0.24	2.52	35.42	13315.41
	−50bps	9138	-0.00	9238.19	-2834.44	-0.32	0.00	1.94	5073.47
	No change	6254	0.00	28067.32	-12412.32	-7.32	0.22	5.00	10554.36
September 2025 FOMC	+25bps	9348	-0.00	7627.15	-1049.54	-0.05	-0.01	0.35	3179.91
	−25bps	7478	0.00	17087.74	-4902.52	-3.65	1.31	15.00	11907.50
	−50bps	13528	-0.00	17038.01	-2948.08	-4.07	0.03	18.99	7269.37
	No change	6902	-0.00	18026.04	-10499.33	-1.27	5.00	75.42	19578.97

Notes. This table reports summary statistics of agents' net positions across a range of Polymarket events. For each market, we report the number of unique agents (N), the mean, standard deviation (SD), and selected percentiles (1%, 25%, 50%, 75%, 99%) of net positions, denominated in USDC.

B.2 Summary Statistics: Cross-Market Trader Overlap

Table B.2: Cross-Market Trader Overlap: FOMC Events vs. Macro Event Markets

Panel A: Share of Macro Traders Who Also Traded on FOMC Meeting								
Event	November 2024	December 2024	January 2025	March 2025	May 2025	June 2025	July 2025	September 2025
Jerome Powell out as Fed Chair in 2025?	0.037	0.055	0.072	0.088	0.125	0.114	0.221	0.257
Will the U.S. enter a recession in 2025?	0.035	0.047	0.054	0.077	0.109	0.105	0.123	0.139
10Y Treasury Yield	0.012	0.014	0.014	0.023	0.029	0.063	0.093	0.185
2025 Annual Inflation	0.017	0.023	0.025	0.040	0.055	0.096	0.114	0.228
February 2025 Inflation	0.035	0.075	0.384	0.232	0.142	0.120	0.104	0.082
April 2025 Inflation	0.029	0.041	0.060	0.089	0.165	0.300	0.208	0.157
May 2025 Inflation	0.066	0.097	0.097	0.164	0.230	0.358	0.314	0.339
June 2025 Inflation	0.060	0.086	0.114	0.150	0.194	0.312	0.400	0.400
August 2025 Inflation	0.059	0.088	0.104	0.112	0.160	0.204	0.280	0.487
Panel B: Share of FOMC Traders Who Also Traded on Macro Market								
Event	November 2024	December 2024	January 2025	March 2025	May 2025	June 2025	July 2025	September 2025
Jerome Powell out as Fed Chair in 2025?	0.013	0.018	0.010	0.018	0.041	0.028	0.043	0.045
Will the U.S. enter a recession in 2025?	0.021	0.027	0.013	0.027	0.062	0.044	0.042	0.042
10Y Treasury Yield	0.006	0.006	0.003	0.006	0.013	0.021	0.025	0.044
2025 Annual Inflation	0.004	0.005	0.002	0.005	0.011	0.014	0.014	0.024
February 2025 Inflation	0.003	0.006	0.012	0.010	0.010	0.007	0.005	0.003
April 2025 Inflation	0.002	0.003	0.002	0.004	0.011	0.015	0.009	0.006
May 2025 Inflation	0.002	0.003	0.001	0.003	0.007	0.009	0.006	0.006
June 2025 Inflation	0.002	0.003	0.001	0.003	0.006	0.007	0.007	0.006
August 2025 Inflation	0.002	0.003	0.001	0.002	0.005	0.005	0.005	0.008

Notes. Panel A reports, for each macro event, the share of its unique traders who also traded the corresponding FOMC event. Panel B reports the reverse: the share of FOMC traders who also traded the macro event. Overlap is computed at the wallet level.

B.3 Trump Social Media Posts on Central Bank Independence

Table B.3: Donald Trump's Posts on Interest Rates and Powell (Truth Soci

Timestamp	Post Content
2025-01-29 16:17	*Because Jay Powell and the Fed failed to stop the problem they created with Inflation, I will do it by unleashing American Energy production, slashing Regulation, rebalancing International Trade, and reigniting American Manufacturing, but I will do much more than stopping Inflation, I will make our Country financially, and otherwise, powerful again! The Fed has done a terrible job on Bank Regulation. Treasury is going to lead the effort to cut unnecessary Regulation, and will unleash lending for all American people and businesses. If the Fed had spent less time on DEI, gender ideology, "green" energy, and fake climate change, Inflation would never have been a problem. Instead, we suffered from the worst Inflation in the History of our Country!*
2025-04-04 11:08	*This would be a PERFECT time for Fed Chairman Jerome Powell to cut Interest Rates. He is always "late," but he could now change his image, and quickly. Energy prices are down, Interest Rates are down, Inflation is down, even Eggs are down 69%, and Jobs are UP, all within two months - A BIG WIN for America. CUT INTEREST RATES, JEROME, AND STOP PLAYING POLITICS!*
2025-04-17 06:12	*The ECB is expected to cut interest rates for the 7th time, and yet, "Too Late" Jerome Powell of the Fed, who is always TOO LATE AND WRONG, yesterday issued a report which was another, and typical, complete "mess!" Oil prices are down, groceries (even eggs!) are down, and the USA is getting RICH ON TARIFFS. Too Late should have lowered Interest Rates, like the ECB, long ago, but he should certainly lower them now. Powell's termination cannot come fast enough!*
2025-04-21 09:41	*"Preemptive Cuts" in Interest Rates are being called for by many. With Energy Costs way down, food prices (including Biden's egg disaster!) substantially lower, and most other "things" trending down, there is virtually No Inflation. With these costs trending so nicely downward, just what I predicted they would do, there can almost be no inflation, but there can be a SLOWING of the economy unless Mr. Too Late, a major loser, lowers interest rates, NOW. Europe has already "lowered" seven times. Powell has always been "Too Late," except when it came to the Election period when he lowered in order to help Sleepy Joe Biden, later Kamala, get elected. How did that work out?*
2025-05-08 06:31	*"Too Late" Jerome Powell is a FOOL, who doesn't have a clue. Other than that, I like him very much! Oil and Energy way down, almost all costs (groceries and "eggs") down, virtually NO INFLATION, Tariff Money Pouring Into the U.S. — THE EXACT OPPOSITE OF "TOO LATE!" ENJOY!*
2025-05-13 13:43	*No Inflation, and Prices of Gasoline, Energy, Groceries, and practically everything else, are DOWN!!! THE FED must lower the RATE, like Europe and China have done. What is wrong with Too Late Powell? Not fair to America, which is ready to blossom? Just let it all happen, it will be a beautiful thing!*

Continued on next page

Table B.3 – continued from previous page

Timestamp	Post Content
2025-05-17 11:11	*THE CONSENSUS OF ALMOST EVERYBODY IS THAT, "THE FED SHOULD CUT RATES SOONER, RATHER THAN LATER." Too Late Powell, a man legendary for being Too Late, will probably blow it again - But who knows???*
2025-05-28 23:16	*"FHFA Director Pulte calls on Powell to lower interest rates"* `https://www.housingwire.com/articles/fhfa-director-pulte-calls-on-powell-to-lower-interest-rates/`
2025-06-04 08:21	*ADP NUMBER OUT!!! "Too Late" Powell must now LOWER THE RATE. He is unbelievable!!! Europe has lowered NINE TIMES!*
2025-06-04 14:00	*https://thehill.com/business/5320379-us-housing-finance-chief-tells-powell-to-lower-interest-rates/*
2025-06-18 23:56	*Too Late—Powell is the WORST. A real dummy, who's costing America $Billions!* *"Fannie, Freddie regulator: Powell should cut rates or quit"* `https://www.nationalmortgagenews.com/news/fannie-mae-freddie-mac-regulator-to-powell-cut-or-quit`
2025-06-19 10:04	*"Too Late" Jerome Powell is costing our Country Hundreds of Billions of Dollars. He is truly one of the dumbest, and most destructive, people in Government, and the Fed Board is complicit. Europe has had 10 cuts, we have had none. We should be 2.5 Points lower, and save $BILLIONS on all of Biden's Short Term Debt. We have LOW inflation! TOO LATE's an American Disgrace!*
2025-06-20 17:58	*"Too Late" Powell complains about costs, much of which were produced by the Biden Fake "Government," but he could do the biggest and best job for our Country by helping to lower Interest Rates and, if he reduced them to the number they should be, 1% to 2%, that "numbskull" would be saving the United States of America up to $1 Trillion Dollars per year. I fully understand that my strong criticism of him makes it more difficult for him to do what he should be doing, lowering Rates, but I've tried it all different ways. I've been nice, I've been neutral, and I've been nasty, and nice and neutral didn't work! He's a dumb guy, and an obvious Trump Hater, who should have never been there, I listened to someone that I shouldn't have listened to, and Biden shouldn't have reappointed him. We have virtually No Inflation, our Economy is doing really well, and will soon be doing, with the tremendous Tariff Income coming in, and Factories being built all over the Country, better than it has ever done before. If he was concerned about Inflation or anything else, then all he has to do is bring the Rate down, so we can benefit on Interest Costs, and raise it in the future when and if these "other elements" happen (which I doubt they will!). Don't say that you think there will be Inflation sometime in the future, because there isn't now but, if there is, raise the Rates! We should be at the TOP of the attached List, not the bottom. I don't know why the Board doesn't override this Total and Complete Moron! Maybe, just maybe, I'll have to change my mind about firing him? But regardless, his Term ends shortly!*

Continued on next page

Table B.3 – continued from previous page

Timestamp	Post Content
2025-06-24 01:32	*"Too Late" Jerome Powell, of the Fed, will be in Congress today in order to explain, among other things, why he is refusing to lower the Rate. Europe has had 10 cuts, we have had ZERO. No inflation, great economy - We should be at least two to three points lower. Would save the USA 800 Billion Dollars Per Year, plus. What a difference this would make. If things later change to the negative, increase the Rate. I hope Congress really works this very dumb, hardheaded person, over. We will be paying for his incompetence for many years to come. THE BOARD SHOULD ACTIVATE. MAKE AMERICA GREAT AGAIN!*
2025-06-26 14:16	*https://www.thestreet.com/economy/fannie-mae-chief-pulte-sends-savage-one-word-message-to-feds-powell*
2025-06-30 13:09	*Jerome "Too Late" Powell, and his entire Board, should be ashamed of themselves for allowing this to happen to the United States. They have one of the easiest, yet most prestigious, jobs in America, and they have FAILED — And continue to do so. If they were doing their job properly, our Country would be saving Trillions of Dollars in Interest Cost. The Board just sits there and watches, so they are equally to blame. We should be paying 1% Interest, or better!*
2025-07-02 18:10	*"Too Late" should resign immediately!* *"Fed Chair Should Be Investigated by Congress, FHFA Head Says"* https://www.bloomberg.com/news/articles/2025-07-02/fed-s-powell-should-be-investigated-by-congress-fhfa-head-says
2025-07-08 15:08	*A new Study by the Council of Economic Advisers (CEA), led by Highly Respected Chair, Dr. Stephen Miran, has found that Tariffs have had ZERO IMPACT on Inflation. In fact, the Study shows that Import Prices are actually DROPPING, just like I always said they would. The Fake News and the so-called "Experts" were wrong again. Tariffs are making our Country "BOOM." Many new Factories, Jobs, and TRILLIONS OF DOLLARS in Investments are pouring into the U.S.A. Someone should show this new Study to "Too Late" Jerome Powell, who has been whining like a baby about non-existent Inflation for months, and refusing to do the right thing. CUT INTEREST RATES JEROME — NOW IS THE TIME!*
2025-07-20 15:37	*The Wall Street Journal ran a typically untruthful story today by saying that Secretary of the Treasury, Scott Bessent, explained to me that firing Jerome "Too Late" Powell, the Worst Federal Reserve Chairman in History, would be bad for the Market. Nobody had to explain that to me. I know better than anybody what's good for the Market, and what's good for the U.S.A. If it weren't for me, the Market wouldn't be at Record Highs right now, it probably would have CRASHED! So, get your information CORRECT. People don't explain to me, I explain to them!*
2025-07-23 09:08	*Housing in our Country is lagging because Jerome "Too Late" Powell refuses to lower Interest Rates. Families are being hurt because Interest Rates are too high, and even our Country is having to pay a higher Rate than it should be because of "Too Late." Our Rate should be three points lower than they are, saving us $1 Trillion per year (as a Country). This stubborn guy at the Fed just doesn't get it — Never did, and never will. The Board should act, but they don't have the Courage to do so!*

Continued on next page

Table B.3 – continued from previous page

Timestamp	Post Content
2025-07-24 15:41	*Getting ready to head over to the Fed to look at their, now, $3.1 Billion Dollar (PLUS!) construction project. Also present will be Fed Chair Jerome Powell, Senator Tim Scott, Senator Thom Tillis, OMB Director Russ Vought, Chairman of Fannie Mae and Freddie Mac, Bill Pulte, my Appointees to the National Capital Planning Commission, James Blair and Will Scharf, and various other construction professionals.*
2025-07-24 17:22	*It was a Great Honor to tour the Renovation (and some new Construction!) of the Federal Reserve Building with Chairman Jerome Powell, Senator Tim Scott, and others. It's got a long way to go, would have been much better if it were never started, but it is what it is and, hopefully, it will be finished ASAP. The cost overruns are substantial but, on the positive side, our Country is doing very well and can afford just about anything — Even the cost of this building! I'll be watching and, hopefully, adding some expertise. As everyone knows, I renovated the Old Post Office on Pennsylvania Avenue, and it was a roaring SUCCESS. The total Construction cost was a small fraction of the Fed Building's cost, and it is many times the size. With all of that being said, let's just get it finished and, even more importantly, LOWER INTEREST RATES!*
2025-07-31 07:11	*Jerome "Too Late" Powell has done it again!!! He is TOO LATE, and actually, TOO ANGRY, TOO STUPID, & TOO POLITICAL, to have the job of Fed Chair. He is costing our Country TRILLIONS OF DOLLARS, in addition to one of the most incompetent, or corrupt, renovations of a building(s) in the history of construction! Put another way,"Too Late" is a TOTAL LOSER, and our Country is paying the price!*
2025-08-01 06:32	*Jerome "Too Late" Powell, a stubborn MORON, must substantially lower interest rates, NOW. IF HE CONTINUES TO REFUSE, THE BOARD SHOULD ASSUME CONTROL, AND DO WHAT EVERYONE KNOWS HAS TO BE DONE!*
2025-08-01 08:51	*Too Little, Too Late. Jerome "Too Late" Powell is a disaster. DROP THE RATE! The good news is that Tariffs are bringing Billions of Dollars into the USA!*

Continued on next page

Table B.3 – continued from previous page

Timestamp	Post Content
2025-08-01 14:09	*I was just informed that our Country's "Jobs Numbers" are being produced by a Biden Appointee, Dr. Erika McEntarfer, the Commissioner of Labor Statistics, who faked the Jobs Numbers before the Election to try and boost Kamala's chances of Victory. This is the same Bureau of Labor Statistics that overstated the Jobs Growth in March 2024 by approximately 818,000 and, then again, right before the 2024 Presidential Election, in August and September, by 112,000. These were Records — No one can be that wrong? We need accurate Jobs Numbers. I have directed my Team to fire this Biden Political Appointee, IMMEDIATELY. She will be replaced with someone much more competent and qualified. Important numbers like this must be fair and accurate, they can't be manipulated for political purposes. McEntarfer said there were only 73,000 Jobs added (a shock!) but, more importantly, that a major mistake was made by them, 258,000 Jobs downward, in the prior two months. Similar things happened in the first part of the year, always to the negative. The Economy is BOOMING under "TRUMP" despite a Fed that also plays games, this time with Interest Rates, where they lowered them twice, and substantially, just before the Presidential Election, I assume in the hopes of getting "Kamala" elected – How did that work out? Jerome "Too Late" Powell should also be put "out to pasture." Thank you for your attention to this matter!*
2025-08-01 15:44	*In my opinion, today's Jobs Numbers were RIGGED in order to make the Republicans, and ME, look bad — Just like when they had three great days around the 2024 Presidential Election, and then, those numbers were "taken away" on November 15, 2024, right after the Election, when the Jobs Numbers were massively revised DOWNWARD, making a correction of over 818,000 Jobs — A TOTAL SCAM. Jerome "Too Late" Powell is no better! But, the good news is, our Country is doing GREAT!*
2025-08-01 18:05	*"Too Late" Powell should resign, just like Adriana Kugler, a Biden Appointee, resigned. She knew he was doing the wrong thing on Interest Rates. He should resign, also!*
2025-08-12 09:44	*Jerome "Too Late" Powell must NOW lower the rate. Steve "Manouychin" really gave me a "beauty"when he pushed this loser. The damage he has done by always being Too Late is incalculable. Fortunately, the economy is sooo good that we've blown through Powell and the complacent Board. I am, though, considering allowing a major lawsuit against Powell to proceed because of the horrible, and grossly incompetent, job he has done in managing the construction of the Fed Buildings. Three Billion Dollars for a job that should have been a $50 Million Dollar fix up. Not good!*
2025-08-19 18:38	*Could somebody please inform Jerome "Too Late" Powell that he is hurting the Housing Industry, very badly? People can't get a Mortgage because of him. There is no Inflation, and every sign is pointing to a major Rate Cut. "Too Late" is a disaster!*
2025-09-05 10:16	*Jerome "Too Late" Powell should have lowered rates long ago. As usual, he's "Too Late!"*

Continued on next page

Table B.3 – continued from previous page

Timestamp	Post Content
2025-09-09 09:11	*"If the Fed had followed what we published, they would have raised rates in early 2021. The entire Organization is broken. It needs to be fixed. They need to use modern sources of information.We strongly disagree with Ken Griffin. We think Incompetence is more important than to defend theoretical independence. He ("Too Late!") has done a terrible job since he adapted a two target? It's too low, it's too rigid, they followed Data that's years delayed. They don't believe that money supply matters, it's like the Pope not believing in Jesus. We think that's a much bigger problem than this notion that they are dependent, or they're not independent." Jay Hatfield Infrastructure Capital Advisors, CEO & CIO, on Maria B. "Chair Powell was late to raise rates, they need to come down here, there's no question about it. He's dragging his feet. The Feds going to come down here 50, 75, Maybe 100." Greg Faranello, American Securities on Maria B.*
2025-09-10 09:08	*Just out: No Inflation!!! "Too Late" must lower the RATE, BIG, right now. Powell is a total disaster, who doesn't have a clue!!! President DJT*

Notes: List of Truth Social messages by President Trump related to Federal Reserve Chair Jerome Powell and pressure on interest rates. All posts are sourced from `https://rollcall.com/factbase/trump/topic/social/`.

C FOMC probability

C.1 CME Implied FOMC Probabilities

We recover the market's assessment of future FOMC decision probabilities from *Fed funds futures* prices. We use the CME FED watch's approach to construct the market implied FOMC decision probabilities with high frequency fed fund futures prices data.

The CME group provides readily available FOMC probability at daily frequency[25]. We adopt their approach and recontruct the benchmark FOMC probabilities with high frequency Fed funds futures data.

Here is an overview of the approach.

Step 1: Start with the first non-FOMC month. The futures contract price for a month without a FOMC meeting is assumed to reflect the average effective federal funds rate (EFFR) for that month. It is further assumed that the EFFR remains unchanged throughout the month T, i.e., $EFFR^{end}_{t,T-1} = EFFR^{avg}_{t,T} = EFFR^{start}_{t,T+1}$.

The implied average effective fed fund rate for any month is

$$EFFR^{avg}_{t,T} = 100 - f_{t,T}$$

where $f_{t,T}$ is the fed fund futures price for contract month T, observed at time t.

Step 2: Establish starting and ending EFFR for every month. From step 1, we obtain $EFFR^{start}_{t,T}$ and $EFFR^{end}_{t,T}$ for the first non-FOMC month in the sample. We then assume $EFFR^{start}_{t,T} = EFFR^{end}_{t,T-1}$ and $EFFR^{end}_{t,T} = EFFR^{start}_{t,T+1}$ and use the relationship to propagate values both forward and backward until every month has values for $EFFR^{Start}$, $EFFR^{End}$.

For FOMC months, the following relationship holds:

$$EFFR^{avg}_{t,T} = \frac{N}{M+N} EFFR^{start}_{t,T} + \frac{M}{M+N} EFFR^{end}_{t,T}$$

[25] See `https://www.cmegroup.com/markets/interest-rates/cme-fedwatch-tool.html?redirect=/trading/interest-rates/countdown-to-fomc.html`

where N is the number of days before FOMC meeting (including meeting date), and M is the number of days after FOMC meeting, using the 30-day month convention standard for Fed funds futures. [26]

Step 3: Calculate the expected rate change. Once we have $EFFR_{t,T}^{start}$ and $EFFR_{t,T}^{end}$ for every month in the sample, we calculate the change in EFFR for the FOMC meeting month:

$$\text{E(rate change in bps)}_t = EFFR_{t,T}^{end} - EFFR_{t,T}^{start}$$

Or equivalently, in units of 25bps changes:

$$\text{E(\# of 25bps changes)}_t = \frac{EFFR_{t,T}^{end} - EFFR_{t,T}^{start}}{25 \text{ bps}}$$

Step 4: Calculate FOMC decision probabilities. Break the expected number of 25bps changes $\text{E(\# of changes)}_t$ into two parts: The whole number represents minimum number of 25bps rate changes. The decimal part indicates the probability of a larger rate change. Thus,

$$P(\text{a larger rate change})_t = |\text{decimal part}|$$
$$P(\text{no larger rate change})_t = 1 - |\text{decimal part}|$$

For example, if the expected change is 2.30, then the expected probability of a 75bps rate hike is 30% and the expected probability of a 50bps rate hike is 70%. Conversely, if the expected change is -2.30, the expected probability of a 75bps rate cut is 30% and the expected probability of a 50bps rate cut is 70%.

[26] When $M < 5$ days (meeting occurs very late in the month), the calculation becomes unstable. In this case, we use $EFFR_{t,T+1}^{avg}$ from the next month's contract as a proxy for $EFFR_{t,T}^{end}$, then solve for $EFFR_{t,T}^{start}$ using $EFFR_{t,T}^{start} = \frac{EFFR_{t,T}^{avg} - \frac{M}{M+N} EFFR_{t,T}^{end}}{N/(M+N)}$

C.2 Polymarket and CME FOMC Expected Rate Changes

To validate Polymarket as a reliable measure of market expectations for FOMC decisions, we compare its implied rate changes with those derived from CME 30 days federal funds futures—the traditional benchmark widely used by market practitioners. This comparison also allows us to highlight the practical advantages Polymarket offers for high-frequency empirical analysis.

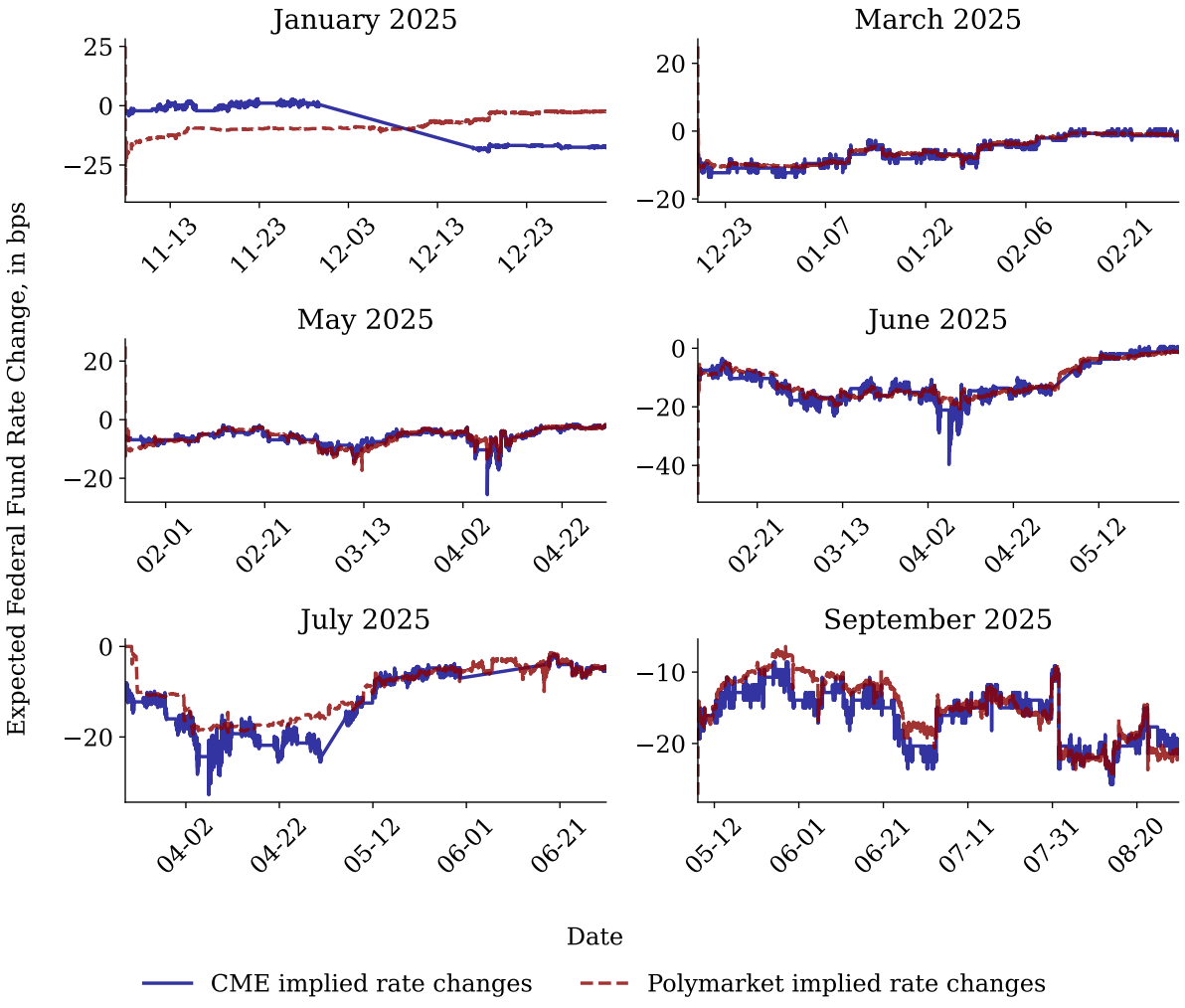
Figure C.1 presents a visual comparison of expected federal funds rate changes implied by CME 30-day federal funds futures contracts and Polymarket prediction markets across six upcoming FOMC meetings from January through September 2025. The two series closely co-move throughout the sample period. The visual alignment is particularly tight for the March, May, and June 2025 meetings, where the two measures are nearly indistinguishable. The January and July 2025 meetings exhibit larger discrepancies because when meetings occur very late in the month, the CME calculation becomes unstable. This also highlights the convenience and reliability Polymarket offers over traditional markets.

To quantify the degree of alignment between these two measures, Table C.1 reports tracking error statistics for each FOMC meeting. The tracking error, defined as the difference between Polymarket-implied and CME-implied rate changes, remains economically small across all meetings. The mean tracking error ranges from 0.03 basis points (May 2025) to 2.19 basis points (July 2025). The root mean squared error (RMSE) and mean absolute error (MAE) statistics similarly indicate tight correspondence.

The close tracking between these two measures provides empirical validation that Polymarket prediction markets serve as reliable proxies for institutional market expectations of FOMC decisions. However, Polymarket offers several practical advantages over the CME-based approach. First, Polymarket directly provides probability distributions over discrete rate change scenarios (e.g., probabilities for -50 bps, -25 bps, 0 bps, +25 bps cuts or hikes), eliminating the need for the multi-step calculation procedure. The CME approach requires: (1) extracting average effective federal funds rates from futures prices, (2) iteratively solving for start-of-month and end-of-month rates, (3) computing expected

rate changes, and (4) decomposing the expected change into probabilities. In contrast, Polymarket probabilities are directly observable and can be aggregated into expected rate changes through simple probability-weighted averaging. Second, the CME methodology becomes unstable when FOMC meetings occur late in the month (when M $<$ 5 days), requiring workarounds that introduce additional assumptions. Polymarket prediction markets, by contrast, maintain well-defined probability distributions regardless of meeting timing within the month.

Figure C.1: CME and Polymarket Implied FOMC Rate Changes



Notes. The plot compares expected federal funds rate changes implied by CME 30-day federal funds futures versus Polymarket prediction markets. CME expectations are calculated following part C. Polymarket expectations are computed as the probability-weighted average of rate change scenarios. Both series are measured in basis points.

Table C.1: Tracking Error Between Polymarket and CME Implied Rate Changes

FOMC Meeting	Mean TE (bps)	Std Dev (bps)	RMSE (bps)	MAE (bps)
January 2025	0.79	12.54	12.57	12.34
March 2025	0.41	1.01	1.09	0.80
May 2025	0.03	1.42	1.42	1.00
June 2025	0.36	2.28	2.31	1.59
July 2025	2.19	2.84	3.59	2.46
September 2025	0.93	1.99	2.20	1.78

Notes. Tracking error (TE) is defined as Polymarket implied rate change minus CME implied rate change. RMSE is Root Mean Squared Error, MAE is Mean Absolute Error.

D Controlling for Hedging Agents

A potential alternative explanation for our findings is that some traders use Powell-removal and FOMC markets as hedges rather than as directional bets. For example, an agent might take a Yes position on "Trump fires Powell" while simultaneously betting No (or No Change) on interest rates, thereby managing risk if Powell is not removed. To evaluate this possibility, we classify matched wallets into four categories based on their positions in the Powell-removal and rate-cut markets:

- Case 1: Yes on Powell removal, and Yes on rate cut (or No on no change/rate hike)—directional macro view.
- Case 2: Yes on Powell removal, and No on rate cut (or Yes on no change/rate hike)—potential hedge.
- Case 3: No on Powell removal, and Yes on rate cut (or No on no change/rate hike)—potential hedge.
- Case 4: No on Powell removal, and No on rate cut (or Yes on no change/rate hike)—directional macro view.

Table D.1 reports the number of wallets in each case across the March, May, June, July, and September 2025 FOMC meetings. The majority of traders fall into Cases 1 and 4, with directional positions accounting for 54.9%, 59.2%, 57.8%, 59.6%, and 49.3% of matched wallets, respectively. This supports our baseline interpretation that Powell-removal and FOMC trades reflect directional macroeconomic views rather than hedging activity.

To further address this concern, we re-estimate the baseline specification excluding hedgers (Cases 2 and 3) from the sample. The results, reported in Table 6, are qualitatively similar to the baseline but with larger coefficients on Fed independence beliefs. The difference between $+FJP$ and $-FJP$ widens considerably, which is intuitive given that hedging trades would otherwise attenuate the estimated effects.

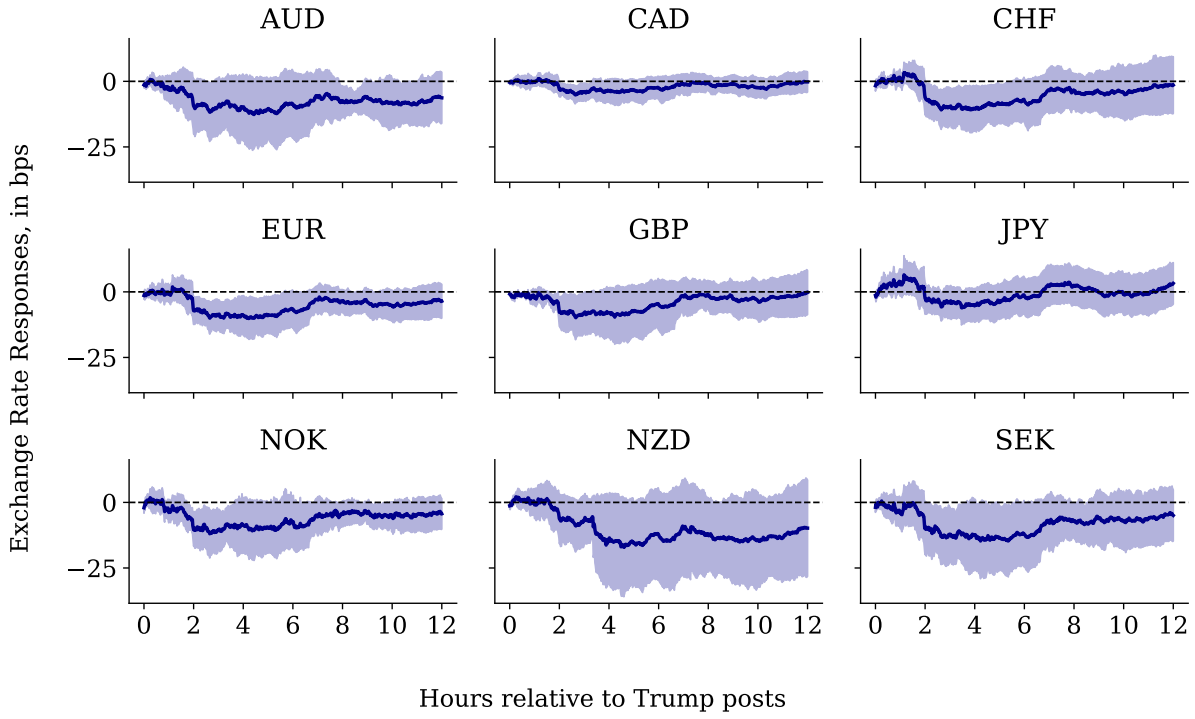
Table D.1: Number of Hedge Traders

Event	Case 1	Case 2	Case 3	Case 4
March 2025 FOMC	14	14	9	14
May 2025 FOMC	156	76	91	86
June 2025 FOMC	113	73	79	95
July 2025 FOMC	443	286	208	285
September 2025 FOMC	504	496	381	348

Notes. This table reports, for each FOMC event, the number of traders classified into Case 1: Yes on Powell removal and Yes on rate cut; Case 2: Yes on Powell removal and No on rate cut; Case 3: No on Powell removal and Yes on rate cut; and Case 4: No on Powell removal and No on rate cut.

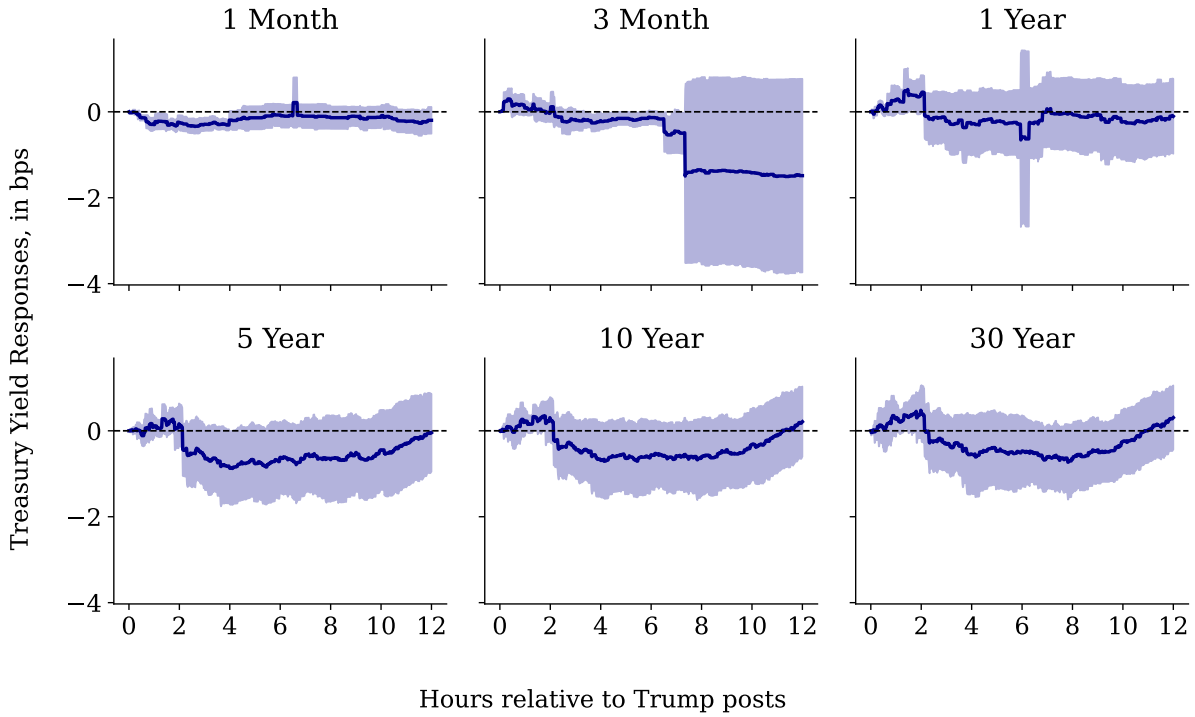
E Trump Social Media Posts and Additional Market Responses

Figure E.1: Trump Social Media posts and Foreign Exchange Rates



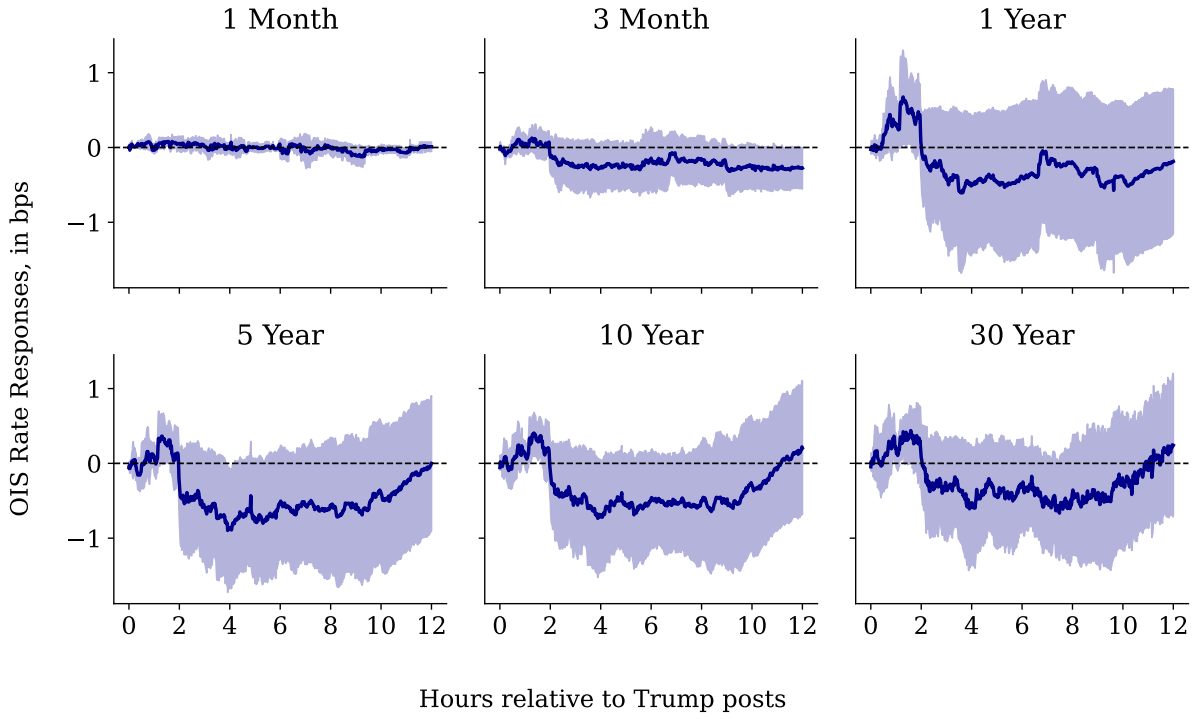
Notes. These figures show the responses of foreign exchange rates to shocks in the market for "Jerome Powell out as Fed Chair in 2025?" induced by Trump's posts on Truth Social. Exchange rates are expressed as the logarithm of units of foreign currency per U.S. dollar, in basis points. Shaded areas indicate 95% confidence intervals, based on heteroskedasticity- and autocorrelation-robust standard errors. The sample period is from 2025-01-30 to 2025-09-25.

Figure E.2: Trump Social Media posts and Treasury Yields



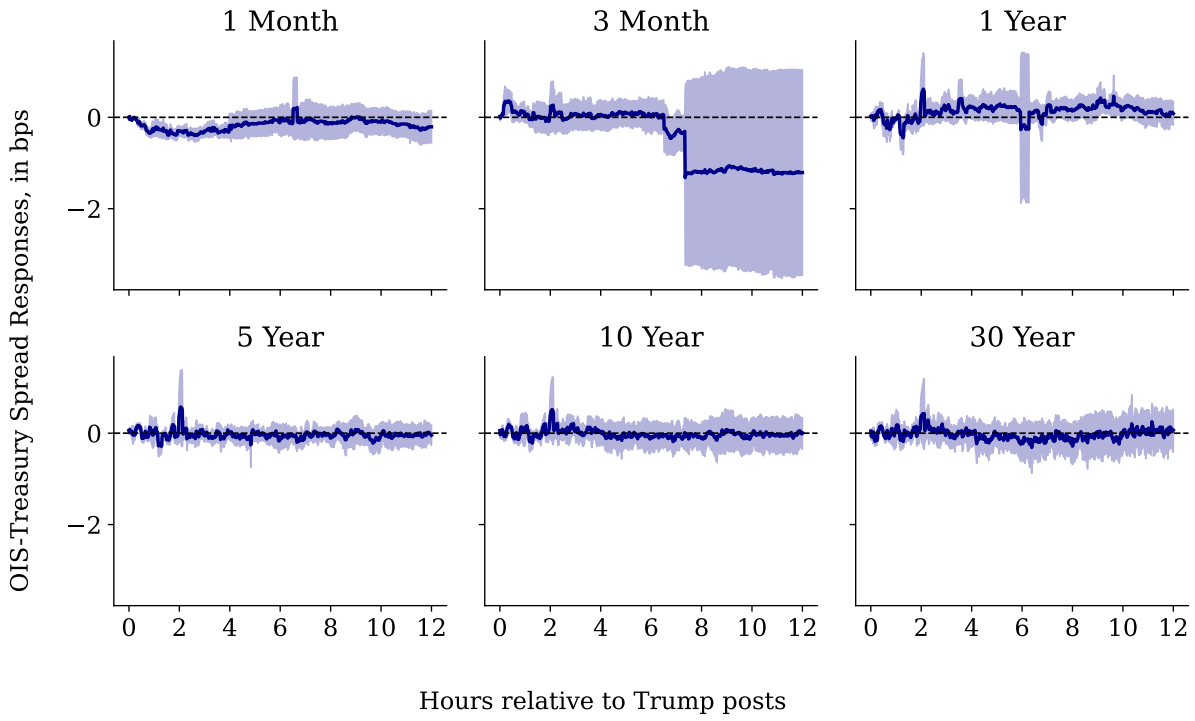
Notes. These figures show the responses of U.S. treasury yields to shocks in the market for "Jerome Powell out as Fed Chair in 2025?" induced by Trump's posts on Truth Social. Yields are in basis points. Shaded areas indicate 95% confidence intervals, based on heteroskedasticity- and autocorrelation-robust standard errors. The sample period is from 2025-01-30 to 2025-09-25.

Figure E.3: Trump Social Media posts and OIS Rates



Notes. These figures show the responses of U.S.Overnight Index Swap (OIS) rates to shocks in the market for "Jerome Powell out as Fed Chair in 2025?" induced by Trump's posts on Truth Social. OIS rates are in basis points. Shaded areas indicate 95% confidence intervals, based on heteroskedasticity- and autocorrelation-robust standard errors. The sample period is from 2025-01-30 to 2025-09-25.

Figure E.4: Trump Social Media posts and OIS and Treasury Spread



Notes. These figures show the responses of U.S. Overnight Index Swap (OIS) - Treasury spreads to shocks in the market for "Jerome Powell out as Fed Chair in 2025?" induced by Trump's posts on Truth Social. OIS rates are in basis points. Shaded areas indicate 95% confidence intervals, based on heteroskedasticity- and autocorrelation-robust standard errors. The sample period is from 2025-01-30 to 2025-09-25.

F Alternative CBI Measure: Lisa Cook Removal

In this part, we further validate our findings on political threats to central bank independence, and check whether similar patterns hold for other Federal Reserve officials. In August 2025, President Trump also threatened to remove Fed Governor Lisa Cook, providing an independent test of our core hypothesis. Table F.1 presents results analogous to our main analysis in Table 6, using positions in the Polymarket contract 'Lisa Cook out as Fed Governor by December 31, 2025' as an alternative measure of perceived threats to CBI. The results are consistent with our main findings: agents betting on Cook's removal (+FLC) exhibit significantly more dovish stance scores for the September 2025 FOMC meeting, with the bias coefficient reaching 25.4 percentile points after excluding hedgers (Figure F.1). These estimates are comparable in magnitude to those observed for Powell-removal expectations, suggesting that market participants interpret political pressure on a Fed governor official—not just the Chair—as threats to central bank independence.

Table F.1: Monetary Policy Stance and Federal Reserve Independence (Lisa Cook Firing)

	September 2025		September 2025 (No Hedger)	
$+FLC$	4.767*	5.915**	25.355***	25.002***
	(2.449)	(2.457)	(2.726)	(2.860)
$-FLC$	1.158	3.690	-0.463	1.420
	(2.576)	(2.600)	(4.837)	(4.916)
$+FLC \times SOP$		-3.933		14.466***
		(14.369)		(4.629)
$-FLC \times SOP$		-10.950		-26.170***
		(15.569)		(5.126)
$log(volume)$		-0.925***		-0.890***
		(0.096)		(0.097)
$profit$		-0.000		-0.000
		(0.000)		(0.000)
$\#markets$		0.016**		0.016**
		(0.007)		(0.007)
SOP		-3.572**		-3.644**
		(1.431)		(1.431)
$const$	-0.030	6.870***	-0.030	6.586***
	(0.163)	(0.691)	(0.163)	(0.697)
R-squared Adj.	0.000	0.004	0.001	0.005
N	31471	31471	31229	31229

Notes. The table reports coefficients from regressions of the hawk-dove percentileon agents' stance toward Federal Reserve independence, along with a set of controls. In the column labeled '(no hedgers),' we exclude hedge traders, defined as (a) agents who voted YES on Trump firing Powell and NO (or YES on No Change) on a rate cut, and (b) agents who voted NO on Trump firing Powell and YES on a rate cut (or NO on No Change). *+FLC* (*-FLC*) is a dummy variable indicating whether a Polymarket agent has positive (negative) net yes position on market 'Lisa Cook out as Fed Governor by December 31, 2025' as of the September 2025 FOMC. *SOP* is a dummy variable indicating whether a Polymarket agent is a sophisticated investor, defined as being in the top 1% in terms of profit on Polymarket and having invested in more than five markets. *log(volume)* is the log of an agent's total collateral volume on Polymarket. *profit* is the agent's total profit, and *# markets* is the number of markets the agent has bet on. White heteroscedasticity-robust standard errors are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% significance levels, respectively.

Figure F.1: Bias Coefficient: Monetary Policy Stance and Fed Independence (Lisa Cook Firing)

*Notes.*Notes. These figures show the estimated bias coefficient—defined as the difference between the coefficients for +FLC and –FLC from the baseline specification and from the specification excluding hedge traders for the September 2025 FOMC meetings in table F.1.Vertical bars represent 95% confidence intervals calculated using the Delta method.