# How Monetary Policy Is Made: Lessons from Historical FOMC Discussions

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*Abstract*: We construct a new dataset of FOMC meeting transcripts from 1966 to 1990 to analyze the sources of heterogeneity in individual monetary policy preferences and study how this heterogeneity shapes policy decisions. Using these detailed discussions, we manually quantify and characterize each FOMC participants' preferred policies along with their reasoning and justification. We show that participants' beliefs about the effects of monetary policy—specifically, their perceived slope of the Phillips Curve—play a central role. Participants who believe monetary policy has stronger effects on real activity are more likely to cite output as a justification for easing, while those perceiving stronger price effects emphasize inflation as a reason for tightening. We then show that the Chair plays a unique and powerful role in reconciling these views, not just in setting policy rates, but also in minimizing dissent. The latter occurs because dissenters find their ability to influence policy in subsequent meetings is significantly curtailed.

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# I Introduction

The Federal Open Market Committee (FOMC) is charged with setting monetary policy at each meeting, but it is composed of individuals with different experiences, priorities, and interpretations of the economic outlook. These differences mean that members often enter deliberations with distinct views about the optimal policy stance, even when presented with the same information. Understanding the extent of these disagreements, their source, and how they are ultimately reconciled into a unified decision is critical to interpreting the historical record of U.S. monetary policy as well as understanding the outlook for future FOMC decisions under different Chairs and members. While public statements and formal votes can reveal some disagreements, the transcripts of FOMC meetings uniquely provide a much richer view of how participants' preferences are formed and the process by which policy consensus is achieved.

In this paper, we use the complete set of FOMC transcripts from 1966 to 1990 to systematically document and explain policy disagreement inside the Committee. For each meeting, we identify the policy action preferred by each participant and classify the justifications they give for their choice, including references to current and expected economic conditions, the perceived tradeoffs between different policy options, and external influences like academic research and political pressure. This allows us to go beyond vote tallies and ex-post policy outcomes to study the individual-level determinants of policy preferences and the mechanisms through which those preferences are aggregated into a decision. By focusing on a period in which deliberations were candid and unconstrained by imminent public release, we are able to observe the full range of views and the process by which they are reconciled.

We begin by asking whether variation in policymakers' desired policy actions can be explained by different reaction functions applied to the same macroeconomic forecasts from the Board of Governors staff (Greenbook) forecasts. The answer is no: estimated reaction functions using only common forecasts have little ability to account for the cross-sectional dispersion in policy preferences. We then turn to the justifications expressed in the meeting transcripts and find that these narrative explanations are powerful predictors of policy preferences, quantitatively explaining far more variation than the forecasts alone. To understand why policymakers appeal to different forces and justifications, we examine the objectives they cite, the tradeoffs they perceive, and the outside pressures and sources of information they reference. Differences in perceived inflation–output tradeoffs emerge as especially important: both over time and across FOMC participants, there are

important differences in the extent to which monetary policy is expected to pass into either prices or output. These differences in perceived tradeoffs translate into different policy recommendations even when members start from the same macroeconomic outlook. In emphasizing the importance of the perceived tradeoff in driving historical policy discussions, our results echo those of earlier work such as Sargent, Williams, and Zha (2005) and Primiceri (2006), but we build on these findings by providing direct evidence on perceived tradeoffs of policymakers over time.

We then examine how these diverse policy preferences are reconciled into a single policy decision. We do so by estimating the extent to which individual FOMC members' desired policy actions pass through into the decision of the Committee. For the Chair, this passthrough is nearly complete: the final policy decision moves almost one-for-one with the Chair's preferred change in the federal funds rate. For everyone else, the passthrough is much smaller, particularly for non-voting members of the Committee. These results confirm the singularly powerful role played by the Chair, consistent with prior work emphasizing the Chair's agenda-setting authority and disproportionate influence on outcomes (e.g., Chappell, McGregor, and Vermilyea 2005; Schonhardt-Bailey 2013). Even when we account for the extent to which other members are cited by colleagues during deliberations—a proxy for interpersonal influence—the passthrough of their preferences into the Committee's final decision remains limited compared to that of the Chair. In short, while disagreement is pervasive among FOMC members, when it comes time to make a decision, the Committee largely follows the Chair's preferences.

In that case, why isn't dissent more common given the extent of underlying disagreement and the dominant role of the Chair in shaping policy outcomes? Examining the predictors of dissent, we find that members whose preferred policy changes are far from those ultimately chosen by the Committee are somewhat more likely to dissent, but the effect is quantitatively small; even large policy disagreements are rarely sufficient to generate a formal dissent. The specific reasons for disagreement—whether rooted in justifications about inflation, output or some other motive—also do not play an important quantitative role in predicting dissent. Instead, the strongest predictor is the identity of the Chair: dissents are unconditionally more frequent under some Chairs than others, regardless of the degree of underlying policy disagreement. A key factor in suppressing dissent appears to be the cost it imposes on future influence within the committee. Members who dissent in one meeting experience a statistically and economically significant decline in the passthrough of their preferred policy choice into the Committee's decisions in subsequent meetings—*falling*

*significantly* with each dissent—consistent with a punishment mechanism for those who deviate from the cooperative outcome within the Committee.

Taken together, our results provide a comprehensive picture of how disagreement, persuasion, and institutional power interact within the FOMC. While members frequently enter meetings with differing policy views, these differences are not well explained by standard reaction functions and are instead closely tied to the narratives and tradeoffs emphasized in their deliberations—particularly differing perceptions of the inflation–unemployment relationship. Yet when preferences are aggregated into a decision, the Chair's position dominates, and dissent is rare in part because it carries lasting costs on a member's influence. These findings highlight both the complexity of the belief formation process within the Committee and the strong centralizing role of its leadership, offering a richer and more nuanced view of FOMC decision-making than is captured by vote records alone.

A substantial literature reconstructs internal FOMC deliberations from minutes and transcripts to understand how policy was made across different eras. This work has documented how the Committee aggregates dispersed information and tempers individual biases (Blinder and Morgan 2005; Gerling et al. 2005), while also showing that heterogeneity in preferences persists, shaped by differences in regional mandates (von Hagen and Süppel 1994), expertise (Hansen et al. 2014), or personal histories (Malmendier et al. 2021). Some studies have inferred preferences from dissenting votes (e.g., Waller 1992; Chappell et al. 1993; Belden 1989) or market perceptions (Istrefi 2016), but dissent is rare and vote records obscure the deliberative process. More recent work has exploited FOMC transcripts to extract tone (Lucca and Trebbi 2009; Hansen and McMahon 2016), track the evolution of views (Meade and Stasavage 2008), and quantify specific themes such as inflation–output tradeoffs (Meade and Thornton 2012). We build on this literature by manually coding the full set of transcripts from 1966 to 1990, recovering each participant's policy rate preference and stated justification, and estimating individual-level Taylor Rules enriched with narrative evidence—linking preferred policy actions directly to the economic reasoning offered in deliberation.

A second body of work studies hawks and doves in monetary policymaking. Bordo and Istrefi (2023) provide a widely used classification, and prior contributions (e.g., Chappell, McGregor, and Vermilyea 2004; Asso, Kahn, and Leeson 2010; Bennani, Farvaque, and Stanek 2018) document systematic differences in estimated reaction functions across policymakers. These differences are often interpreted as reflecting fundamentally different tolerances for inflation versus unemployment. Our results qualify this view. Once justifications and expectations are held constant,

hawks and doves in our sample behave similarly in terms of how they would respond to inflation and output. The persistent divide in policy preferences appears instead to be rooted in different beliefs about the structure of the economy—particularly about the natural rate of unemployment (Orphanides and Williams 2002) and the equilibrium real interest rate (Laubach and Williams 2003). These structural beliefs shape perceptions of how monetary policy would affect inflation and output and thus the tradeoffs each policymaker sees between prices and real activity, echoing the role of long-run belief heterogeneity emphasized for forecasters in Crump et al. (2025).

Finally, our work relates to the growing use of computational text analysis to measure policy preferences and perceived tradeoffs from central bank communications. Studies such as Lucca and Trebbi (2009), Hansen and McMahon (2016), and Meade and Stasavage (2008) have shown the potential of textual records to shed light on the evolution of views and the internal dynamics of policymaking. Large language models and other automated methods now allow for broader and faster scaling of such analyses, but they rarely connect inferred sentiment or classifications to the exact macroeconomic justifications offered in real time. By manually coding every justification in the historical transcripts and linking them to both contemporaneous forecasts and final policy decisions, we provide a transparent, verifiable mapping from beliefs to preferences to outcomes. In doing so, we offer a benchmark against which automated approaches can be validated and extended, while also delivering new quantitative insights into the mechanisms of belief formation, persuasion, and influence within the FOMC.

## II Data Construction

Our primary dataset was constructed from transcripts of Federal Open Market Committee (FOMC) meetings between 1966 and 1990. We excluded earlier years due to the unavailability of Bluebook documents, which outlined the policy options discussed during meetings and were essential for classifying policymakers' stated preferences. We also excluded transcripts after 1990, as Chairman Greenspan's 1993 decision to publicly release meeting transcripts altered the nature of deliberations, reducing the frequency of dissent and potentially controversial views (Meade 2018).

We focused on remarks by voting or potentially voting Committee members—namely the Chair, Vice Chair, Board Governors, and regional Federal Reserve Bank presidents, collectively known as "participants"—who were directly responsible for monetary policy decisions. In selected cases, particularly those involving discussions of policy tradeoffs, we also included remarks by

nonvoting staff economists. The resulting dataset spanned 268 meetings, each averaging 80–100 transcript pages and roughly 18 participants, yielding 4,772 speaker-meeting observations.

Each transcript was read and classified by at least two trained research assistants who recorded the meeting date, speaker identity, page references, thematic classification, and any relevant numerical targets. A third assistant addressed any discrepancies to ensure consistency and accuracy, after which the authors conducted a final review of all classifications. Unlike prior work that aggregated multiple classifications (i.e., a "mixture of experts"), we used the assistants' work as a first-pass filter to identify relevant statements. We made the final classifications, since we were arguably better equipped to interpret economic nuance, complex policy tradeoffs, and "Fed-speak."

We coded all statements related to the short-run conduct of monetary policy—primarily implemented by adjusting the federal funds rate and monetary aggregates such as M1 or M2. References to other tools (e.g., the discount rate or exchange rate policy) were only included if explicitly tied to the stance of short-run policy. Most relevant statements appeared in the policy "roundtable" section of each meeting, where participants typically expressed and justified their preferred policy stance.

To systematically capture the reasoning behind participants' monetary policy preferences, we classified each relevant statement in the FOMC transcripts into six interrelated thematic categories. These categories reflect not only what participants believed about appropriate policy actions, but also how they justified their positions, the pace of implementation they favored, the tradeoffs they perceived, the external pressures they acknowledged, and the informational and interpersonal dynamics that shaped their views. Together, these represent a uniquely detailed characterization of policymakers' perceived policy decisions and the reasons for those preferred choices.

### 2.1 Preferred policy choice

At the core of the classification system are statements of Policy Preferences, which include explicit references to short-run monetary targets such as specific levels or ranges for the federal funds rate or desired paths for monetary aggregates like M1 and M2. Participants occasionally expressed a preference for direct numerical targets. The Bluebooks typically include three possible policy options for policymakers to consider at each meeting, and participants often described their preferences in terms of the coded options from the Bluebook, which we mapped to numerical targets based on contemporaneous documentation. If policymakers endorsed a combination of options or suggested a target between the officially proposed alternatives, we recorded their exact wording and derived

the most precise numerical target range consistent with their statement. When participants expressed indifference across a range or endorsed midpoints, we assigned targets accordingly.

The individual policy preferences represent the outcome of each FOMC member's consideration of their perceived objectives, real-time economic conditions, and constraints. They therefore provide a natural starting point for understanding the ways in which different FOMC members form their views about policy decisions as well as how the committee ultimately comes down in terms of a final decision. In Tables 1 and 2, we report some summary statistics of these preferred policy choices in terms of the desired change in the fed funds rate (FFR) at each FOMC meeting, with Table 1 reporting statistics across all participants and meetings, and Table 2 focusing on individual-specific statistics. Across all participants, the average desired policy change over our sample is for a reduction of 10bp, with a median value of no desired change in the FFR. The standard deviation of 0.60, however, indicates that there is significant dispersion over time and individuals. Figure 1 plots the time series of the average preferred policy change across all FOMC participants compared to the change in the effective FFR, showing that these average preferred changes line up very closely with ex-post changes in the effective FFR, and that there is significant variation in desired policy changes over time.

But the variation in desired policy changes is not limited to variation over time, which has been extensively studied using the FOMC FFR decisions (e.g. Orphanides 2003, Romer and Romer 2004). Table 2 indicates that the standard deviation of preferred policy changes is 0.49 within an individual over time, indicating that there is significant variation both within participants over time as well as *across* participants each meeting (since the overall standard deviation is much higher). Figure 2, for example, shows the number of different policy options cited by FOMC participants each meeting when describing their preferred choice, as well as the number of distinct FFR preferences given by participants each meeting, which can exceed the number of options in Bluebooks since some participants express a preference for something other than one of the pre-specified policy options. Figure 3 plots the share of participants expressing preferences that differ from the ultimate outcome by at least 25bp or at least 50bp, illustrating that there were periods when disagreement about the optimal policy choice was very high (e.g. early 1980s) even though dissents were infrequent, as emphasized in Meade (2005).

### 2.2 Justifications

Participants spend a significant amount of time during FOMC discussions justifying their preferred policy choice in terms of their underlying reasoning—such as concerns about inflationary pressures,

labor market slack, or broader macroeconomic risks. Given this, we document each speaker's underlying rationale and classify these rationales as supporting tighter, looser, or unchanged policy. Specifically, we categorize policy rationales into six broad categories: (i) Inflation—motivated by inflationary pressures or expectations; (ii) Output—emphasizing economic activity, unemployment, or growth considerations; (iii) International Considerations—reflecting concerns related to exchange rates, trade imbalances, foreign economic conditions, or international policy coordination; (iv) Uncertainty—highlighting caution due to economic, policy, or forecasting uncertainties; (v) Financial Stability—emphasizing conditions related to financial markets, asset prices, banking stability, or systemic financial risks; and (vi) Other—capturing rationales not explicitly covered by the previous categories, such as risk of interference with upcoming Treasury auctions. Each rationale is quantified as -1, 0, or 1 depending on whether it is used to justify higher interest rates (-1), lower interest rates (1), or no policy change (0). As indicated in Table 1, inflation is most commonly used as a justification for tightening monetary policy, whereas output is more frequently cited to justify loosening policy.

In some cases, policymakers provide very clear motivations for their preferences in terms of a single or primary justification. For example, in January 1980, San Francisco Fed President Balles stated "*it seems to me that inflation does remain the key threat to the longer-term health of the economy… without going into more detail, I too would come out in favor of alternative C.*" But it is more common for policymakers to make note of multiple factors, potentially pushing in different directions, in justifying their preferences. For example, in June 1976, then Vice-Chair Volcker stated "*And that leaves me with somewhat opposite prescriptions of wanting to boost business investment but at the same time wanting to be very cautious on the inflationary side, which leaves me right in the middle where the rest of you have been,*" which we score as a -1 for inflationary intention (calls for tightening) and a +1 for output intention (calls for loosening).

Figure 4 plots the time series of the total number of justifications for each category normalized by the number of FOMC participants. Inflation and output are the two most common justifications used for policy preferences, but financial stability, uncertainty and international considerations all are also frequently mentioned. The number of inflation and output justifications tend to be negatively correlated, consistent with the latter being used disproportionately to justify policy tightening and the latter policy loosening, but there are periods where both are increasing (e.g. late 1980s) or decreasing

(early 1970s). Financial stability justifications were very common in the late 1960s and became much less prevalent over time, until the late 1980s when a resurgence can be seen.

### 2.3 Objectives

In formulating their policy preference, policymakers must start with a set of objectives to achieve. By statute (at least as of the 1978 Humphrey-Hawkins Act), the policy objectives of the FOMC are to foster maximum employment and stable prices (the so-called "dual mandate"). However, policymakers also occasionally framed their monetary policy preferences around other topics, not only as means toward achieving these goals, but as distinct objectives in their own right. We identified cases in transcripts where policymakers made statements that indicated that they perceived objectives above and beyond inflation and output stabilization.

A time series of these objectives, which include uncertainty, financial stability, international developments, fiscal policy, and a residual "other" category, are shown in Figure 5. While uncommon, such mentions illustrate subtle changes in the FOMC's approach over time. For example, references to fiscal policy were more common in the 1960s and early 1970s, when the FOMC pursued its "even keel" policy that was explicitly designed to stabilize Treasury auctions. International objectives are also discussed intermittently. In the 1960s, the US balance of payments was at the forefront of policy discussions as emphasized in this January 1967 summary of Governor Brimmer's discussion: "*He agreed with Mr. Reynolds' conclusion that the objective of long run improvement in the balance of payments would be served best by policies that sustained domestic growth, and he thought the Committee was fortunate in having so smooth a meshing of policy requirements for the balance of payments and the domestic economy.*" In the late 1980s, there was a resurgence of discussion of international objectives, at that time focusing more on achieving stability in the dollar. The importance of that objective is highlighted by this May 1989 quote from Governor Heller: "*I think we have a classic situation here where we have an external problem on the one hand and various domestic problems on the other hand that call for different policies. With intervention you can overcome some of those difficulties and try to reconcile those conflicting goals.*" Hence, we can observe some variation over time in the perceived broader objectives of policymakers.

### 2.4 Tradeoffs

After defining an objective function, the next step in determining optimal policy typically involves specifying the tradeoffs between those objectives. We therefore attempted to measure how

policymakers perceived the tradeoff between inflation and output over time. To do so, we recorded statements that explicitly addressed both dimensions and constructed a five-point scale reflecting each speaker's perceived slope of the Phillips Curve. A higher score implied the belief that monetary policy would primarily influence prices, while a lower score indicated stronger effects on output. Conceptually, a statement may imply anywhere from 0–20% of the nominal GDP response occurring through real activity (with inflation absorbing 80–100%), up to the opposite extreme (80–100% in real activity, 0–20% in inflation). Negative statements—for instance, comments suggesting the policy might reduce output—are handled in absolute-value terms so that we still capture which dimension (prices or activity) the policymaker sees as relatively more affected. A score of 1 indicates the belief that policy will operate almost entirely through real activity, a score of 5 suggests that policy will operate almost entirely through prices, and a score of 3 indicates roughly equal effects on each. Although this procedure yields a categorical 1–5 variable, the bins are approximately equally spaced (in 20% increments), which allows us to treat them as numeric in subsequent regressions.

A particularly clear example of this is in December 1968, when St. Louis Fed President Francis favorably described his staff's study in which a reduction of the growth rate of the money from 6% to 4% per year would reduce the growth rate of real GDP by only 0.5 p.p. but lower inflation from 4% to 2.5%, implying a much larger passthrough into inflation than output. In contrast, by February 1970, Francis was pointing to new research from the St. Louis Fed indicating that an increase in the growth rate of the money supply would have almost no effect on inflation but significantly raise output. In most cases, references to a tradeoff are less quantitative but nonetheless can still be quite informative. For example, in July 1970, Minneapolis Fed President Galusha's views are summarized in the minutes as "*Others had suggested maintaining the present stance of monetary policy, Mr. Galusha continued. Presumably that meant seeking growth in money at about a 5 per cent annual rate. He would suggest instead that a 6 per cent growth rate be sought over the second half of 1970. In his judgment that would have only a modest effect on prices--there would be slightly less slowing in the advance of the GNP deflator--but it would have a significant impact on the general economic climate and on the rate of growth in real GNP in the first half of 1971,*" which we interpret as implying that he perceived a large passthrough of monetary policy into GDP and small passthrough into prices (a score of 2). Another example comes from the following quote by Governor Partee in the January 1975 meeting, which was scored as a 1: "*...given the generally low rate of resource utilization, an increase in demands stemming from a*

*monetary expansion would have almost no inflationary effect in the short run; the impact would be almost entirely on physical activity.*"

The average score across participants and time is 3.2, as shown in Table 1, with individual scores ranging from 1 to 5 and a relatively high standard deviation of 1.05. Figure 6 plots the average perceived policy tradeoff across FOMC participants over time, which indicates that this perceived tradeoff has not been stable. There is no particular trend to the perceived tradeoff over time, but nonetheless there are important swings so that the average measure ranges from a low of below 2.5 to a high above 4, indicating significant time variation in the perceived tradeoff between inflation and output.

### 2.5 Gradualism

Even with the same objectives, perceived tradeoffs and economic outlooks, policymakers could reach different preferred policy changes depending on their desired *pace* for policy adjustment, commonly referred to as gradualism. On occasion, some policymakers called for immediate and forceful moves, while others advocated for more measured steps. To characterize this preference, we identified all occasions when policymakers seemed to express a preference for either rapid (-1) or gradual (+1) policy changes, above and beyond what was called for by economic fundamentals. Formally, we classified mentions of the desired pace of policy adjustment by their stated motivation in terms of five categories: (i) Firm/Household Reactions—the pace motivated by anticipated responses of households and non-financial firms; (ii) Financial Market Reactions—the pace motivated by potential reactions within the financial sector; (iii) Uncertainty—the pace motivated by existing economic or financial uncertainty, or by the aim to avoid generating additional uncertainty; (iv) Communications—the pace motivated by the necessity to clearly communicate the Fed's policy stance; and (v) Other—the pace motivated by reasons not captured by the categories above. Each category is recorded as a binary variable indicating whether it was cited as a justification for gradual or swift policy implementation. These classifications at the speaker-meeting level are not mutually exclusive, and policymakers could invoke multiple motivations, potentially even expressing different gradualist preferences across these distinct categories.

For example, in February of 1973, Boston Fed President Morris was described as calling for a gradual approach: "*He was not sure that it was possible as yet to evaluate the effect of that firming on growth rates in reserves and the money supply, and he would be inclined to hold the ground for another month in order to get a better basis for judging those effects.*" This was

classified as calling for gradualism due to uncertainty about the economic environment, consistent with Brainerd (1967). In contrast, in that same meeting, Chairman Burns instead advocated for a faster policy adjustment: "*The Chairman added that the pursuit of such a policy course might temporarily produce a little more firmness than desired on a steady basis. Personally, he saw nothing wrong in pursuing a zig-zag policy course in the short run. Apart from the fact that it was not always easy to specify the straight path to monetary policy objectives, deviations, within limits, had the advantage of depriving speculators of the free ride offered to them when the course of policy was made crystal clear."* This argument would be characterized as related to financial markets (depriving a free ride to speculators) in the direction of rapid adjustment.

These justifications offer an important window into how policymakers balanced decisiveness with caution, especially in the face of volatile or incomplete information. Figure 7 plots these series over time, averaged across participants. While participants were on average more likely to express preferences for more gradual changes in policy, some periods---such as the late 1970s and early 1980s---showed a desire for more rapid action. Justifications for this changing pace of adjustment were broad-based and correlated across categories over time, consistently involving appeals to financial markets, firms and households and overall uncertainty.

### 2.6 Outside pressure

In some meetings, participants also acknowledged that there were outside forces directly or indirectly exerting pressure on them to act in a certain way, which we refer to as "Political Pressure." Similar to our classification of "Policy Preferences", these pressures may advocate for tighter, looser, or unchanged policy. We further distinguish political pressures according to their source, classifying them into four categories: (i) Congress—pressure or influence originating from legislators, legislative actions, or congressional hearings; (ii) Executive—pressure from the President, administration officials, or executive branch policies; (iii) Financial Markets—pressure related to market expectations, investor sentiment, or financial-sector lobbying; and (iv) Other—any remaining pressures not included above, such as media scrutiny or public opinion.

An example of pressure coming from Congress and the Administration is illustrated by the introductory comments of Chairman Burns in the January 1972 FOMC meeting. As shown in Adams (2006), Burns was being pressured by President Nixon in late 1971 and through 1972 to pursue more expansionary monetary policy to help him win reelection. While Burns never formulated things so directly in FOMC discussions, he began the January 1972 meeting by emphasizing Congressional

and Presidential expectations of monetary policy: "*In his view, Chairman Burns continued, it was important that the performance of monetary policy improve rather promptly. In that connection, he might note that he was scheduled to testify before the Joint Economic Committee on February 9. In essence, his task would be to give an accounting to the Congress on how the Federal Reserve had been contributing to the national objectives of economic growth and orderly reduction in the rate of inflation--that is, an accounting of the contribution the System had been making to the success of the new economic program which the President had announced on August 15. That program had the support not only of the entire Administration but also of both political parties in the Congress, as the passage of the Economic Stabilization Act and the Revenue Act of 1971 clearly attested.*" We interpret Burns' starting the meeting on this note as indicative of him perceiving pressure to move in the direction wanted by the Congress and Administration.

In terms of pressure from financial markets, discussions among the FOMC make frequent references to market expectations and participants' desire to avoid clashing with those expectations. A typical example is by Brimmer in April 1970: "*On the other hand, an effort to keep growth in the bank credit proxy within the neighborhood of the rate associated with alternative A by exerting upward pressure on money market rates would risk disappointing market expectations.*" Meeting market expectations to avoid causing potential volatility in financial markets is not uncommon in FOMC discussions and is consistent with motives for gradualism emphasized in e.g. Woodford (1999).

Figure 8 plots the total number of mentions of pressure on the Federal Reserve by type. This figure illustrates two novel stylized facts. First, explicit references to external pressure are quite rare, even in closed-door discussions. Second, while pressure from the President has been the primary focus of past research, pressure from Congress or financial markets (and sometimes both) are more likely to be cited throughout our sample period.

### 2.7 Citations

To evaluate what kinds of information entered into deliberations, we tracked Citations—explicit references to outside sources that participants used to support their arguments. These included materials from Federal Reserve staff, academic research, industry briefings, and publications from the media, think tanks, and other institutions. Identifying these sources helps clarify which forms of analysis or expertise were considered most salient by FOMC members, and whether certain types of evidence systematically informed specific policy positions. Figure 9 plots the time series of the total

number of references to each type of information, with references to work of Federal Reserve staff being the primary source cited. Industry and other non-academic sources are occasionally referenced by participants, but academic research appears to play no direct measurable role in FOMC discussions.

### 2.8 Influence

Finally, we coded for influences, defined as instances where participants referenced the views of other participants. These references help capture the structure of internal deliberation—whether certain individuals disproportionately shaped the conversation, or whether their arguments were frequently invoked by others. By quantifying the frequency and direction of such references, this category provides a way to assess interpersonal influence within the policymaking process. Figure 10 plots the time series for total number of references to the views of other members for both all participants (solid black line) and voting members (dashed blue line).

This series displays two striking patterns. First, references to voting members account for more than on 80 percent of all references at each meeting on average, which is notably larger than the 63 percent that would be expected if references were distributed equally (assuming a full FOMC with 12 voters and 19 participants). Second, the number of references increases over time, particularly during the early 1980s. This can also be seen in the table at the bottom, which reports the five most-referenced participants in our sample. Alan Greenspan, who was referenced more than 12 times per meeting on average, sits at the top of the list. Second and third place are held by the two Chairs that immediately preceded him, suggesting that the Chair plays a unique role in shaping the opinions of the Committee and ultimate monetary policy outcomes.

### 2.9 Summary

Taken together, this dataset provided speaker-level information on preferred policy stances, their justifications, perceptions of tradeoffs, and external influences—enabling us to systematically analyze the sources of disagreement in monetary policymaking over a crucial period in U.S. macroeconomic history.[1]

## III Why do FOMC members have different policy preferences?

While announced FOMC policy decisions are generally unanimous, one of the most striking features of historical discussions within the FOMC is how much disagreement underlies the façade. To

[1] We do not utilize every measure in this paper, but data for all measures are publicly available on our websites.

illustrate this, Figure 2 plots the number of dissents at each FOMC meeting versus two simple measures of disagreement in terms of *a priori* policy preferences. The red line plots the average number of unique FFR target preferences reported at each meeting. The blue line reports average number of preset policy options (usually indexed by A/B/C) presented in the Bluebook that were cited by each participant during deliberations. Both measures exhibit variation that is correlated with, but distinct from, actual dissents. The black line in Figure 3 reports that, on average, roughly 18% of participants preferred a target rate was at least 25bp away from the Committee's ultimate target rate, with about 10% exhibiting a gap of 50bp or more. These numbers are very similar when the sample is restricted to voters. They are also conservative in the sense that they reflect a participant's final reported preference and will not capture disagreements resolved during the course of a meeting. In contrast to this pervasive disagreement about preferred policies, dissent is relatively rare. While the FOMC tries to present a unanimous stance to the world, internal discussions are rife with disagreement and policy decisions reflect significant compromises by many members of the committee. In this section, we focus on understanding what drives differences in these *a priori* policy preferences.

### 3.1 Individual Reaction Functions

Prior to coming into FOMC meetings, all participants are provided with macroeconomic forecasts from the staff of the Federal Reserve ("Greenbooks" during this era). A natural starting point for characterizing the sources of different policy preferences is in terms of individual reaction functions to this common source of forecasts, following Taylor (1995). Specifically, we estimate, for each FOMC participant, individual reaction functions of the form:

$$FFR_{it} = \alpha_i + \rho_i FFR_{t-1} + \phi_{\pi,i}(1-\rho_i)E_t\pi_{t+1} + \phi_{y,i}(1-\rho_i)E_t\Delta Y_t + erorr$$

For this exercise, we only include participants with at least 10 reported FFR targets (which includes roughly 60% of our total observations).

Panel A of Figure 11 shows the resulting distribution of estimated reaction coefficients across participants. The averages are all in line with past estimates from aggregate data ($\rho \approx 0.9, \phi_\pi \approx 1.5, \phi_Y \approx 0.25$). This is perhaps unsurprising given that all of the reactions are estimated on the same set Greenbook forecasts at each meeting. But what stands out is the amount of dispersion in these estimates at the individual level: roughly one third of participants are estimated to respond less than one-for-one to inflation, for example. There is similar variation in response coefficients to output growth, with many participants estimated to have negative responses to higher expected GDP growth. Panel B plots the time variation in these parameters using the evolving composition of the

FOMC. In the 1960s, the cross-sectional variation in inflation response coefficients was high, and dispersion fell in subsequent decades. In the left figure in Panel C, we plot the correlation in individual response coefficients to inflation and output growth: one might expect some respondents to respond more strongly to inflation and others more to output, yielding a negative correlation. We find the opposite: overall, FOMC participants for whom we estimate strong responses to inflation also yield strong responses to output growth. Finally, in Panel D, we plot the individual estimates of participants' estimated persistence parameters $\rho_i$ against their average reported gradualism preferences described in section 2.5. We find that participants who are more likely to express preferences for gradual policy changes also have higher estimated values of $\rho_i$, which provides further empirical validation for our narrative measures.

How do these individual response functions account for the observed disagreement about policy decisions shown in Figures 2 and 3? One approach is to relate these response functions to an alternative metric of preferences, namely the "Hawk" versus "Dove" classification of Bordo and Istrefi (2023). When we split participants into Hawks and Doves and estimate response coefficients for the two groups separately, we find almost identical coefficients for both inflation ($\phi_\pi^{Hawk} = 1.69, \phi_\pi^{Dove} = 1.60$) and output ($\phi_Y^{Hawk} = 0.25, \phi_Y^{Dove} = 0.26$). A related strategy is to keep our individual estimates of reaction functions and compare the individual coefficients for inflation and output for those classified as Hawks versus those as Doves, which we do in the right figure of Panel C of Figure 11. If Hawkish participants systematically preferred more aggressive responses to inflation, we would expect a steeper slope; instead, the relationship between the two coefficients is extremely close. Again, to the extent that we believe that the Bordo and Istrefi (2023) classification is informative about policy preferences of individual FOMC members, the absence of a relationship between individual response coefficients and this alternative classification suggests that response coefficients do not go far in accounting for differences in policy preferences.

Another potential source of differences in policy preferences is if FOMC participants hold very different views about the economic outlook. The individual reaction functions here were estimated using a common set of forecasts, those of FOMC staff, but beliefs of FOMC participants can differ from these. However, we view differences in short-run economic forecasts as a very unlikely source of differences in policy choices. This is because, in practice, differences in short-run forecasts across FOMC participants tend to be very small. Unfortunately, we do not have individual forecasts of FOMC members during the time sample of our analysis. However, these are available starting in 2007 and, as

shown in Figure 12, they don't vary strongly across Hawks and Doves over the post-2007 sample.[2] Assuming a similar pattern was also true during the earlier sample, then this would suggest that differences in short-run forecasts are unlikely to be driving differences in policy preferences.

### 3.2 Narrative justifications for preferences

If differences in participants' tolerance for inflation aren't driving the dispersion in individual TR coefficient estimates, what is? To answer this, we leverage the fact that we collected each participants' reported justification for their preferred policy. As described in section 2, we include six possible categories: inflation, output, uncertainty, financial stability, international, and other. These responses are scaled so that a value of -1 means that a particular topic was used as justification for tighter policy ("*Inflation* is too high and we need to raise rates to get it under control...") and a value of +1 means that it was used as justification for looser policy ("...but tightening too much or too quickly could disrupt *financial stability*."). Values of zero are recorded if a participant either didn't mention a topic or mentioned it without a clear direction on their policy preference.

Table 3 presents results from regressing individual policy preferences on these justifications, either individually (columns 1-6) or jointly (columns 7-8). Individually, each justification is correlated with policy preferences, with the expected negative coefficient since justifications are expressed in terms of cutting interest rates. Even after including participant and meeting fixed effects, most justifications remain strong predictors of policy preferences. For example, someone appealing to higher inflation as a justification for raising interest rates has a preferred FFR which is higher by almost 10 basis points compared to someone who does not make this justification. These justifications can be correlated (an FOMC member may appeal to many reasons to justify their policy preference), but even when we include these jointly, most continue to remain statistically significant predictors of policy preferences.

Are these justifications for policy preferences capturing underlying economic pressures? In Table 4, we regress inflation and output justifications on Greenbook forecasts of inflation and output growth, as well as unemployment nowcasts. We find the expected patterns: when the Board staff are predicting higher GDP growth, FOMC participants become more likely to cite higher output as a reason for raising interest rates. Similarly, when forecasts of inflation are high, FOMC

[2] Individual SEP forecasts for 2015 have not yet been released to the public. Prior to 2015, participant-level forecasts were released after 10 years. Starting in 2016, this lag was shortened to 5 years to match the transcripts, but the change was not applied retroactively.

participants are more likely to appeal to inflation as a reason to raise interest rates. Interestingly, while inflation forecasts are the only ones that systematically predict FOMC members citing inflationary pressures as a reason to raise rates, output justifications are related not just to output growth forecasts but also inflation forecasts and unemployment nowcasts. In other words, higher forecasts of future inflation tend to lead FOMC members to appeal to both inflation *and* output justifications for higher interest rates.

While correlated with underlying aggregate forces, Table 4 makes clear that much of the variation in these justifications is *not* accounted for by aggregate variables. We would therefore like to assess whether the additional variation in justifications helps predict policy preferences above and beyond what is coming from macroeconomic fundamentals. To do so, we present in Table 5 regressions of individual policy preferences on both Greenbook forecasts and policy justifications of FOMC members. We find that the latter have important predictive power for policy preferences above and beyond macroeconomic fundamentals: both output and inflation justifications help predict policy preferences, even after accounting for macroeconomic forecasts and participant fixed effects (column 6). When we account for both participant and meeting fixed effects, output and inflation justifications still have significant predictive power: appealing to either motive for higher interest rates is associated with close to a 10 basis point higher desired policy rate.

How are these justifications related to the differentiation between Hawks and Doves? To explore this, we first regress individual policy preferences on the individual Hawk versus Dove classification of Istrefi and Bordo (2023). As can be seen in Table 6, we find the expected result, namely that Doves prefer lower interest rates than Hawks by about 20 basis points on average. When we include policy justifications for output and inflation, the effect of the Hawk and Dove classification remains significant, but its magnitude is cut in about half, indicating that much of the effect is operating through justifications: Hawks explain that inflation and output conditions are calling for higher interest rates than what Doves perceive on average. What is not the case is that Hawks prefer a stronger response to inflation *conditional on believing that inflation justifies a rate increase*: the interactions between Hawk and Dove classifications and the act of justifying policy changes through inflation or output conditions are insignificant. Instead, the key channel is that Hawks and Doves largely justify their different policy preferences in terms of what they perceive as economic fundamentals and optimal policy respond to those fundamentals.

### 3.3 Perceived Tradeoffs

One force that can lead policymakers to come to different interpretations of how policy should respond, even conditional on largely similar economic forecasts, is if they perceive different effects of monetary policy on economic aggregates. For example, someone who believes that policy changes would have little effect on inflation but primarily reduce output is less likely to want to raise rates to fight inflation than someone who believes the reverse. Because our data include participant-level perceptions of monetary policy tradeoffs, we are able to assess the potential importance of this mechanism. In most theoretical settings, including the canonical New Keynesian model, this tradeoff will be approximately constant. In practice, however, policymakers could perceive this tradeoff to vary over time or it could vary systematically across participants.

We consider both characteristics visually in Figure 13. Panel A plots the average perceived tradeoff across all participants at each meeting (black line) against the inverted unemployment rate (blue line). These two series display a striking correlation; when the unemployment rate increases, such as during recessions (shown as the shaded gray areas), the perceived tradeoff measure declines, implying that FOMC participants expect monetary policy to have stronger effects on output (i.e., a flatter Phillips Curve) during periods of greater economic slack. In Panel B, we show average perceived tradeoffs for Hawks versus Doves separately. While their time variation is broadly similar, we find that Doves systematically perceive monetary policy as affecting output by relatively more than do Hawks, who instead perceive generally larger effects on inflation. Hence, this provides one rationale for why Hawks and Doves could prefer different policy choices even with similar information sets and short-term forecasts: Doves think lower rates will be more stimulative and less inflationary than their Hawkish counterparts.

To characterize the link between the perceived tradeoff of policymakers and their justifications for their policy preferences, we regress the absolute value of the latter on the former and present results for each justification separately in Table 7. When looking at inflation and output justifications, shown in the first row, we find a clear link between perceived tradeoffs and policy justifications. Policymakers who believe that monetary policy changes primarily affect inflation are more likely to report inflation as a reason to change interest rates, whereas those who believe interest rate changes will primarily affect output are more likely to appeal to output as the justification to change policy. However, when policymakers justify policy changes based on financial stability or

international factors, we find no link with their perceived tradeoffs. This is unsurprising since these justifications are not directly related to stabilizing output and inflation.

These results suggest that variation in participants' perceived policy tradeoffs affect their justifications which, in turn, drive variation in their policy preferences. In other words, even if all FOMC participants had the same forecast of future inflation and output at each meeting and placed the same weight on deviations in these variables, differences in policy preferences would still emerge if participants had different views about how monetary policy would ultimately affect the economy.

What could give rise to such different beliefs about the passthrough of monetary policy into output versus inflation? One possibility is if policymakers have different perceptions of how much slack is left in the economy, then given a belief in a non-linear Phillips curve, they would draw different inferences about how much a given policy change would affect inflation or output. While the left panels of Figure 12 showed that there was little variation in short run forecasts across participants, the right panels plot longer-run forecasts of FOMC participants and documents much more systematic differences in beliefs between Hawks and Doves about the long-run, especially when it comes to unemployment rates. Differences in beliefs about long-run unemployment are often as high as 0.5 percentage points, which means these participants may view the degree of economic slack as significantly different, even conditional on the same forecasts of the short-term unemployment rate. Combined with a belief in a non-linear Phillips curve, this can readily deliver the type of variation documented in Figure 13 about the degree to which monetary policy changes would pass through into inflation or output. However, because long-term forecasts of FOMC participants are not available prior to 2007, we cannot verify that these differences in beliefs about the long-run were as pronounced during our time sample as they were post-2007.

### 3.4 Policy Objectives

Another avenue that could account for variation in policy preferences is if policymakers perceive the Federal Reserve as having different objectives or view some objectives as relatively more important than others. In Figure 5, we showed the time variation in mentions of different objectives by FOMC participants, indicating that there are many objectives that get emphasized above and beyond inflation and output/employment, including international factors, financial stability, and even occasionally fiscal considerations.

To what extent do different objectives matter for how policymakers view optimal policy? One way to assess this is presented in Table 8, in which we regress individual policy justifications on indicator variables for whether those policymakers referred to a specific objective in that meeting, as well as the perceived tradeoff measure considered in the previous section. Individuals who emphasize the inflation objective of the Federal Reserve are more likely to, in the same meeting, justify raising interest rates because of inflation concerns and less likely to want higher interest rates because of financial stability considerations. Those who emphasize international objectives are more likely to propose raising interest rates because of international considerations. Thus, there is some indication that different perspectives on the main objectives of the Federal Reserve are occasionally reflected in different policy preferences. However, the quantitative importance of these is quite limited (R2's in Table 8 are only marginally higher than those in Table 7 which included only perceived tradeoffs), and the coefficients on perceived tradeoffs are largely unaffected by the inclusion of these additional controls, indicating that the quantitative importance of different views about policy objectives cannot fully account for different policy preferences relative to perceptions of the tradeoff between inflation and output.

### 3.5 Pressures

Beyond the objectives and tradeoffs faced by policymakers, outside forces can also potentially impact policy decisions and preferences. To gauge the extent to which FOMC participants perceived pressures on them coming from the outside, we tracked when they made references to outside pressures during FOMC meetings, as described in section 2. We focused on political pressures, from either the President or Congress, as well as pressure from financial markets to act in a particular way. Figure 8 makes clear that FOMC participants frequently perceived such pressures from different sources, with some pushing toward lower interest rates while others pushed toward higher rates.

To what extent did this seem to impact their policy preferences? To gauge this, we regressed their preferred policy outcomes on their perceptions of outside pressures from each source separately, which can take values of +1 when those pressures are toward lower interest rates and -1 when those pressures are toward higher interest rates, controlling for their other justifications for policy changes (inflation, output, etc.). These results are reported in Table 9. Across all specifications, the differences in preferred policies of Participants' who perceive pressure from Congress or the President compared to those who do not are not statistically significant. The effects of pressure from financial markets do show up as statistically significant in some specifications, and the magnitudes are similar to those of

other reported justifications. One caveat of these results is that they are based on a relatively small sample of 215 explicit mentions of pressure across all Participants (158 of which come from voters). However, given that Participants at the time had no reason to believe that the transcripts would ever be made public, we do not see any particular reason why Participants would feel the need to underreport these instances; instead, it is more likely that most Participants simply did not feel (or at least report during discussions) that external pressure influenced their decision making.

### 3.6 Combined effects of different forces

To get a sense of the relative importance of these different forces underlying FOMC members' policy preferences, we implement a Shapley (1953) decomposition of desired policy changes in terms of justifications, forecasts, objectives, influence, and perceived tradeoffs. We report results from this decomposition in Table 10.[3] There are number of striking features from this decomposition.

First, with no interaction effects, justifications account for almost 60% of the explanatory power. This is consistent with our earlier evidence that narrative justifications are powerful in explaining the policy preferences of individual FOMC members. Second in importance are the common economic forecasts prepared by the Board staff. Despite the fact that these cannot explain any of the cross-sectional variation in preferred policy choices, they play a key role in accounting for the average time variation in desired policy changes.

Some measures—such as stated objectives or perceived tradeoffs—should not be expected to have a direct effect on the desired policy changes on average. For example, believing that monetary policy actions will mainly affect prices does not mechanically call for either raising or lowering rates, instead it should imply that the preferred policy choice should be driven more by inflation dynamics. To capture these effects, we therefore add interaction effects to the Shapley decomposition. Column (2) includes all interactions, whereas columns (3)-(7) focus on interactions of preferences, forecasts, objectives, influence, and tradeoffs, respectively. A key finding here is that, once we allow for interactions with perceived tradeoffs, justifications become much less important quantitatively, and perceived tradeoffs become a more important determinant of policy preferences. In column (7), for example, the explanatory power of justifications falls by about half once we include interactions of the perceived tradeoff with other factors. Instead, more explanatory power

[3] To avoid confusion, note that the Shapley value calculations use the total $R^2$, whereas the other regression tables in the paper that include fixed effects report the within-$R^2$.

now comes from the interaction of the perceived tradeoff with both forecasts and justifications. This indicates that the mechanism through which forecasts and justifications become policy preferences depends to an important extent on how policymakers perceive the tradeoff between inflation and output. Differences in cited policy objectives or influence, in contrast, seem to play only a small quantitative role in accounting for policy preferences.

In columns (8)-(11), we also implement these decompositions including individual and/or meeting fixed effects, both of which play an important role in explaining some of the variation. Individual fixed effects sharply reduce the explanatory power of justifications, indicating that some FOMC members use the same justifications repeatedly to explain their policy preferences. Time fixed effects primarily supplant the explanatory power of Greenbook forecasts, which are common to all FOMC members.

### 3.7 Summary

Even though dissents are rare in FOMC meetings, disagreement is pervasive. Our reading of the FOMC meetings allows us to quantify and characterize the sources of this disagreement. We consider several possible channels and find that differences in beliefs about how monetary policy affects output versus inflation seem to play a particularly important role in explaining the heterogeneity of views across Participants. This likely reflects in part different beliefs about the natural rate of unemployment and the productive capacity of the economy, so that participants view the economy as being on different points along a nonlinear Phillips curve. This in turn implies that they perceive that policy choices would have different implications for inflation and output, accounting for some of the variation if their policy preferences.

## IV Decision-making by committee

Ultimately, policymakers with different views come into the meeting and agree to a decision as a committee, typically without dissent even in the presence of disagreement. How do these decisions get made and what determines which viewpoints ultimately win the day? For those whose views differ significantly from the committee's decision, what determines the decision to dissent?

### 4.1 From individual preferences to committee decisions

The first dimension we consider in determining how consensus decisions are reached is the position of the individual within the FOMC. It's commonly acknowledged, for example, that the Chair holds a lot of leeway in leading the discussion and determining outcomes. To quantify the importance of

individual roles, we regress the ex-post policy decision (the change in the FFR chosen during the meeting, which will be the same for all participants) on each individual's preferred policy change, as well as interactions of that preferred change on indicator variables for different roles within the FOMC, such as being a governor, a voting regional Fed president or a non-voting regional Fed president, with the Chair being the omitted category, and report the results in Table 11.

The coefficient on the individual's preferred policy choice (first row of the table) captures the passthrough of the Chair's preferred policy action into the actual policy action. With that coefficient being estimated to be above 0.8, we therefore find that the passthrough from the Chair's preferred policy action into the policy decision is almost one-for-one. In contrast, pass-throughs for those in all other roles are much lower, confirming the unique role and influence of the Chair on policy outcomes emphasized in past work such as Chappell, McGregor, and Vermilyea (2005) . Governors have the second-largest influence on policy decisions, with a pass-through that is only about half of that of the chair. Non-voting regional Fed presidents' policy preferences have the least effect on policy outcomes, although the difference relative to voting regional Fed presidents is small and statistically insignificant. The main difference across roles in terms of influence on policy outcomes is therefore that of the Chair.

Beyond the special role of the Chair, others could still have a disproportionate influence on policy decisions at times if their arguments are particularly persuasive. One way to try to gauge this is by measuring how often other participants refer to an individual during FOMC discussions. Because we tracked references to other participants during all the FOMC meetings in our sample, we can assess whether more references to an individual affect how much their policy preferences feed into ex-post policy decisions. We do this by again regressing ex-post policy decisions at each FOMC meeting on individuals' desired policy changes, along with interactions of this desired policy change and measures of their influence on the discussion.

References to others are measured in two ways. The first is simply the number of times other FOMC members make a reference to that individual, regardless of whether that reference indicates agreement or disagreement. The second is the number of positive references to that individual minus the number of negative references. Thus, this measure potentially captures the direction of the influence. As shown in Table 12, total mentions do not affect the direction of policy. By contrast, net positive references to voting members have a statistically and economically significant effect on the committee decision: each net positive reference is associated with a 5 percentage point increase in the

passthrough of the member's preferred policy into the committee decision. This effect is moderate once one accounts for the fact that the most-referenced non-chair members (see the table accompanying Figure 10) receive about two net positive references per meeting, implying an additional passthrough of roughly 10 percentage points above the baseline. Overall, the evidence in this section remains consistent with the view that the Chair's influence on the FOMC dwarfs that of other members.

### 4.2 When do FOMC members dissent?

Given that the Fed chair seems to get their way in terms of decision-making but FOMC members frequently disagree with one another (and therefore with the chair), why is dissent so rare? We approach this question in two ways. First, we consider what factors raise the probability of dissent for any FOMC member in a given meeting. Second, we consider the consequences of dissent in subsequent meetings in terms of how these impact the extent to which individual policymakers' preferences passthrough into committee decisions.

To better understand the decision to dissent, we first project an indicator variable for whether a committee member dissented or not in each FOMC meeting on a measure of the absolute gap between their preferred policy choice and that chosen by the committee and indicator variables for the chair of the FOMC at the time. Results are reported in Table 13. We find that when a member's preference is further away from the committee's decision, the probability that they dissent rises. But consistent with dissent being rare, the effect is small: a difference of 100bp in preferred policies only raises the probability of dissent by about 6 percentage points. So even a very large disagreement with the committee's decision does not make it likely that there will be dissent. In contrast, the Chair fixed effect is large: relative to when William McChesney Martin was Chair, members were about 5 percentage points more likely to dissent under Volcker and Greenspan, and almost 12 percentage points more likely under William Miller. Thus again, the influence of the Chair on committee outcomes appears paramount.

In columns (2)-(6), we replace the preference gap measure with individual justifications for policy preferences. When members want higher interest rates because of concerns about inflation or output, this raises the probability of dissent, but quantitatively the effect is small. Wanting lower rates because of uncertainty also raises the probability of dissent somewhat. When we include all justifications as well as the preference gap (column 7), the coefficient on the preference remains unchanged and statistically significant, as does the output justification. Finally, column (8) controls for individual fixed effects. Strikingly, doing so increases the coefficients on the Chair: the

probability of dissent from Miller through the Greenspan era is systematically higher by about 10 percentage points than during the terms of Martin and Burns. The preference gap and output justification remain significant but relatively small in magnitude. Hence, while it is the case that those who disagree more with the consensus view are more likely to dissent, the main factor that we can identify for the probability of dissent is the Chair.

Another factor that could affect the decision to dissent is its consequence. The FOMC is a relatively small committee that tries to maintain unanimity. Dissent could be rare because it is punished ex-post internally. To assess whether there are consequences to dissent, we re-estimate how policymakers' preferences passthrough into the policy decision but conditioning on past dissents and an interaction of past dissent with members' preferred policy change. As shown in Table 14, having dissented in one of the 4 previous meetings reduces the passthrough of a member's policy preference into the policy decision significantly. Each dissent reduces the passthrough by almost 20 percent. On average, dissents reduce the passthrough by about one-third, taking into account that members may dissent repeatedly. This is true even conditioning on individual fixed effects or different measures that control for the size of the gap between individual's policy preferences and that of the committee's or that of the nearest FOMC member's preferences. We find a consistent decline in subsequent passthrough of preferences into policy decisions from prior dissents.

One possible source of this result is a punishment strategy: those who dissent find their influence diminished in subsequent meetings. Such a punishment strategy could therefore help explain how rare dissent is among FOMC members. Another interpretation is that FOMC members only dissent when they realize the battle is lost and their viewpoint will not carry the day in future meetings. In other words, they anticipate that the committee will move in a direction they do not like in future meetings and, if they feel they cannot prevent this policy movement, respond by dissenting. Whatever the reason, what is clear is that dissent not only does *not* move subsequent committee decisions toward the individual's policy preference, but comes at the added cost of future loss of influence.

## V Conclusions

Being in charge of monetary policy is far from trivial. In deciding what the best policy decision is, policymakers must take a stand on what shocks are driving economic dynamics, where the economy will be by the time any policy changes kick in, how policy will affect different variables and which of those variables are most important. Not surprisingly, different policymakers often enter into FOMC meetings with different opinions about what the best way to proceed is. Yet the

committee must reconcile these different opinions and come to a single decision, and historically has managed to do so with only occasional public dissents.

While there are many potential sources of disagreement, our reading of the historical record and classification of objectives, justifications, perceived tradeoffs and other factors suggests that the extent to which monetary policy is expected to affect either output or inflation is one of the main factors driving committee members to come to different conclusions about the optimal policy path. Other factors still matter, of course (except perhaps academic research!), but perceived tradeoffs play a critical role, consistent with earlier evidence in Sargent, Williams, and Zha (2005) and Primiceri (2006). Relative to this earlier evidence, our main contribution in this dimension is to provide direct historical evidence on the perceived tradeoff over time and across FOMC members, as well as its role in shaping the policy prescriptions of those on the committee.

In studying how the committee comes to a decision, we emphasize two key results. First, the role of the Chair is unique and incredibly powerful. We estimate the passthrough of their preferred policy choice into the final decision to be very close to one, whereas it is much smaller for all other committee members. Second, the fact that participants rarely dissent from the decision of the committee, even when they profoundly disagree with that decision, likely reflects the fact that those who dissent lose some of their ability to influence subsequent decisions, which we interpret as a punishment imposed by the chair (although some chairs are more willing than others to tolerate dissent), further reinforcing the key role played by the chair of the FOMC.

Together, these results have several potential implications. One is that better understanding the inflation-output tradeoff, and whether it varies with economic conditions, would help reduce potential differences in policy recommendations across FOMC members and likely improve the consistency of policy over time. Another implication is that chair appointments are particularly crucial to the implementation of monetary policy, both because they are the primary determinant of policy decisions as well as the main guardian of consensus in decision-making. Relatedly, our results suggest that lame-duck chairs are likely to be subject to much more frequent dissents, since it is harder for them to enforce the punishment strategy that helps prevent dissents. The end of chair's terms, conditional on knowing they will not be renewed or staying, are therefore likely to be particularly turbulent episodes for monetary policymaking.

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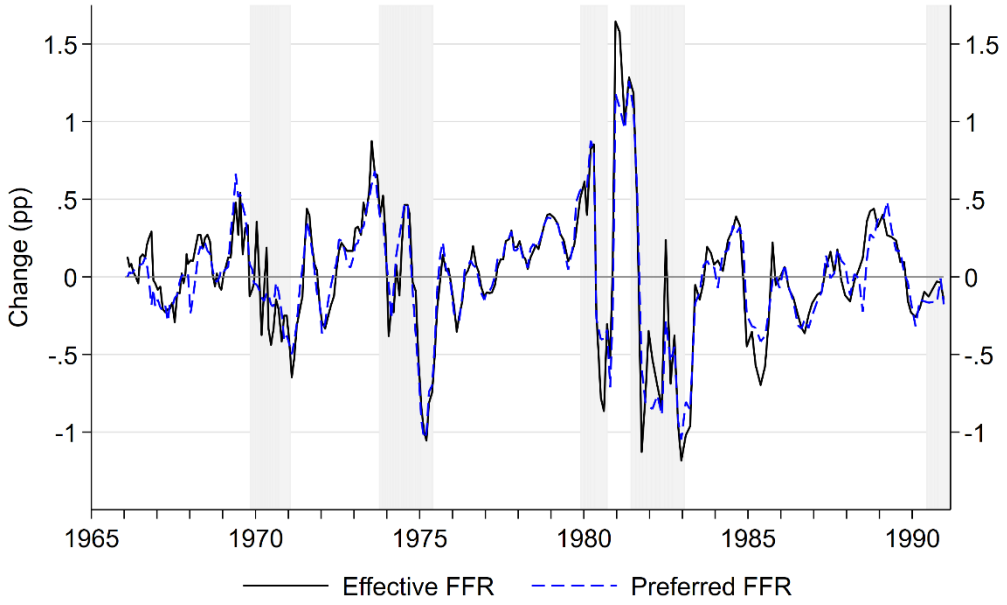
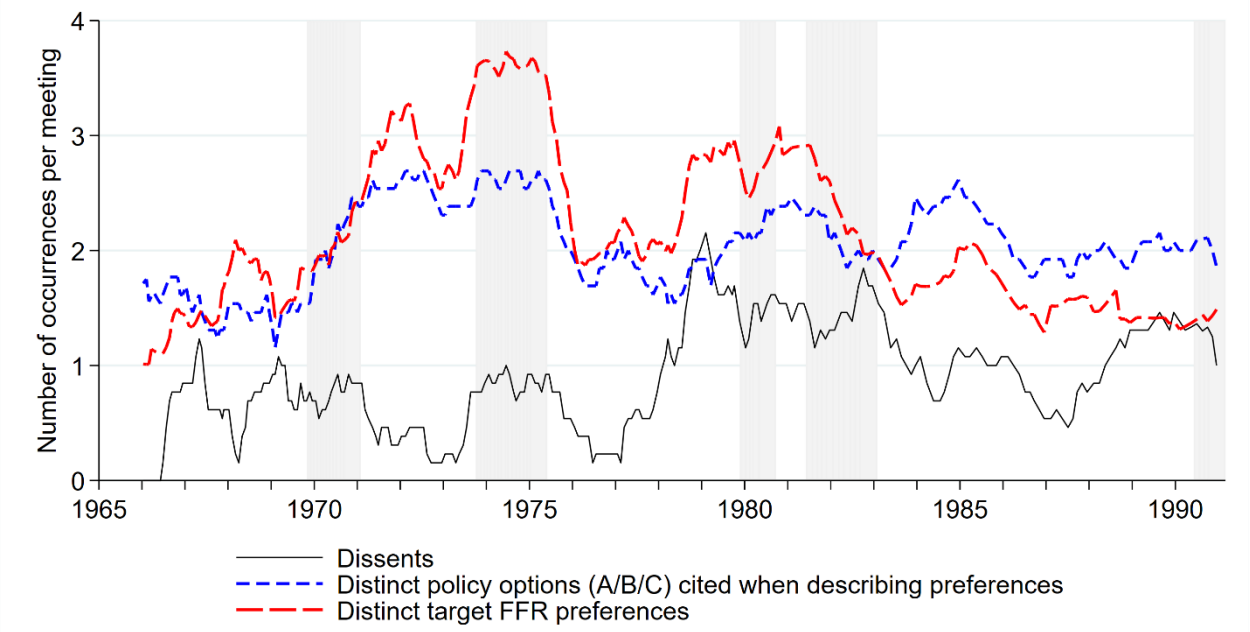
**Figure 1:** Preferred FFR Policy Changes



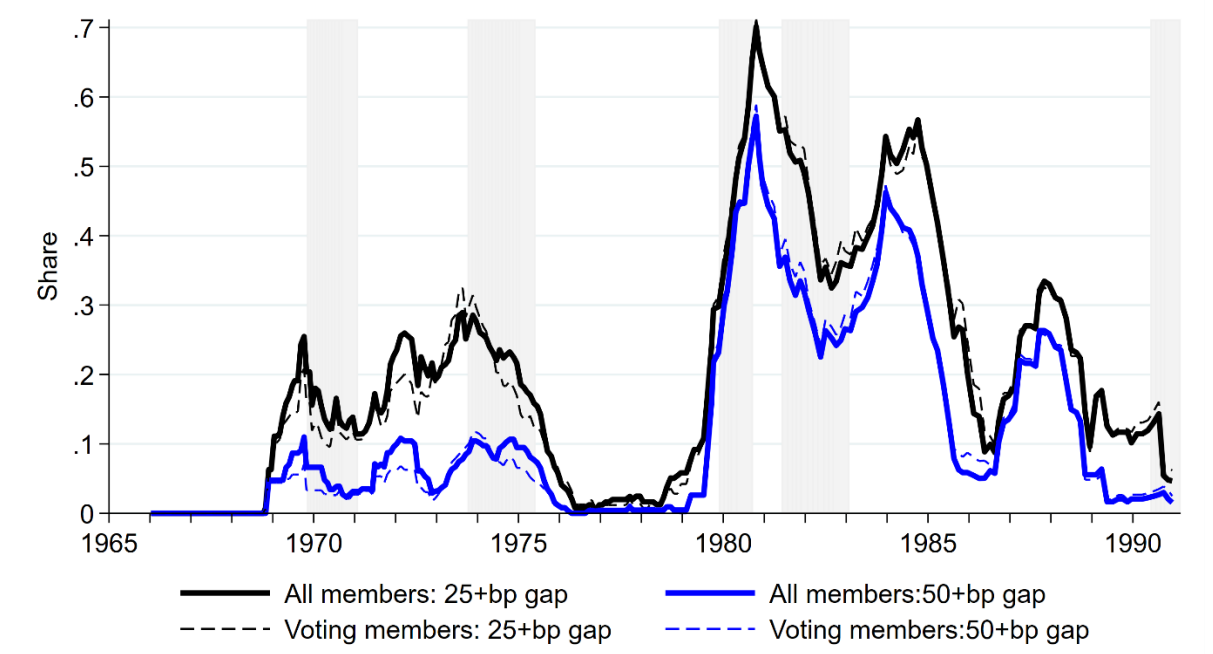

Notes: This figure compares the average preferred FFR change expressed by participants to the change in the effective FFR (as calculated in Romer and Romer (2004)). Both series are smoothed using a 6-meeting moving average. Shaded areas show NBER recessions.

**Figure 2:** Dissent versus Disagreement



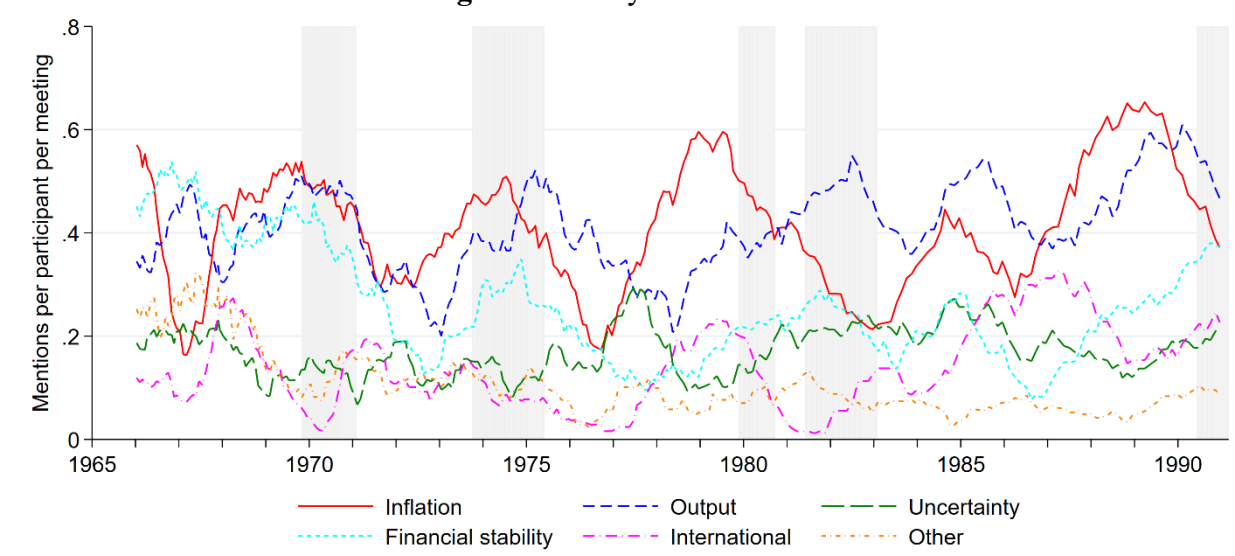

Notes: This plots several measures of participant disagreement. The solid black line reports the total number of dissents. The dotted blue line plots the number of distinct Bluebook policy options (between A/B/C) preferred. The dashed red line plots the number of distinct target FFR preferences. All series are smoothed using a 13-meeting centered moving average. Shaded areas show NBER recessions.

**Figure 3:** Share of Participants with Differing FOMC Preferences



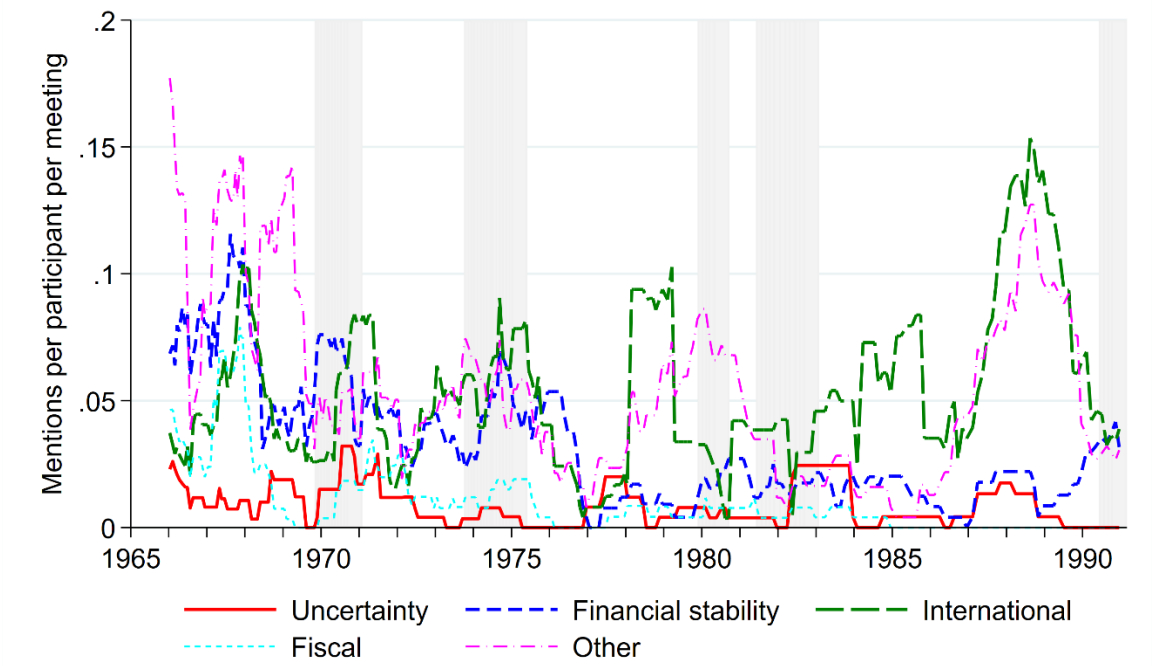

Notes: This figure plots the share of participants at each meeting with a preferred FFR change of at least 25 basis points (black lines) or 50 basis points (blue lines) away from the change in the FOMC's target FFR. The solid lines show shares for voting members, while the dashed lines show shares for all participants. All series are smoothed using a 13-meeting centered moving average. Shaded areas show NBER recessions.

**Figure 4:** Policy Justifications



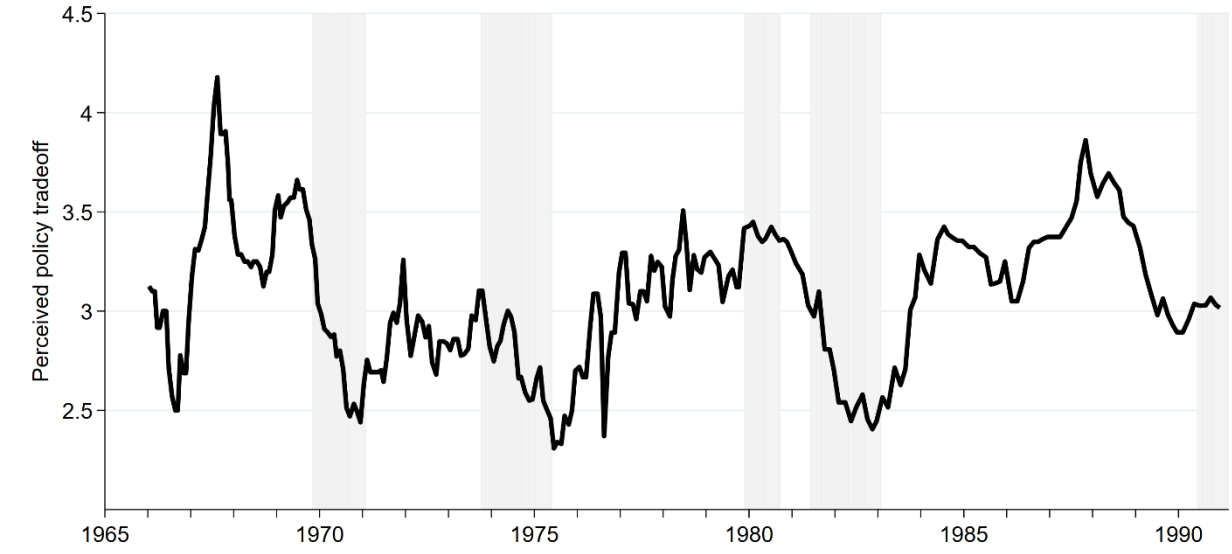

Notes: This figure shows narrative policy justifications. Each line shows the total number of justifications mentioned in each category, regardless of direction, divided by the number of participants at each meeting. All series are smoothed using 13-meeting centered moving averages. Shaded areas show NBER recessions.

**Figure 5:** Policy Objectives



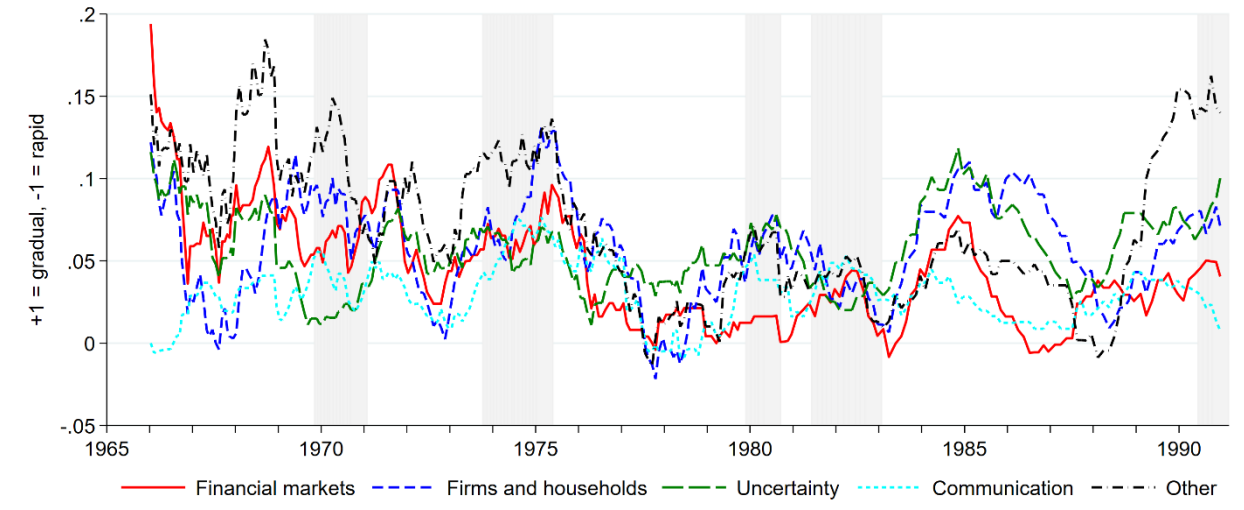

Notes: This figure shows participant references to policy objectives other than those mentioned in the "dual mandate" (inflation and output/employment). Each line shows the total number of mentions for each category divided by the number of participants at each meeting. All series are smoothed using 13-meeting centered moving averages. Shaded areas show NBER recessions.

**Figure 6:** Policy Tradeoffs



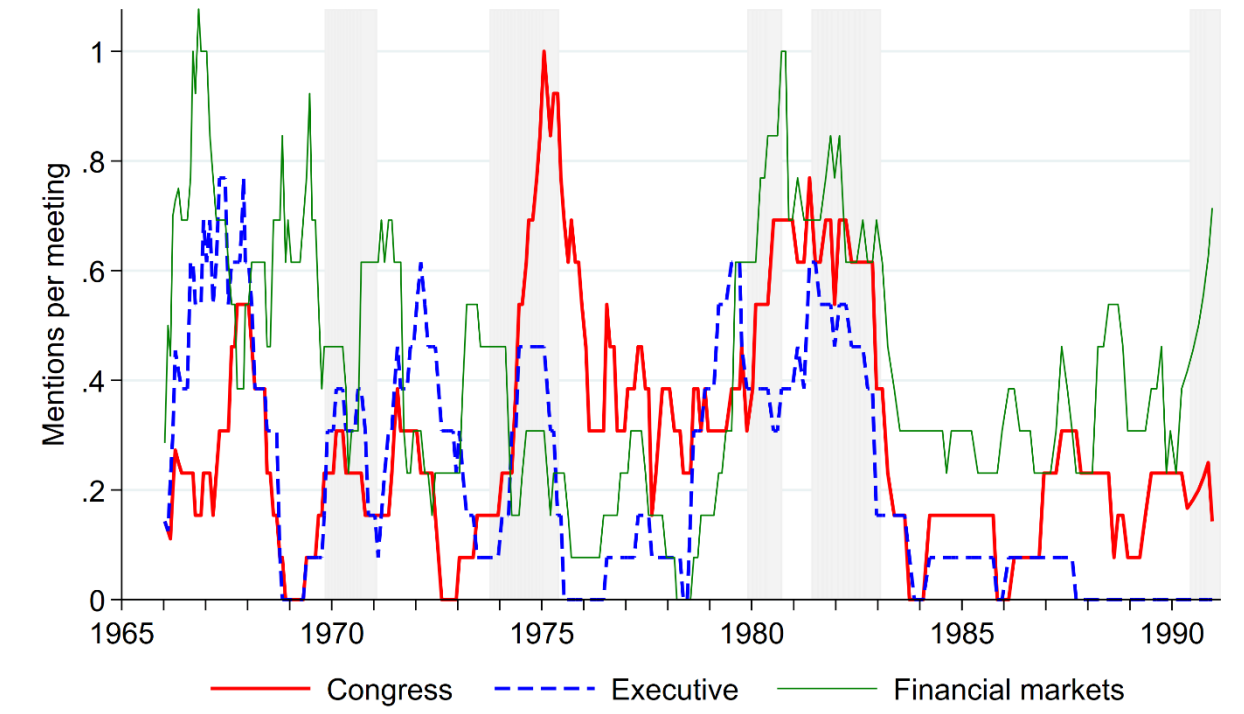

Notes: This figure shows the average perceived policy tradeoff, which represents participant beliefs about whether the incidence of monetary policy will operate through prices or real activity. This variable takes on values between 1 and 5, with higher values corresponding to larger effects on prices. We take averages across all participants who express them in each meeting, and then smoothed using a 13-meeting centered moving average. Shaded areas show NBER recessions.

**Figure 7:** Gradualism



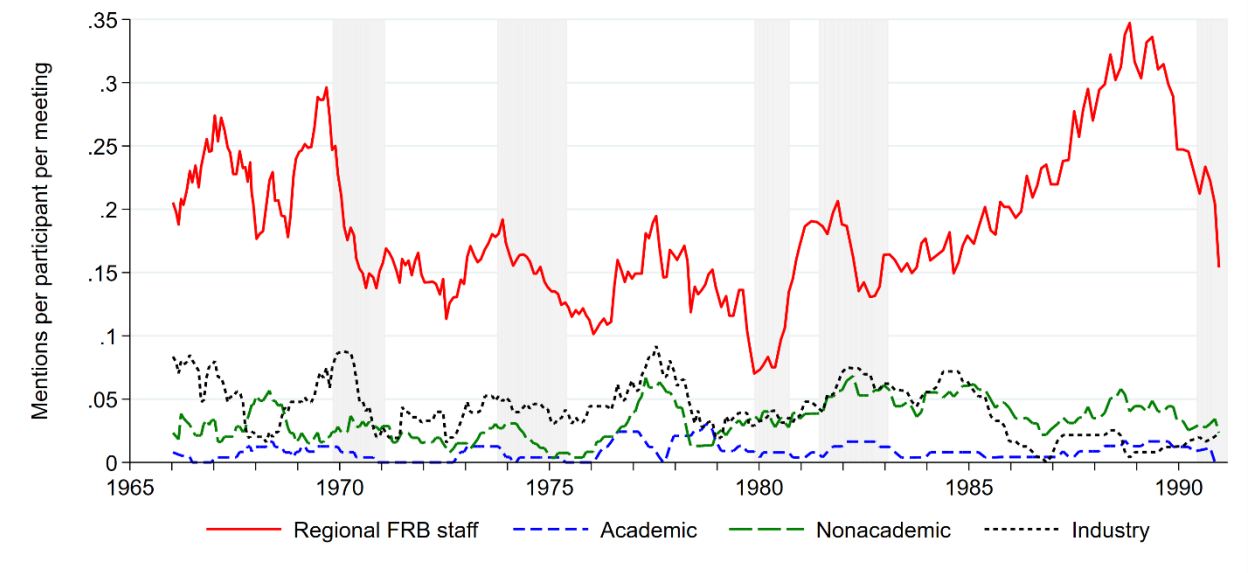

Notes: This figure shows participant references to the preferred pace of policy changes. We average scores for each category across all participants, with a +1 corresponding to a preference for more gradual policy changes, a -1 corresponding to a preference for more rapid policy changes, and a zero otherwise. All series are smoothed using 13-meeting centered moving averages. Shaded areas show NBER recessions.

**Figure 8:** External Pressure on FOMC



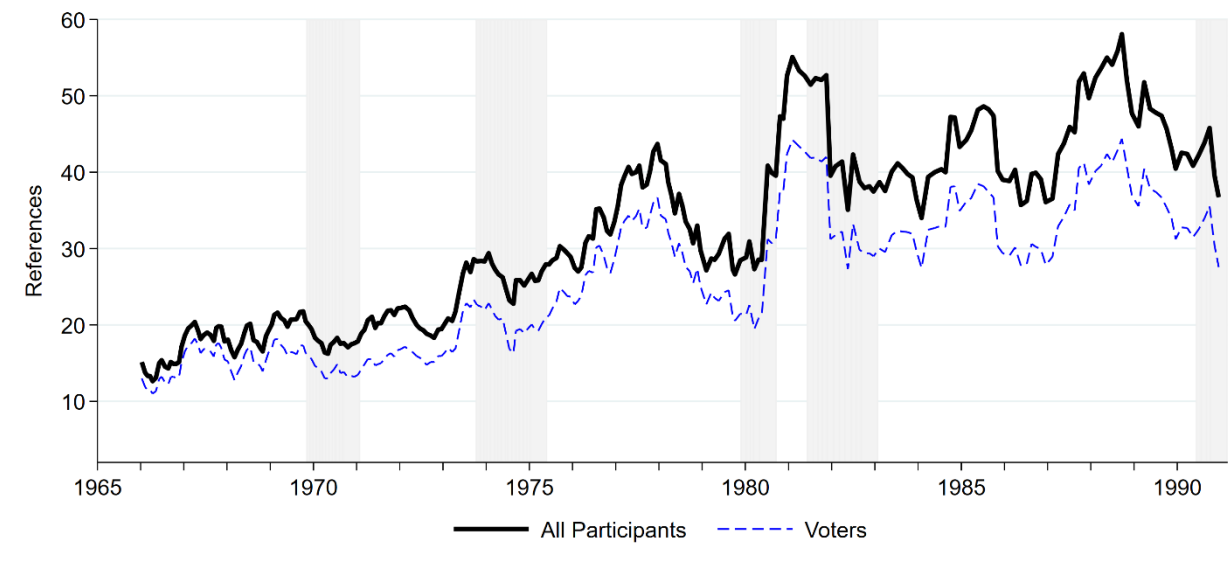

Notes: This figure shows participant references to external pressure from Congress, the President, or Financial markets. Each line shows the total number of mentions for each category, regardless of direction, divided by the total number of participants at each meeting. All series are smoothed using 13-meeting centered moving averages. Shaded areas show NBER recessions.

**Figure 9:** Citations




Notes: This figure shows participant citations of external sources in support of their policy preferences. Each line shows the total number of mentions of each category, regardless of direction, divided by the total number of participants at each meeting. All series are smoothed using 13-meeting centered moving averages. Shaded areas show NBER recessions.

**Figure 10:** Influence

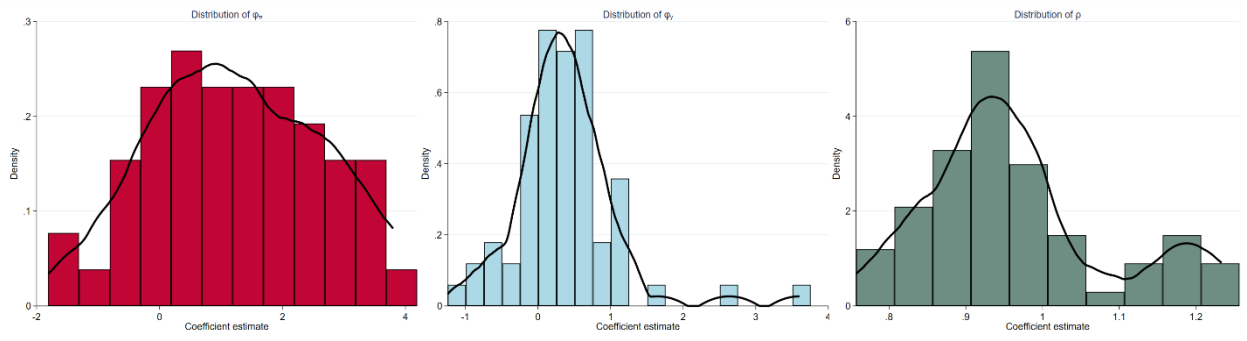



| Speaker | Role | Years in Our Sample | Average Total References | Average Net Reference Score |
|---|---|---|---|---|
| Alan Greenspan | Chair | 1987-1990 | 10.9 | 8.2 |
| Arthur Burns | Chair | 1970-1978 | 6.3 | 4.2 |
| Paul Volcker | NY Fed President, Chair | 1975-1987 | 5.0 | 2.5 |
| Wayne Angell | Governor | 1986-1990 | 4.9 | 2.5 |
| Alfred Hayes | NY Fed President | 1956-1975 | 3.2 | 2.0 |

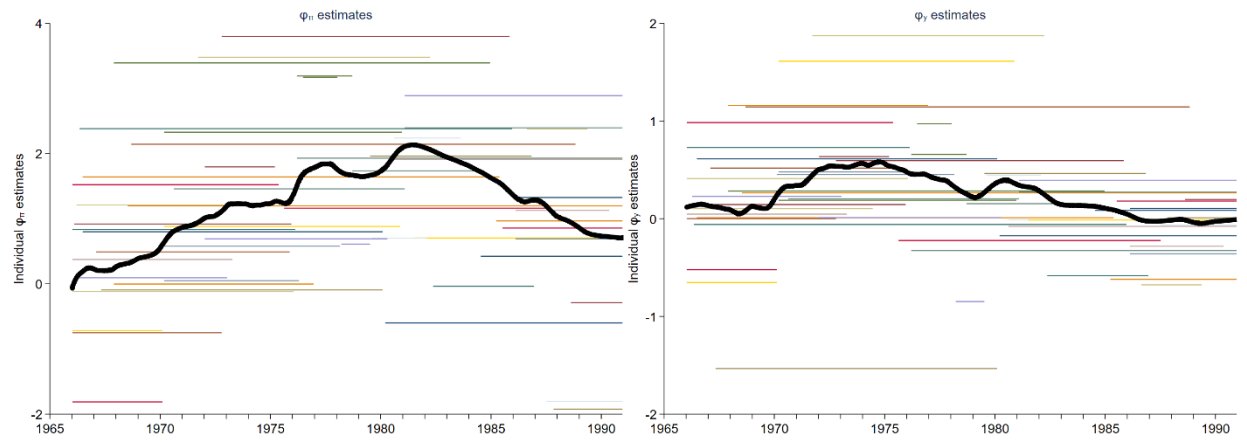
Notes: The top figure shows a time series of the total number of references to other Participants (regardless of whether positive or negative) across all meetings in our sample. The solid black line shows references to all Participants, while the dashed blue line shows references to voting members. All series are smoothed using 13-meeting centered moving averages. Shaded areas show NBER recessions. The bottom table reports the five most frequently referenced participants throughout our sample, their roles, the years in which they participated, the average number of times they were referenced by other Participants per meeting, and their net reference score (which subtracts disagreement references from agreement references). Note that we do not include the full tenures for Greenspan and Angell because our sample stops in 1990.

**Figure 11:** Individual Reaction Functions

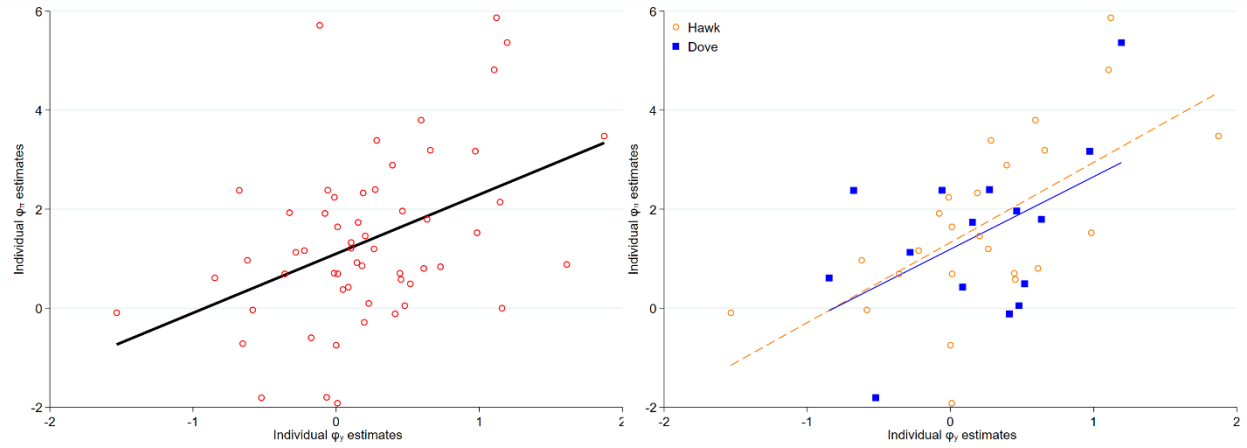
Panel A: Distribution of Estimated Reaction Function Parameters



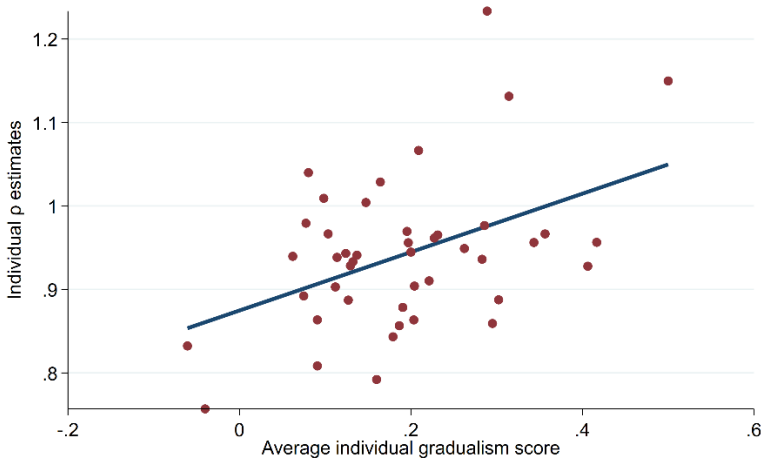

Panel B: Time Variation in Effective Reaction Function Parameters




Panel C: Correlation of Response Function Parameters

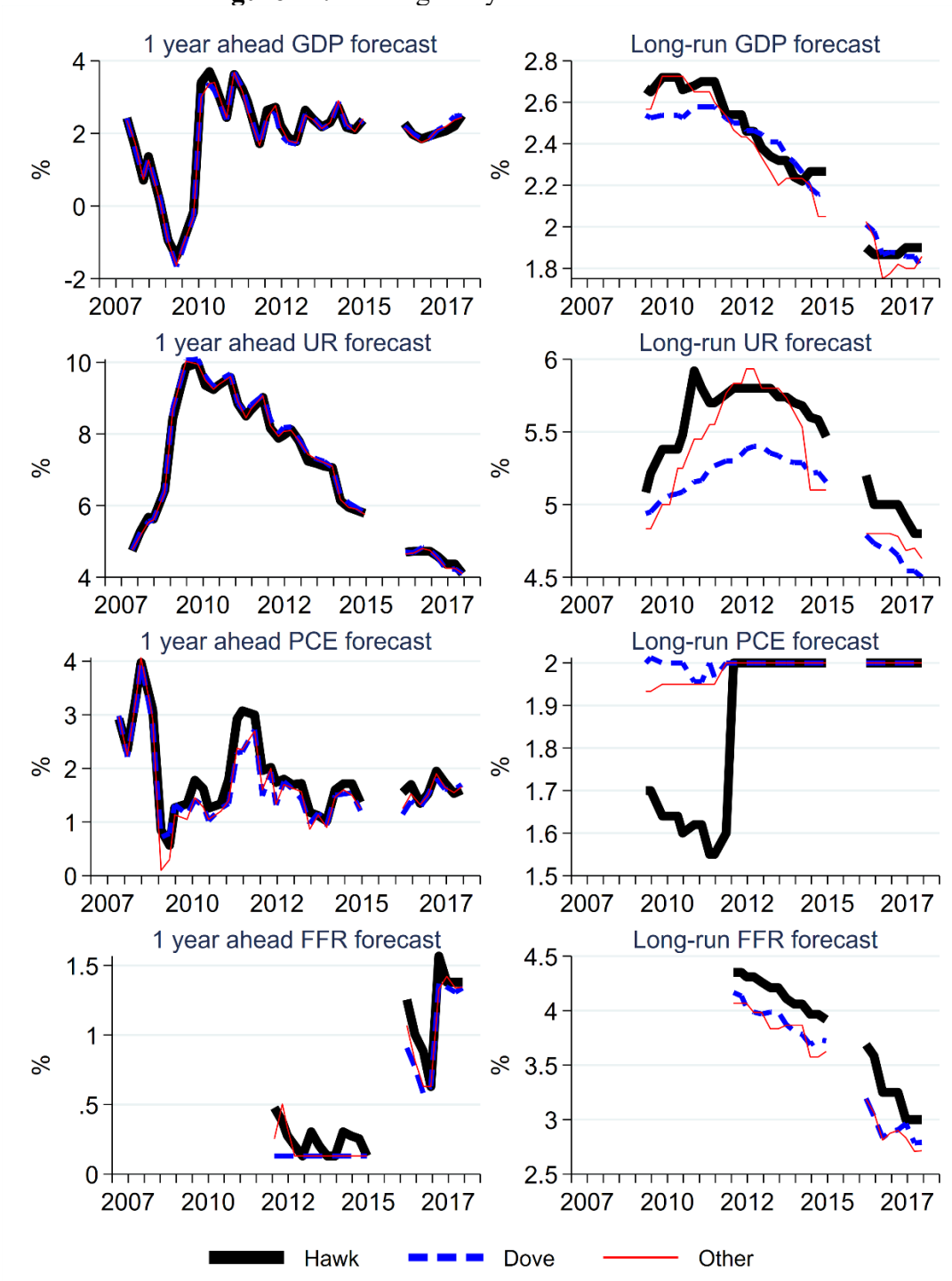


Panel D: Correlation of Gradualism Scores and Individual-Level Policy Persistence Estimates



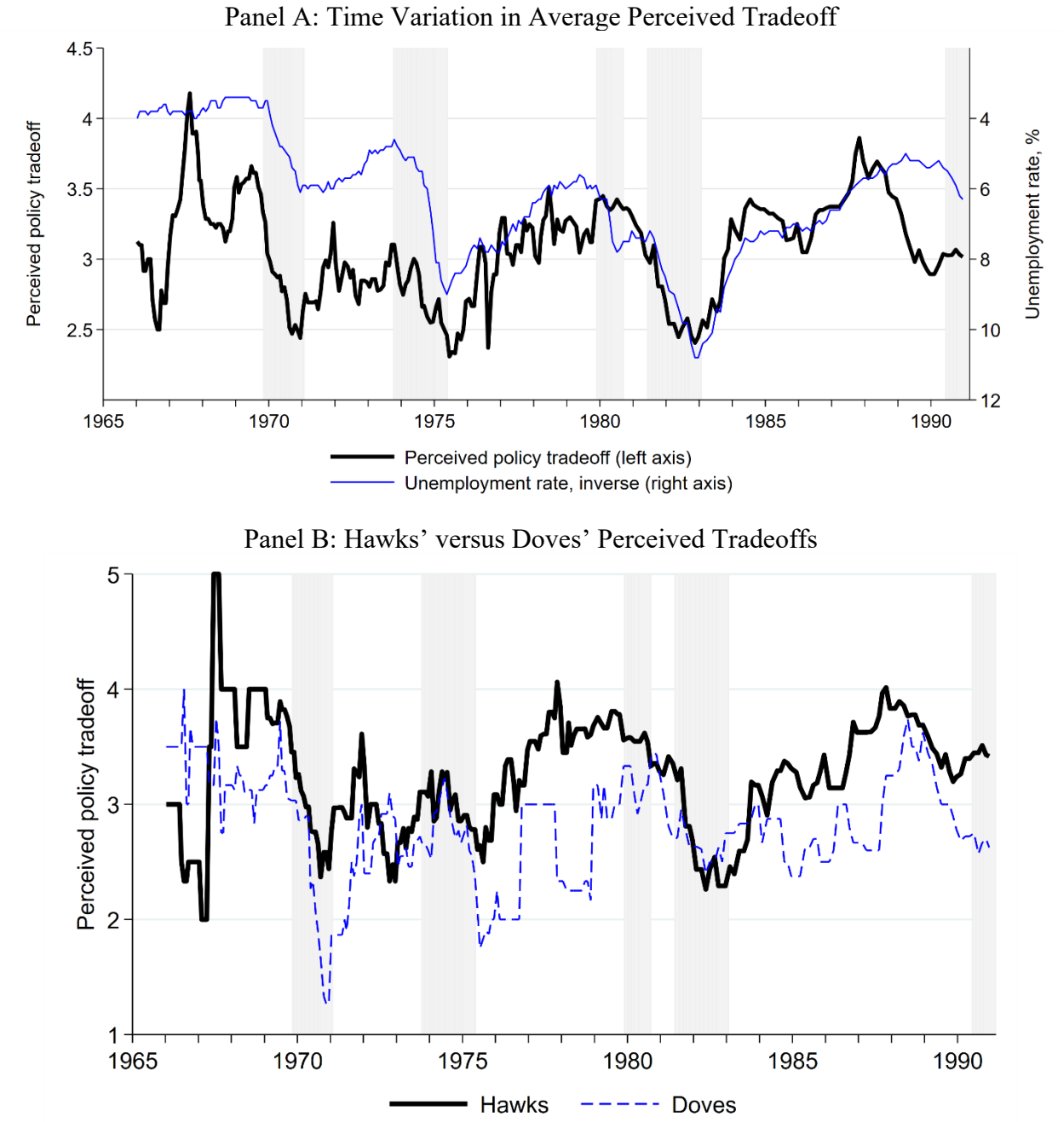

Notes: Panel A reports the distributions of estimated individual-level response coefficients for inflation and output (scaled by $(1-\rho)$, with the individual-level persistence term $\rho$ capped at 0.95). Estimated response coefficients are based on regressions including participants with at least 10 reported FFR preferences, and a small number of outliers with values of $\phi^Y < -2$, $\phi^\pi < -2$, or $\phi^\pi > 4$ are excluded from the figure for readability. Panel B reports participant-level estimates of the policy rule coefficients for inflation (left) and output (right). Each horizontal line corresponds to a participant's average response, with the width of the line corresponding to their tenure on the FOMC. The solid black lines are smoothed averages (using locally estimated scatterplot smoothing regressions) across participants at each meeting over time. A small number of outliers with values of $\phi^Y < -2$, $\phi^\pi < -2$, or $\phi^\pi > 4$ are excluded from the figure for readability. Panel C shows scatterplots of the estimated participant-level response coefficients for inflation and output. The left panel shows all participants, while the right panel separates hawks and doves. Both panels exclude outliers with values of $\phi^Y < -2$, $\phi^\pi < -2$, or $\phi^\pi > 6$ for readability. Panel D shows a scatterplot of the estimated participant-level estimate of $\rho$ (the coefficient on the lagged FFR) against the average participant-level gradualism score for participants with at least 10 reported FFR preferences and gradualism references. Gradualism is scaled so that -1 indicates a preference for more rapid policy changes, +1 indicates a preference for more gradual policy changes, and all other meetings take on values of zero.

**Figure 12:** Heterogeneity in Short-Run Forecasts




Notes: This figure shows participant-level forecasts from the FOMC's Summary of Economic Projections. The solid black (dashed blue) lines show average forecasts across all Hawks (Doves) at each meeting using the classification from Bordo and Istrefi (2023), while the red line reports averages across all participants who are not explicitly classified as a Hawk or Dove. The top row shows GDP growth. The second row shows the unemployment rate. The third row shows the growth rate of the headline PCE price index. The bottom row shows the Federal Funds Rate (where forecasts were not collected prior to 2012). Missing values for 2015 are scheduled to be released publicly in 2026.

**Figure 13**: Perceived Policy Tradeoffs




Notes: In the top panel, the black line (left axis) shows the average perceived policy tradeoff, which represents participant beliefs about whether the incidence of monetary policy will operate through prices or real activity. This variable takes on values between 1 and 5, with higher values corresponding to larger effects on prices. We take averages across all participants who express them in each meeting, and then smoothed using a 13-meeting centered moving average. The blue line (right axis) shows the inverted unemployment rate. The bottom panel calculates the policy tradeoff series separately for Hawks and Doves using the classification from Bordo and Istrefi (2023). Shaded areas show NBER recessions.

**Table 1**: Summary Statistics

| | Mean | Median | 5% | 95% | SD | N |
|---|---|---|---|---|---|---|
| Preferred FFR change | -0.10 | 0.00 | -1.25 | 0.63 | 0.60 | 3,008 |
| Dissent | 0.08 | 0.00 | 0.00 | 1.00 | 0.27 | 2,942 |
| Perceived tradeoff | 3.20 | 3.00 | 1.00 | 5.00 | 1.05 | 588 |
| Inflation preference | -0.88 | -1.00 | -1.00 | 1.00 | 0.47 | 1,431 |
| Output preference | 0.30 | 1.00 | -1.00 | 1.00 | 0.96 | 1,162 |
| Financial stability preference | -0.07 | -1.00 | -1.00 | 1.00 | 1.00 | 627 |
| International preference | -0.41 | -1.00 | -1.00 | 1.00 | 0.91 | 369 |
| Uncertainty preference | -0.05 | -1.00 | -1.00 | 1.00 | 1.00 | 192 |
| Congress pressure | 0.15 | 1.00 | -1.00 | 1.00 | 0.99 | 80 |
| Executive pressure | -0.08 | -1.00 | -1.00 | 1.00 | 1.00 | 65 |
| Financial market pressure | 0.04 | 1.00 | -1.00 | 1.00 | 1.00 | 115 |

Notes: This table shows summary statistics for all participant-meeting observations in our sample, except for dissents, which are calculated only for voters. The preferred FFR change is measured in percentage points. We only include non-zero values for objectives, justifications, and political pressure. Negative (positive) values for pressure and justifications correspond to tighter (looser) policy.

**Table 2**: Participant Level Summary Statistics

| | Mean | Median | 5% | 95% | SD | N |
|---|---|---|---|---|---|---|
| **Panel A: Participant-level mean** | | | | | | |
| Preferred FFR change | -0.11 | -0.10 | -0.44 | 0.12 | 0.20 | 70 |
| Dissent | 0.09 | 0.04 | 0.00 | 0.36 | 0.13 | 71 |
| Perceived tradeoff | 3.17 | 3.25 | 2.20 | 4.00 | 0.58 | 69 |
| Inflation preference | -0.84 | -0.92 | -1.00 | -0.45 | 0.28 | 76 |
| Output preference | 0.30 | 0.38 | -0.69 | 1.00 | 0.53 | 75 |
| Financial stability preference | -0.02 | 0.00 | -1.00 | 1.00 | 0.67 | 72 |
| International preference | -0.30 | -0.33 | -1.00 | 1.00 | 0.71 | 66 |
| Uncertainty preference | -0.08 | 0.00 | -1.00 | 1.00 | 0.75 | 58 |
| Congress pressure | 0.21 | 0.33 | -1.00 | 1.00 | 0.80 | 37 |
| Executive pressure | -0.06 | 0.00 | -1.00 | 1.00 | 0.84 | 29 |
| Financial market pressure | 0.03 | 0.00 | -1.00 | 1.00 | 0.85 | 53 |
| **Panel B: Participant-level standard deviation** | | | | | | |
| Preferred FFR change | 0.49 | 0.45 | 0.16 | 1.04 | 0.25 | 70 |
| Dissent | 0.19 | 0.21 | 0.00 | 0.49 | 0.17 | 70 |
| Perceived tradeoff | 0.97 | 0.96 | 0.57 | 1.33 | 0.26 | 44 |
| Inflation preference | 0.37 | 0.43 | 0.00 | 0.89 | 0.34 | 67 |
| Output preference | 0.82 | 0.94 | 0.00 | 1.10 | 0.29 | 62 |
| Financial stability preference | 0.87 | 0.97 | 0.00 | 1.05 | 0.27 | 43 |
| International preference | 0.68 | 0.82 | 0.00 | 1.10 | 0.43 | 31 |
| Uncertainty preference | 0.99 | 1.03 | 0.76 | 1.10 | 0.10 | 15 |
| Congress pressure | 1.07 | 1.07 | 1.04 | 1.10 | 0.04 | 2 |
| Executive pressure | 1.01 | 1.05 | 0.89 | 1.10 | 0.11 | 3 |
| Financial market pressure | 1.04 | 1.10 | 0.84 | 1.10 | 0.10 | 6 |
| **Panel C: Participant-level persistence** | | | | | | |
| Preferred FFR change | 0.39 | 0.39 | -0.06 | 0.71 | 0.25 | 53 |
| Dissent | 0.07 | 0.00 | -0.10 | 0.46 | 0.17 | 50 |
| Perceived tradeoff | -0.08 | 0.00 | -0.67 | 0.39 | 0.38 | 5 |
| Inflation preference | 0.03 | 0.00 | -0.04 | 0.00 | 0.19 | 28 |
| Output preference | 0.31 | 0.00 | 0.00 | 1.00 | 0.42 | 24 |
| Financial stability preference | 0.28 | 0.10 | -0.20 | 1.00 | 0.46 | 6 |
| International preference | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2 |

Notes: This table shows summary statistics calculated across participants based on within-participant means (panel A), standard deviations (panel B), and persistence coefficients (panel C). Each row in panel B is calculated using only participants with at least 5 observations of that variable. Each row in panel C is calculated using only participants with at least 20 observations of that variable.

**Table 3**: Policy Preferences and Narrative Justifications for those Preferences

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| Inflation preference | -0.258*** | | | | | | -0.154*** | -0.077*** |
| | (0.034) | | | | | | (0.030) | (0.016) |
| Output preference | | -0.313*** | | | | | -0.217*** | -0.087*** |
| | | (0.055) | | | | | (0.051) | (0.018) |
| Financial stability preference | | | -0.346*** | | | | -0.190*** | -0.091*** |
| | | | (0.041) | | | | (0.032) | (0.024) |
| International preference | | | | -0.291*** | | | -0.123** | -0.045* |
| | | | | (0.057) | | | (0.048) | (0.025) |
| Uncertainty preference | | | | | -0.358*** | | -0.166*** | -0.025 |
| | | | | | (0.066) | | (0.063) | (0.036) |
| Other preference | | | | | | -0.357*** | -0.233*** | -0.133*** |
| | | | | | | (0.056) | (0.056) | (0.045) |
| Participant FE | N | N | N | N | N | N | N | Y |
| Meeting FE | N | N | N | N | N | N | N | Y |
| Observations | 3,008 | 3,008 | 3,008 | 3,008 | 3,008 | 3,008 | 3,008 | 3,003 |
| $R^2$ | 0.966 | 0.966 | 0.965 | 0.965 | 0.965 | 0.965 | 0.968 | 0.041 |

Notes: The dependent variable in each regression is the midpoint of each participants' preferred FFR target range. The independent variables are the policy preference justifications, where a value of -1 for inflation signifies that the participant used inflation as justification for tighter policy, while a value of +1 for output means a participant used output as justification for looser policy. All regressions without meeting fixed effects include the lagged FFR. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 4**: The role of economic forecasts in accounting for policy justifications

| | Inflation | | | | | | Output | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Expected RGDP growth | 0.012 | | | | | 0.003 | -0.022 | | | | | -0.034** |
| | (0.012) | | | | | (0.015) | (0.014) | | | | | (0.015) |
| Current RGDP growth | | -0.007 | | | | -0.009 | | -0.021** | | | | -0.010 |
| | | (0.008) | | | | (0.008) | | (0.009) | | | | (0.008) |
| Expected inflation | | | -0.055*** | | | -0.054*** | | | -0.043 | | | -0.060** |
| | | | (0.019) | | | (0.020) | | | (0.026) | | | (0.028) |
| Current inflation | | | | -0.015 | | -0.012 | | | | 0.009 | | -0.001 |
| | | | | (0.015) | | (0.018) | | | | (0.016) | | (0.013) |
| Unemployment rate | | | | | 0.080 | 0.049 | | | | | 0.351*** | 0.329*** |
| | | | | | (0.056) | (0.057) | | | | | (0.063) | (0.062) |
| Observations | 3,900 | 3,900 | 3,900 | 3,900 | 4,712 | 3,900 | 3,900 | 3,900 | 3,900 | 3,900 | 4,712 | 3,900 |
| $R^2$ | 0.001 | 0.001 | 0.004 | 0.001 | 0.001 | 0.007 | 0.002 | 0.007 | 0.002 | 0.000 | 0.028 | 0.040 |

Notes: This table shows the relationship between participants' use of inflation or output as justification for their preferred policy choice and macroeconomic variables. The dependent variable is equal to 1 if a participant used inflation (columns 1-6) or output (columns 7-12) as justification for looser policy, and -1 if it was used as justification for tighter policy. Current values of output and inflation come from the Greenbook at the time of the meeting, and expected RGDP growth and inflation are the averages of the one- and two-year ahead forecasts from the Greenbook. All variables are measured in percentage points. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 5**: Separating economic forecasts and policy justifications for policy preferences

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| Previous FFR target | 0.934*** | 0.934*** | 0.963*** | 0.966*** | 0.938*** | 0.942*** | | |
| | (0.024) | (0.026) | (0.030) | (0.031) | (0.030) | (0.030) | | |
| Output preference | | | -0.309*** | -0.279*** | -0.242*** | -0.220*** | -0.120*** | -0.090*** |
| | | | (0.055) | (0.057) | (0.040) | (0.038) | (0.020) | (0.017) |
| Current RGDP growth | | | 0.007 | 0.008 | 0.010 | 0.011 | | |
| | | | (0.021) | (0.021) | (0.019) | (0.018) | | |
| Expected RGDP growth | | | -0.014 | -0.012 | -0.004 | 0.011 | | |
| | | | (0.027) | (0.026) | (0.024) | (0.023) | | |
| Inflation preference | -0.226*** | -0.189*** | | | -0.167*** | -0.139*** | -0.117*** | -0.080*** |
| | (0.029) | (0.028) | | | (0.028) | (0.028) | (0.016) | (0.015) |
| Current inflation | -0.068 | -0.067 | | | -0.054 | -0.049 | | |
| | (0.047) | (0.045) | | | (0.047) | (0.043) | | |
| Expected inflation | 0.159*** | 0.168*** | | | 0.148** | 0.164*** | | |
| | (0.060) | (0.062) | | | (0.061) | (0.063) | | |
| Participant FE | N | Y | N | Y | N | Y | N | Y |
| Meeting FE | N | N | N | N | N | N | Y | Y |
| Observations | 3,003 | 3,003 | 3,003 | 3,003 | 3,003 | 3,003 | 3,406 | 3,404 |
| $R^2$ | 0.969 | 0.963 | 0.967 | 0.961 | 0.971 | 0.965 | 0.052 | 0.025 |

Notes: This table tests whether inflation and output justifications are meaningful drivers of individual policy preferences after controlling for current and expected economic conditions. The dependent variable in each regression is each participant's FFR target rate. Columns 1 through 6 include the previous FFR target rate as well as combinations of current and expected inflation and real GDP growth in addition to participants' justifications for output and inflation (which are scaled so that a -1 corresponds to a preference for tighter policy, and a +1 corresponds to a preference for looser policy). Columns 7 and 8 include meeting fixed effects, which absorb all of the variation in the Greenbook forecasts. The number of observations for these regressions is higher because Greenbook forecasts are not available until 1969. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 6**: Narrative Justifications and Hawk versus Dove

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Hawk | 0.044* | 0.012 | 0.016 | 0.014 | -0.003 | 0.005 |
| | (0.025) | (0.023) | (0.027) | (0.015) | (0.015) | (0.019) |
| Dove | -0.150*** | -0.091*** | -0.073** | -0.139*** | -0.109*** | -0.083*** |
| | (0.027) | (0.027) | (0.032) | (0.020) | (0.019) | (0.020) |
| Inflation preference | | -0.173*** | -0.180*** | | -0.113*** | -0.142*** |
| | | (0.026) | (0.037) | | (0.015) | (0.022) |
| Output preference | | -0.276*** | -0.251*** | | -0.117*** | -0.114*** |
| | | (0.038) | (0.046) | | (0.019) | (0.024) |
| Hawk x inflation preference | | | 0.004 | | | 0.035 |
| | | | (0.051) | | | (0.031) |
| Dove x inflation preference | | | 0.029 | | | 0.077* |
| | | | (0.064) | | | (0.042) |
| Hawk x output preference | | | -0.024 | | | 0.024 |
| | | | (0.053) | | | (0.030) |
| Dove x output preference | | | -0.072 | | | -0.059 |
| | | | (0.060) | | | (0.037) |
| Meeting FE | N | N | N | Y | Y | Y |
| Observations | 3,008 | 3,008 | 3,008 | 3,003 | 3,003 | 3,003 |
| $R^2$ | 0.015 | 0.094 | 0.095 | 0.026 | 0.068 | 0.070 |

Notes: This table tests whether participants' policy justifications had different effects on their ultimate policy preferences for hawks and doves. The dependent variable in each regression is each participant's preferred change in the FFR. “Hawk” and “Dove” are static participant-level indicators using the classification from Bordo and Istrefi (2023). Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 7**: Perceived Tradeoffs and Policy Justifications

| | Inflation | | | | Output | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Perceived tradeoff | 0.093*** | 0.073*** | 0.063*** | 0.024 | -0.109*** | -0.095*** | -0.102*** | -0.092*** |
| | (0.022) | (0.026) | (0.024) | (0.025) | (0.023) | (0.021) | (0.025) | (0.024) |
| Participant FE | N | Y | N | Y | N | Y | N | Y |
| Meeting FE | N | N | Y | Y | N | N | Y | Y |
| Observations | 588 | 583 | 518 | 513 | 588 | 583 | 518 | 513 |
| $R^2$ | 0.038 | 0.021 | 0.018 | 0.002 | 0.057 | 0.040 | 0.049 | 0.036 |
| | Financial Stability | | | | International | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Perceived tradeoff | -0.005 | -0.003 | -0.020 | -0.022 | 0.015 | -0.004 | 0.016 | -0.010 |
| | (0.013) | (0.016) | (0.016) | (0.018) | (0.011) | (0.013) | (0.014) | (0.017) |
| Participant FE | N | Y | N | Y | N | Y | N | Y |
| Meeting FE | N | N | Y | Y | N | N | Y | Y |
| Observations | 588 | 583 | 518 | 513 | 588 | 583 | 518 | 513 |
| $R^2$ | 0.000 | 0.000 | 0.003 | 0.004 | 0.003 | 0.000 | 0.003 | 0.001 |

Notes: These tables show the relationship between participants' justifications and their perceived policy tradeoffs. The dependent variable in each regression is a dummy variable indicating whether a participant cited each justification shown at the top of each panel, regardless of direction. Each column shows a different combination of participant and meeting fixed effects. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 8**: Policy Objectives and Justifications

| | Inflation | | | | Output | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Perceived tradeoff | 0.092*** | 0.073*** | 0.062*** | 0.024 | -0.109*** | -0.096*** | -0.105*** | -0.099*** |
| | (0.022) | (0.026) | (0.023) | (0.025) | (0.023) | (0.021) | (0.025) | (0.025) |
| Financial stability objective | -0.010 | 0.028 | -0.038 | -0.022 | -0.049 | -0.121 | -0.092 | -0.207 |
| | (0.068) | (0.083) | (0.097) | (0.104) | (0.114) | (0.105) | (0.098) | (0.127) |
| International objective | -0.008 | -0.026 | 0.023 | -0.006 | -0.073 | -0.073 | -0.127** | -0.080 |
| | (0.066) | (0.073) | (0.074) | (0.084) | (0.064) | (0.073) | (0.050) | (0.063) |
| Net political pressure | -0.038 | -0.008 | 0.012 | 0.068 | 0.041 | 0.016 | 0.043 | -0.026 |
| | (0.051) | (0.059) | (0.073) | (0.070) | (0.061) | (0.050) | (0.054) | (0.067) |
| Participant FE | N | Y | N | Y | N | Y | N | Y |
| Meeting FE | N | N | Y | Y | N | N | Y | Y |
| Observations | 588 | 583 | 518 | 513 | 588 | 583 | 518 | 513 |
| $R^2$ | 0.039 | 0.022 | 0.019 | 0.004 | 0.061 | 0.046 | 0.059 | 0.050 |

| | Financial Stability | | | | International | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Perceived tradeoff | -0.005 | -0.004 | -0.021 | -0.024 | 0.015 | -0.004 | 0.017 | -0.010 |
| | (0.013) | (0.016) | (0.016) | (0.018) | (0.012) | (0.014) | (0.014) | (0.017) |
| Financial stability objective | 0.017 | -0.031 | -0.032 | -0.050 | -0.053 | -0.050 | -0.040 | -0.036 |
| | (0.067) | (0.077) | (0.105) | (0.099) | (0.041) | (0.056) | (0.042) | (0.062) |
| International objective | -0.031 | -0.019 | -0.009 | -0.018 | 0.186*** | 0.163** | 0.108** | 0.060 |
| | (0.035) | (0.036) | (0.049) | (0.063) | (0.066) | (0.068) | (0.046) | (0.043) |
| Net political pressure | 0.015 | -0.013 | 0.038 | -0.019 | -0.040 | -0.017 | -0.086* | -0.071* |
| | (0.043) | (0.056) | (0.057) | (0.077) | (0.044) | (0.029) | (0.044) | (0.043) |
| Participant FE | N | Y | N | Y | N | Y | N | Y |
| Meeting FE | N | N | Y | Y | N | N | Y | Y |
| Observations | 588 | 583 | 518 | 513 | 588 | 583 | 518 | 513 |
| $R^2$ | 0.001 | 0.001 | 0.005 | 0.005 | 0.047 | 0.034 | 0.026 | 0.010 |

Notes: These tables show the relationship between participants' justifications and their perceived policy tradeoffs, but with the addition of controls for participants' mentions of financial stability or international objectives or net political pressure. The dependent variable in each regression is a dummy variable indicating whether a participant cited each justification shown at the top of each panel, regardless of direction. Each column shows a different combination of participant and meeting fixed effects. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 9**: Political Pressure and Preferred Policy Changes

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Net pressure from Congress | -0.044 | | | -0.129 | -0.046 | -0.115 |
| | (0.088) | | | (0.095) | (0.091) | (0.095) |
| Net pressure from Executive | | 0.101 | | 0.077 | 0.155 | 0.076 |
| | | (0.081) | | (0.081) | (0.103) | (0.078) |
| Net pressure from financial markets | | | -0.188** | -0.139* | -0.173** | -0.119 |
| | | | (0.085) | (0.075) | (0.084) | (0.077) |
| Inflation preference | -0.138*** | -0.139*** | -0.135*** | -0.107*** | -0.120*** | -0.075*** |
| | (0.025) | (0.025) | (0.025) | (0.015) | (0.027) | (0.016) |
| Output preference | -0.231*** | -0.233*** | -0.232*** | -0.111*** | -0.223*** | -0.088*** |
| | (0.037) | (0.037) | (0.037) | (0.019) | (0.037) | (0.019) |
| Financial stability preference | -0.207*** | -0.206*** | -0.197*** | -0.106*** | -0.176*** | -0.086*** |
| | (0.032) | (0.032) | (0.033) | (0.025) | (0.033) | (0.025) |
| International preference | -0.130*** | -0.129*** | -0.132*** | -0.072** | -0.101*** | -0.047 |
| | (0.042) | (0.042) | (0.042) | (0.028) | (0.038) | (0.030) |
| Uncertainty preference | -0.156** | -0.154** | -0.156** | -0.035 | -0.150** | -0.030 |
| | (0.062) | (0.063) | (0.062) | (0.040) | (0.065) | (0.039) |
| Other preference | -0.248*** | -0.250*** | -0.248*** | -0.149*** | -0.232*** | -0.135*** |
| | (0.066) | (0.065) | (0.066) | (0.048) | (0.066) | (0.047) |
| Meeting FE | N | N | N | Y | N | Y |
| Participant FE | N | N | N | N | Y | Y |
| Observations | 3,008 | 3,008 | 3,008 | 3,003 | 3,008 | 3,003 |
| $R^2$ | 0.119 | 0.119 | 0.121 | 0.079 | 0.099 | 0.046 |

Notes: This table shows participant-level regressions where the dependent variable is the preferred change in the FFR. Net pressure from Congress/Executive/Financial markets is scaled so that higher values correspond to pressure for looser policy. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 10**: Quantifying the Relative Importance of Mechanisms at Work

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Justification | 0.5804 | 0.2228 | 0.2544 | 0.4200 | 0.5225 | 0.5189 | 0.3029 | 0.3829 | 0.0978 | 0.0829 | 0.0483 |
| Forecast | 0.3545 | 0.1266 | 0.2237 | 0.1458 | 0.3286 | 0.3244 | 0.1840 | 0.2719 | 0.0495 | 0.0483 | 0.0285 |
| Objective | 0.0310 | 0.0059 | 0.0069 | 0.0086 | 0.0076 | 0.0156 | 0.0076 | 0.0193 | 0.0062 | 0.0050 | 0.0014 |
| Influence | 0.0012 | 0.0009 | 0.0006 | 0.0012 | 0.0011 | 0.0018 | 0.0014 | 0.0011 | 0.0004 | 0.0004 | 0.0003 |
| Tradeoff | 0.0330 | 0.0180 | 0.0202 | 0.0236 | 0.0314 | 0.0318 | 0.0238 | 0.0221 | 0.0075 | 0.0063 | 0.0046 |
| Justification x Forecast | | 0.1647 | 0.2072 | 0.1908 | | | | | | | 0.0364 |
| Justification x Objective | | 0.0245 | 0.0256 | | 0.0363 | | | | | | 0.0060 |
| Justification x Influence | | 0.0302 | 0.0366 | | | 0.0585 | | | | | 0.0072 |
| Justification x Tradeoff | | 0.1977 | 0.2249 | | | | 0.2722 | | | | 0.0448 |
| Forecast x Objective | | 0.0363 | | 0.0400 | 0.0479 | | | | | | 0.0082 |
| Forecast x Influence | | 0.0203 | | 0.0232 | | 0.0389 | | | | | 0.0050 |
| Forecast x Tradeoff | | 0.1291 | | 0.1468 | | | 0.1863 | | | | 0.0296 |
| Objective x Influence | | 0.0053 | | | 0.0058 | 0.0073 | | | | | 0.0011 |
| Objective x Tradeoff | | 0.0156 | | | 0.0189 | | 0.0190 | | | | 0.0030 |
| Influence x Tradeoff | | 0.0020 | | | | 0.0026 | 0.0028 | | | | 0.0005 |
| Person FE | | | | | | | | 0.3026 | | 0.0723 | 0.0639 |
| Time FE | | | | | | | | | 0.8387 | 0.7850 | 0.7109 |
| Total $R^2$ | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

Notes: This table shows Shapley decompositions for participants' preferred FFR change. The "Justification" row includes the reasons participants give to justify their preferred policy change. The "Forecast" row includes the Greenbook forecasts of current inflation, output growth, and the unemployment rate, and expected inflation and output growth. The "Objective" row includes indicators for the alternative policy objectives shown in Panel B of Figure 2. The "Influence" row includes a score reflecting the net number of other participants who spoke positively about a participant's position. The "Tradeoff" row includes the numerical score capturing a participant's perceived tradeoff between output and inflation. Each number is reported as a share of the total $R^2$ for the regression shown in that column.

**Table 11**: Voting Outcomes and Preferences of Different Roles of FOMC Participants

| | Participant | | Grouped | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Pref. Δ FFR | 0.817*** | 0.828*** | 0.817*** | 0.817*** | 0.817*** | 0.817*** |
| | (0.204) | (0.208) | (0.205) | (0.205) | (0.205) | (0.205) |
| FRB non-voter | -0.032 | 0.017 | -0.012 | | | -0.012 |
| | (0.026) | (0.011) | (0.023) | | | (0.023) |
| FRB voter | -0.044 | | | -0.031 | | -0.031 |
| | (0.028) | | | (0.028) | | (0.028) |
| Governor | -0.027 | -0.129 | | | 0.006 | 0.006 |
| | (0.024) | (0.141) | | | (0.022) | (0.022) |
| Pref. Δ FFR x FRB non-voter | -0.478** | -0.476** | -0.321** | | | -0.321** |
| | (0.191) | (0.196) | (0.160) | | | (0.160) |
| Pref. Δ FFR x FRB voter | -0.429** | -0.414** | | -0.266 | | -0.266 |
| | (0.167) | (0.172) | | (0.165) | | (0.166) |
| Pref. Δ FFR x Governor | -0.397*** | -0.368** | | | -0.262** | -0.262** |
| | (0.142) | (0.144) | | | (0.126) | (0.126) |
| Participant FE | N | Y | N | N | N | N |
| Grouped | N | N | Y | Y | Y | Y |
| Observations | 3,008 | 3,008 | 365 | 365 | 370 | 794 |
| $R^2$ | 0.222 | 0.233 | 0.349 | 0.364 | 0.356 | 0.322 |

Notes: The dependent variable in each regression is the actual change in FFR target rate calculated in percentage points. “Preferred FFR change” is a participant-level measure calculated as the difference between the midpoint of a participant's preferred FFR target range and the FFR target range prior to that meeting. “Governor” is a dummy variable indicating whether each participant was one of the FOMC members who votes at every meeting, which includes Governors of the Federal Reserve Board and the President of the Federal Reserve Bank of New York. “FRB (non-)voter” variables indicate whether each participant was a regional FRB President who did (not) vote at the meeting. The omitted category in these regressions is the FOMC Chair. The first two columns are at the participant-meeting level (with column (2) including participant fixed effects). Columns (3) - (6) aggregate preferred FFR changes by group using simple averages at each meeting. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 12**: References and the Passthrough of their Preferences into Policy Decisions

| | Any reference | | | | Net score (agree - disagree) | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Pref. Δ FFR | 0.397*** | 0.423*** | 0.383*** | 0.407*** | 0.382*** | 0.408*** | 0.380*** | 0.405*** |
| | (0.078) | (0.081) | (0.072) | (0.074) | (0.072) | (0.074) | (0.069) | (0.071) |
| References | -0.008 | -0.013 | | | | | | |
| | (0.007) | (0.010) | | | | | | |
| References (voters) | | | -0.005 | -0.009 | | | | |
| | | | (0.005) | (0.008) | | | | |
| Net references | | | | | 0.000 | -0.001 | | |
| | | | | | (0.004) | (0.006) | | |
| Net references (voters) | | | | | | | 0.002 | 0.002 |
| | | | | | | | (0.003) | (0.006) |
| Pref. Δ FFR x References | -0.002 | -0.003 | | | | | | |
| | (0.011) | (0.011) | | | | | | |
| Pref. Δ FFR x References (voters) | | | 0.008 | 0.008 | | | | |
| | | | (0.010) | (0.010) | | | | |
| Pref. Δ FFR x Net references | | | | | 0.014 | 0.012 | | |
| | | | | | (0.009) | (0.009) | | |
| Pref. Δ FFR x Net references (voters) | | | | | | | 0.021** | 0.020** |
| | | | | | | | (0.009) | (0.009) |
| Participant FE | N | Y | N | Y | N | Y | N | Y |
| Voters | N | N | Y | Y | N | N | Y | Y |
| Observations | 3,008 | 3,008 | 3,008 | 3,008 | 3,008 | 3,008 | 3,008 | 3,008 |
| $R^2$ | 0.214 | 0.226 | 0.214 | 0.225 | 0.213 | 0.223 | 0.214 | 0.224 |

Notes: The dependent variable in each regression is the actual change in FFR target rate at each meeting in percentage points. "Pref. Δ FFR" is each participant's preferred change in the target FFR at that meeting. "References" is the number of times each participant was referred to by other participants during discussions. "Net references" use a net reference score (1 for agreement, -1 for disagreement) summed across all mentions. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 13**: Disagreement and Dissent

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| FFR preference deviation | 0.057** | | | | | | 0.058** | 0.047** |
| | (0.023) | | | | | | (0.023) | (0.019) |
| Burns | -0.011 | -0.005 | -0.006 | -0.006 | -0.006 | -0.003 | -0.003 | 0.001 |
| | (0.022) | (0.019) | (0.018) | (0.018) | (0.018) | (0.018) | (0.022) | (0.029) |
| Miller | 0.117*** | 0.096*** | 0.103*** | 0.100*** | 0.099*** | 0.107*** | 0.126*** | 0.117* |
| | (0.043) | (0.036) | (0.035) | (0.037) | (0.037) | (0.037) | (0.042) | (0.061) |
| Volcker | 0.046* | 0.052** | 0.049** | 0.050** | 0.051** | 0.054** | 0.052** | 0.091** |
| | (0.023) | (0.022) | (0.021) | (0.021) | (0.021) | (0.021) | (0.024) | (0.040) |
| Greenspan | 0.052* | 0.050** | 0.048** | 0.051** | 0.052** | 0.055** | 0.051* | 0.113** |
| | (0.027) | (0.024) | (0.024) | (0.024) | (0.023) | (0.024) | (0.029) | (0.046) |
| Inflation justification | | 0.031** | | | | | 0.016 | 0.013 |
| | | (0.014) | | | | | (0.015) | (0.014) |
| Output justification | | | 0.025** | | | | 0.028** | 0.023* |
| | | | (0.011) | | | | (0.012) | (0.012) |
| International justification | | | | 0.012 | | | 0.017 | 0.010 |
| | | | | (0.019) | | | (0.022) | (0.020) |
| Uncertainty justification | | | | | -0.029*** | | -0.014 | -0.014 |
| | | | | | (0.010) | | (0.012) | (0.011) |
| Financial stability justification | | | | | | 0.014 | 0.026* | 0.019 |
| | | | | | | (0.012) | (0.013) | (0.013) |
| Participant FE | N | N | N | N | N | N | N | Y |
| Observations | 2,162 | 2,942 | 2,942 | 2,942 | 2,942 | 2,942 | 2,162 | 2,161 |
| $R^2$ | 0.024 | 0.018 | 0.016 | 0.015 | 0.016 | 0.015 | 0.030 | 0.021 |

Notes: This table shows voter-level regressions where the dependent variable is an indicator for whether that voter dissented in each meeting. “FFR preference deviation” is the difference between that participant's preferred FFR target and the average of all participants at that meeting. “Burns”, “Miller”, “Volcker”, and “Greenspan” are indicator dummies equal to 1 for the period in which they were Chair and 0 otherwise (the period of Miller's Chairship at the beginning of the sample is the excluded group). The “justification” variables are equal to 1 if a participant used each category as justification for their policy, regardless of direction. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 14**: The Cost of Dissent

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| Pref. Δ FFR | 0.421*** | 0.442*** | 0.424*** | 0.445*** | 0.388*** | 0.407*** | 0.391*** | 0.410*** |
| | (0.076) | (0.077) | (0.078) | (0.079) | (0.076) | (0.076) | (0.078) | (0.078) |
| Dissent count, previous 4 meetings | -0.010 | -0.005 | | | -0.005 | -0.000 | | |
| | (0.018) | (0.020) | | | (0.018) | (0.022) | | |
| Pref. Δ FFR x Dissent count, previous 4 meetings | -0.082** | -0.072* | | | -0.073** | -0.058* | | |
| | (0.038) | (0.039) | | | (0.033) | (0.033) | | |
| 1 = Dissent, previous 4 meetings | | | -0.005 | 0.007 | | | 0.008 | 0.018 |
| | | | (0.026) | (0.030) | | | (0.032) | (0.036) |
| Pref. Δ FFR x 1 = Dissent, previous 4 meetings | | | -0.144* | -0.132* | | | -0.130* | -0.112 |
| | | | (0.075) | (0.080) | | | (0.068) | (0.069) |
| Mean Pref. Δ FFR over previous 4 meetings | | | | | 0.033 | 0.047 | 0.033 | 0.047 |
| | | | | | (0.035) | (0.035) | (0.035) | (0.035) |
| Mean absolute FFR preference deviation from mean over previous 4 meetings | | | | | -0.211 | -0.314 | -0.214 | -0.314 |
| | | | | | (0.243) | (0.221) | (0.242) | (0.220) |
| Mean distance to closest other FFR preference over previous 4 meetings | | | | | 0.167 | 0.270 | 0.147 | 0.253 |
| | | | | | (0.292) | (0.255) | (0.292) | (0.255) |
| Participant FE | N | Y | N | Y | N | Y | N | Y |
| Observations | 3,008 | 3,008 | 3,008 | 3,008 | 2,917 | 2,917 | 2,917 | 2,917 |
| $R^2$ | 0.217 | 0.226 | 0.217 | 0.226 | 0.232 | 0.253 | 0.232 | 0.253 |

Notes: The dependent variable is the realized change in the FFR. The first regressor is each member's preferred change in the FFR. Dissent is captured in two ways: (i) the number of dissents in the four preceding meetings (columns 1-2 and 5-6), and (ii) a binary indicator equal to 1 if the member dissented in any of those meetings (columns 3-4 and 7-8). Columns 5-8 also include controls for the four-meeting averages of each of the following participant-level measures: (i) their preferred FFR change, (ii) the average absolute deviation in FFR preference from the mean of all participants, and (iii) average distance to the closest other participants' FFR preference. Driscoll-Kraay standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 1%, 5%, and 10% levels, respectively.