

Appendix for
Career Concerns in Collective Decision-Making:
The Federal Open Market Committee

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A Additional Tables and Figures

Recommendations	Adopted Policy		
	(1)	(2)	(3)
Median	0.854*** (0.031)	1.042*** (0.108)	1.009*** (0.108)
60th Percentile		-0.477** (0.219)	-0.417** (0.208)
70th Percentile		0.394** (0.191)	0.360 (0.186)
80th Percentile		-0.216 (0.110)	-0.183 (0.114)
90th Percentile		0.147 (0.096)	0.158 (0.093)
Economic Characteristics	No	No	Yes
Observations	347	347	347
R ²	0.652	0.665	0.712

Note: **p<0.05; ***p<0.01

Robust Standard Errors in Parentheses.

Table A1: Adopted Policy as a Function of Recommendations' Distribution

Chair	Meetings Number	FFR Rec. Mean	FFR Rec. Dispersion	Inf Mean	Unemp Mean	M1 Mean	GDP Mean
BURNS ('70-'78)	99	6.45	0.61	5.65	6.37	3.51	3.49
MILLER ('78-'79)	11	8.39	0.67	7.45	5.93	0.62	4.24
VOLCKER ('79-'87)	61	10.49	1.72	5.77	7.78	0.73	1.77
GREENSPAN ('87-'06)	147	4.80	0.21	2.44	5.59	0.27	2.55
BERNANKE ('06-'08)	23	3.97	0.24	2.40	5.07	0.29	1.28
All	341	6.33	0.61	4.02	6.18	1.18	2.60

Table A2: Summary Statistics. Meetings (Number) denotes the number of meetings per Chair. FFR Rec. (Mean) denotes the average FFR recommendation per Chair. FFR Rec. (Dispersion) denotes the per-meeting difference between the maximum and minimum FFR recommendation averaged per Chair. Inf, GDP, and Unemp refer to quarterly forecasts of inflation, real GDP growth, and civilian unemployment, averaged per Chair. M1 denotes the three-month moving average money growth around the date of FOMC meetings, also averaged per Chair.

Variable	$\gamma_0^{O,Gov}$	$\gamma_1^{O,Gov}$	$\gamma_0^{T,Gov}$	$\gamma_1^{T,Gov}$	$\gamma_0^{O,Pr}$	$\gamma_1^{O,Pr}$	$\gamma_0^{T,Pr}$	$\gamma_1^{T,Pr}$
Unemployment	-0.24 (0.15)	0.02 (0.16)	-0.09 (0.16)	0.11 (0.22)	-0.24 (0.16)	-0.18 (0.17)	-0.10 (0.15)	-0.10 (0.22)
GDP growth	0.05 (0.05)	0.15 (0.06)	-0.28 (0.10)	0.31 (0.14)	0.11 (0.10)	0.30 (0.12)	-0.23 (0.12)	0.46 (0.16)
Inflation	0.13 (0.10)	0.15 (0.12)	0.06 (0.24)	0.37 (0.30)	0.03 (0.09)	0.21 (0.14)	-0.05 (0.23)	0.43 (0.31)
Fed fund rate	0.06 (0.05)	-0.20 (0.09)	-0.02 (0.10)	-0.33 (0.14)	0.04 (0.05)	-0.05 (0.08)	-0.04 (0.10)	-0.17 (0.13)
M1	0.02 (0.05)	-0.00 (0.10)	-0.94 (0.28)	0.25 (0.37)	0.04 (0.05)	0.01 (0.23)	-0.92 (0.28)	0.28 (0.39)
Rookie	-0.46 (0.20)	-0.18 (0.25)	-0.46 (0.20)	-0.18 (0.25)	0.02 (0.15)	-0.15 (0.24)	0.02 (0.15)	-0.15 (0.24)
Gender (F)	-0.43 (0.35)	-1.14 (0.34)	-0.43 (0.35)	-1.14 (0.34)	0.10 (0.33)	-0.39 (0.40)	0.10 (0.33)	-0.39 (0.40)
Finance Exp	-0.09 (0.34)	0.05 (0.36)	-0.09 (0.34)	0.05 (0.36)	0.50 (0.36)	-0.12 (0.44)	0.50 (0.36)	-0.12 (0.44)
Central Bank Exp	0.17 (0.32)	0.04 (0.36)	0.17 (0.32)	0.04 (0.36)	-0.01 (0.35)	-0.22 (0.44)	-0.01 (0.35)	-0.22 (0.44)
Economics Exp	-0.28 (0.33)	-0.18 (0.34)	-0.28 (0.33)	-0.18 (0.34)	-0.39 (0.41)	0.06 (0.48)	-0.39 (0.41)	0.06 (0.48)
Business Exp	-0.27 (0.38)	0.42 (0.41)	-0.27 (0.38)	0.42 (0.41)	0.21 (0.56)	0.73 (0.65)	0.21 (0.56)	0.73 (0.65)
Gov. Exp	-0.27 (0.41)	0.52 (0.45)	-0.27 (0.41)	0.52 (0.45)	-0.95 (0.50)	0.45 (0.60)	-0.95 (0.50)	0.45 (0.60)
Formal Voter	-	-	-	-	-0.06 (0.14)	0.46 (0.23)	-0.06 (0.14)	0.46 (0.23)
Reg.Unemployment	-	-	-	-	-0.12 (0.10)	-0.20 (0.15)	-0.71 (0.23)	-0.86 (0.33)
Ch: BURNS	0.27 (0.46)	-0.24 (0.35)	-	-	0.27 (0.46)	-0.24 (0.35)	-	-
Ch: MILLER	-0.05 (0.56)	-1.03 (0.63)	-	-	-0.05 (0.56)	-1.03 (0.63)	-	-
Ch: VOLCKER	0.54 (0.39)	0.19 (0.39)	-	-	0.54 (0.39)	0.19 (0.39)	-	-
Ch: GREENSPAN	-0.11 (0.24)	0.81 (0.29)	-0.11 (0.24)	0.81 (0.29)	-0.11 (0.24)	0.81 (0.29)	-0.11 (0.24)	0.81 (0.29)
Constant	-0.26 (0.53)	0.75 (0.63)	-0.82 (0.72)	0.82 (0.78)	-0.26 (0.53)	0.75 (0.63)	-0.82 (0.72)	0.82 (0.78)
Affiliation FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other member chars.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: The table shows median posterior estimates with posterior standard deviations in parentheses.

Table A3: First Stage Coefficient Estimates

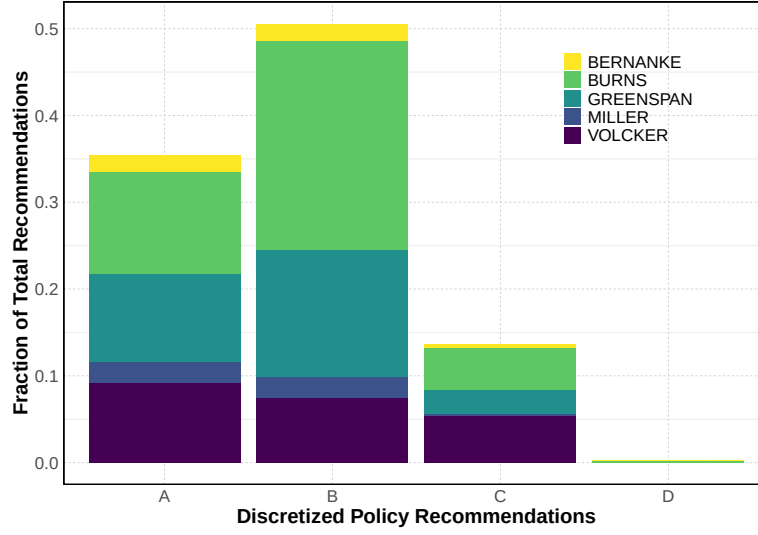


Figure A1: Discrete Policy Preferences Across Policy Alternatives. The Figure shows the fraction of policy recommendations per Chair that are classified as supporting each of the policy alternatives presented in the *Blue Book*.

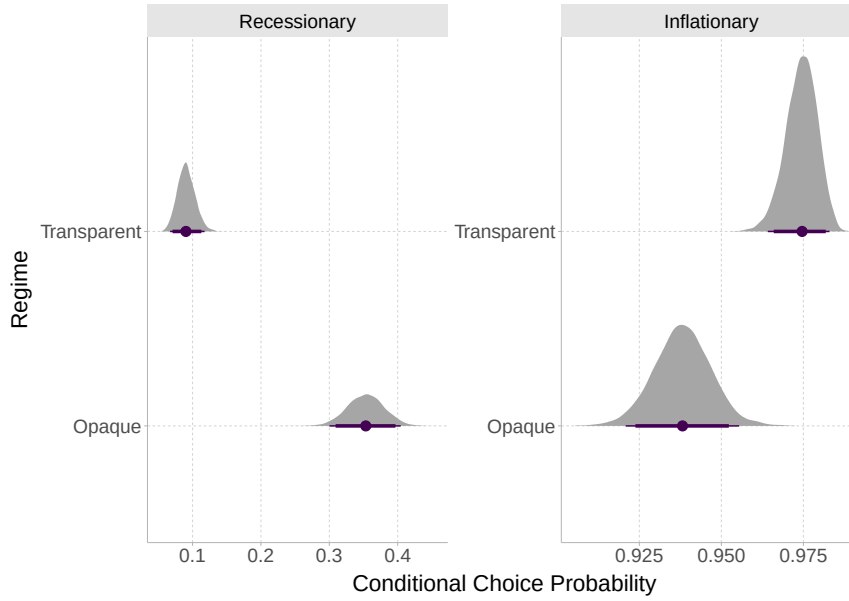


Figure A2: Conditional Choice Probabilities by Regime. Posterior distribution of the estimates for the committee median value of the conditional choice probabilities γ_{i0}^r and γ_{i1}^r in each regime, $r = O, T$. Thin (thick) lines representing the 95% (90%) credible intervals.



Figure A3: Structural Parameters' Estimates. Top panel: change in the estimate of Δ , θ , and π when each covariate changes from its min to its max value in the data. Bottom panel: estimates of the affiliation fixed effect for each parameter. Thick (thin) lines represent 90% (95%) confidence intervals.

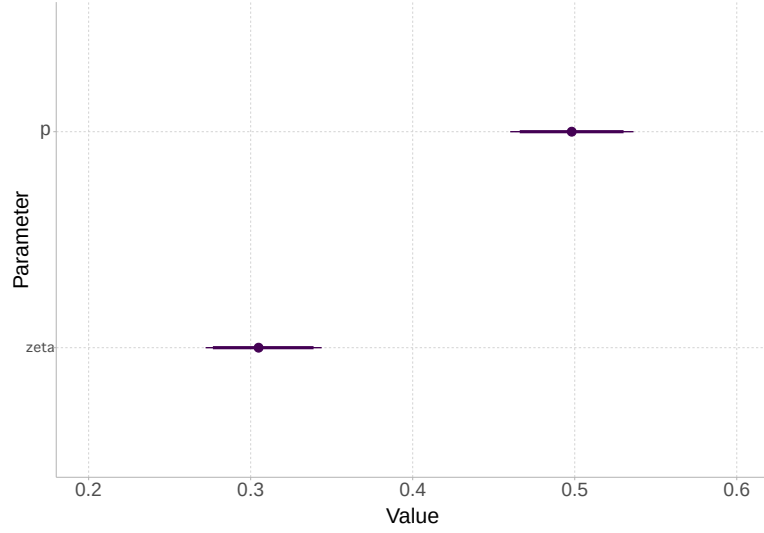


Figure A4: Estimates for the prior probability of an expert type (p), and the variance of the informational content of regional shocks in Principals' beliefs (ζ). Thin (thick) lines denote 90% (95%) confidence intervals.

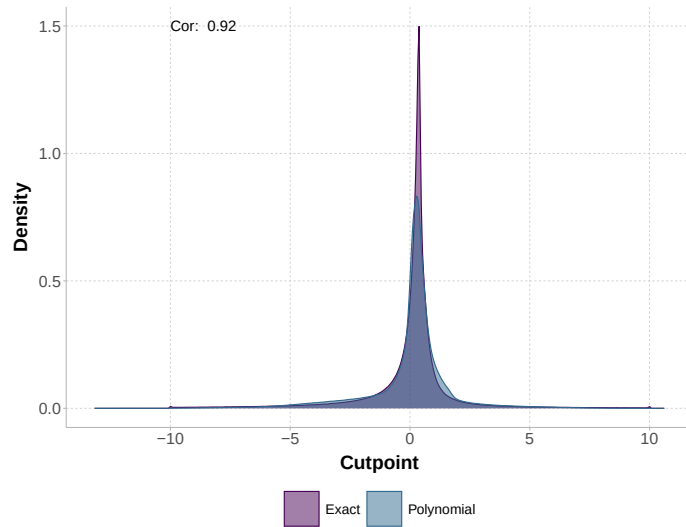


Figure A5: Exact Cutpoints and Polynomial Fit. The plot shows the density of the optimal cutpoints for a discrete grid of structural parameters and the fitted cutpoints from a third-degree polynomial on the vector of parameters.

B Reduced-form Evidence

	Disagreement					
	FFR (Recommendation)		FFR (Direction)		Topic	
	(1)	(2)	(3)	(4)	(5)	(6)
Transparency	-0.096** (0.047)		0.046 (0.037)		-1.156* (0.682)	
$Trans_t \times Pres_i$	0.072** (0.028)	0.059** (0.028)	-0.062** (0.026)	-0.066** (0.028)	0.976*** (0.296)	1.040*** (0.260)
Female	0.047 (0.030)	0.036 (0.025)	-0.017 (0.026)	-0.008 (0.022)	1.218*** (0.322)	1.392*** (0.203)
Finance (Exp.)	-0.121 (0.109)	-0.050 (0.085)	-0.038 (0.082)	-0.032 (0.076)	-2.499*** (0.965)	-1.381** (0.684)
Central Bank (Exp.)	-0.200* (0.113)	-0.133 (0.086)	-0.039 (0.084)	-0.030 (0.074)	-1.383 (0.985)	-0.392 (0.696)
Economics (Exp.)	-0.199* (0.114)	-0.114 (0.087)	-0.021 (0.084)	-0.021 (0.075)	-0.494 (1.185)	0.850 (0.734)
Business (Exp.)	-0.238** (0.116)	-0.162* (0.093)	-0.033 (0.085)	-0.010 (0.081)	0.317 (1.079)	0.882 (0.698)
Government (Exp.)	-0.233** (0.112)	-0.155* (0.094)	-0.094 (0.100)	-0.109 (0.094)	-3.972*** (1.291)	-1.319 (0.842)
Rookie	-0.0003 (0.013)	-0.012 (0.011)	-0.015 (0.013)	-0.017 (0.014)	0.031 (0.239)	0.304** (0.137)
GDP (Forecast)	-0.021*** (0.007)		0.009 (0.008)		0.168 (0.135)	
Inflation (Forecast)	0.037*** (0.011)		0.004 (0.010)		-0.144 (0.152)	
Unemployment (Forecast)	0.028* (0.016)		0.008 (0.015)		-0.424** (0.195)	
Constant	0.145 (0.176)		0.035 (0.120)		11.726*** (1.783)	
Mean (Governors, Opaque)	0.29	0.29	-0.02	-0.02	5.69	5.69
Affiliation FE	Yes	Yes	Yes	Yes	Yes	Yes
Individual Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Economic Characteristics	Yes	No	Yes	No	Yes	No
Time FE	No	Yes	No	Yes	No	Yes
Observations	5,090	5,090	5,090	5,090	3,913	3,913
R ²	0.137	0.026	0.015	0.023	0.163	0.193

Note: *p<0.1; **p<0.05; ***p<0.01
Driscoll-Kraay Standard Errors in Parentheses

Table B1: Disagreement by Transparency and Affiliation (Full Results)

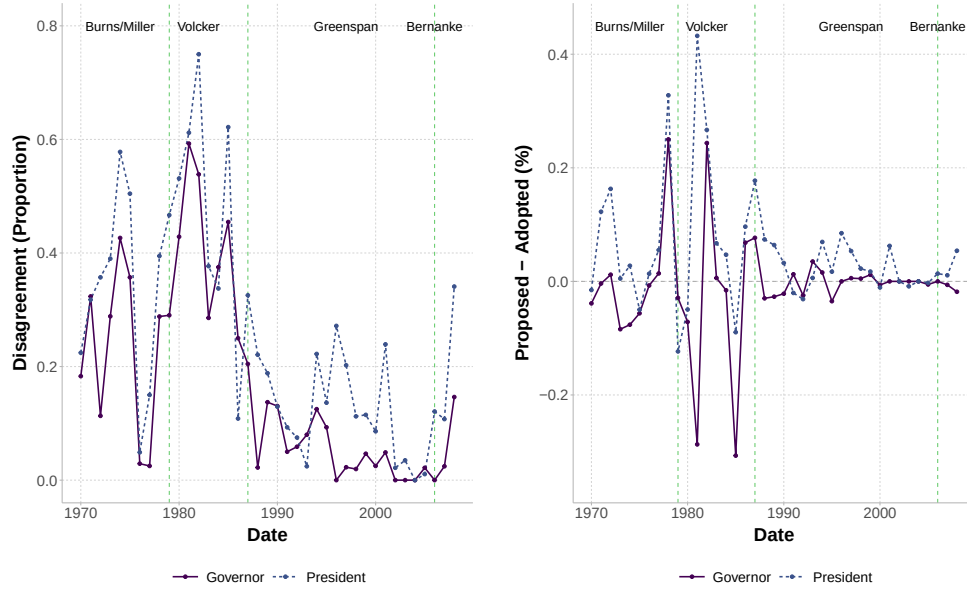


Figure B1: Disagreement in Policy Recommendations. Left Panel: Yearly rate of disagreement (computed as any difference between a member's voiced preferred policy and the adopted FFR of at least 25 bps.) relative to the adopted policy, for Governors and Presidents. Right Panel: Yearly average difference between members' voiced preferred policy and the adopted FFR.

	Disagreement		
	FFR (Rec.)	FFR (Direction)	Topic
	(1)	(2)	(3)
Fed President	0.037*** (0.014)	0.069*** (0.022)	1.496*** (0.225)
Member Characteristics	Yes	Yes	Yes
Time FE	Yes	Yes	Yes
Mean (Governors)	0.21	-0.01	6.2
Observations	5,090	5,090	3,913
R ²	0.013	0.014	0.133

Note: *p<0.1; **p<0.05; ***p<0.01
Driscoll-Kraay Standard Errors in Parentheses

Table B2: Voiced Disagreement (relative to the Chair's directive) for Board Governors and Fed Presidents.

	Disagreement					
	FFR (Recommendation)		FFR (Direction)		Topic	
	(1)	(2)	(3)	(4)	(5)	(6)
Excluding 1993						
$T_t \times Pres_i$	0.074*** (0.028)	0.062** (0.028)	-0.064** (0.026)	-0.068** (0.029)	0.944*** (0.308)	1.069*** (0.264)
Transparency	-0.111** (0.048)		0.045 (0.039)		-0.977 (0.677)	
Mean (Governors, Opaque)	0.29	0.29	-0.02	-0.02	-3.41	-3.41
Observations	4,966	4,966	4,966	4,966	3,772	3,772
R ²	0.138	0.027	0.016	0.024	0.164	0.193
Excluding 1979-1982 (Nonborrowed Reserves Policy)						
$T_t \times Pres_i$	0.079*** (0.030)	0.058** (0.029)	-0.045*** (0.016)	-0.039** (0.015)	0.853** (0.370)	1.001*** (0.279)
Transparency	-0.111** (0.049)		0.026 (0.034)		-1.449 (0.883)	
Mean (Governors, Opaque)	0.25	0.25	-0.01	-0.01	6.17	6.17
Observations	4,639	4,639	4,639	4,639	3,416	3,416
R ²	0.095	0.029	0.040	0.040	0.148	0.242
Affiliation FE	Yes	Yes	Yes	Yes	Yes	Yes
Individual Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Economic Characteristics	Yes	No	Yes	No	Yes	No
Time FE	No	Yes	No	Yes	No	Yes

Note: *p<0.1; **p<0.05; ***p<0.01
Driscoll-Kraay Standard Errors in Parentheses

Table B3: Disagreement by Transparency and Affiliation (Robustness)

	Disagreement			
	Rate (Indicator)		Topic	
	Greenspan (O)	Greenspan (T)	Greenspan (O)	Greenspan (T)
	(1)	(2)	(3)	(4)
$T_t \times Pres_i$	-0.021 (0.043)	0.028 (0.045)	-0.213 (0.298)	-0.600* (0.364)
Individual Characteristics	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Affiliation FE	Yes	Yes	Yes	Yes
Observations	3,169	1,921	1,911	2,002
R ²	0.028	0.088	0.108	0.342

Note: *p<0.1; **p<0.05; ***p<0.01
Driscoll-Kraay Standard Errors in Parentheses

Table B4: Placebo Test with Disagreement.

	Dissent		
	Rate (Indicator)	Rate-Adopted	Topic
	(1)	(2)	(3)
Regional-National Unemp.	−0.005 (0.009)	−0.007 (0.008)	0.030 (0.070)
Transparent × R-N Unemp	−0.047*** (0.018)	−0.042*** (0.012)	−0.595*** (0.128)
Individual Characteristics	Yes	Yes	Yes
Fed President FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes
Observations	2,761	2,761	2,605
R ²	0.039	0.013	0.211

Note: *p<0.1; **p<0.05; ***p<0.01
Driscoll-Kraay Standard Errors in Parentheses

Table B5: Disagreement by Transparency and Regional Economic Conditions

	Disagreement			
	Rate (Binary Policy)		Topic (Econ Section)	
	(1)	(2)	(3)	(4)
Transparency	−0.072** (0.030)		−2.036*** (0.701)	
Trans × Fed President	0.071*** (0.024)	0.068*** (0.024)	1.349*** (0.388)	1.583*** (0.297)
Individual Characteristics	Yes	Yes	Yes	Yes
Economic Characteristics	Yes	No	Yes	No
Affiliation FE	Yes	Yes	Yes	Yes
Time FE	No	Yes	No	Yes
Mean (Governors, Opaque)	0.2	0.2	6.01	6.01
Observations	5,230	5,230	3,812	3,812
R ²	0.073	0.016	0.272	0.275

Note: *p<0.1; **p<0.05; ***p<0.01
Driscoll-Kraay Standard Errors in Parentheses

Table B6: Disagreement by Transparency and Affiliation (Alternative Measures)

C Topic Disagreement

We construct our measure of topic disagreement using all individual statements that FOMC members made during the economics and policy discussion sections across 227 meetings between August 1979 to December 2008, covering the periods of Volcker, Greenspan and Bernanke. For each period, we represent each statement as the count of unique terms from a vocabulary of unigrams and bigrams used across meetings. For vocabulary selection we remove punctuation, apply lowercase to all words, remove stop-words, and reduce words to their common root (stemming). Finally, we remove rare terms defined as those that appear fewer than 10 times across all statements or in less than five statements. For the Volcker period, we examine 2,237 statements and 356,429 unique terms. For the Greenspan period, we consider 5,336 statements and 728,853 unique terms. For the Bernanke period, we analyze 775 statements and 257,832 unique terms.

We settle in a topic model with 60 topics per chairperson period, which allows us to recover the distribution over topics for each member/meeting. We allow the topic prevalence to be a function of whether the statement is made during the economic or the policy discussion of the meeting, as well as of members' affiliation and characteristics (gender, career background, experience). From the 60 topics recovered per chairperson period, some topics are related to monetary policy, whereas others are procedural topics that just pick up conversational terms. We construct our measure of textual disagreement from the subset of topics that are most informative about FOMC members' desired policy. This topic selection is implemented automatically by fitting a LASSO regression of FOMC members' desired FFR on members' topic prevalence across the 60 topics recovered from the topic model.¹ The topics most associated with policy recommendations during the policy discussion are those with nonzero coefficient after regularization. For the Volcker period we obtain 47 policy topics, for the Greenspan period, 50 policy topics, and for Bernanke, we obtain 49 policy topics.

Given the selected policy topics, our measure of disagreement computes the difference between member i 's conditional distribution over topics, $\Pi_{i,t}$ at meeting t and the chair's, $\Pi_{C,t}$. To do so, we compute the Kullback-Leibler divergence:

$$K_{it} = \sum_k \Pi_{i,t} \log \frac{\Pi_{i,t}}{\Pi_{C,t}},$$

which captures how much information is lost when $\Pi_{i,t}$ is used as an approximation of $\Pi_{C,t}$.

¹Results are similar if we instead use our binary policy recommendations.

D Proofs

Lemma D.1. *In the Transparent regime, the Principal's posterior belief that agent i is an expert after observing $(0, v_{-i})$ is*

$$P_i^T(0, v_{-i}) = \left[1 + \frac{1 - p_i}{p_i} \left[\left(\frac{1 - \sigma_i^T(1)}{1 - \tilde{\rho}_i(v_{-i}; \gamma_{-i}^T)} \right) + (\sigma_i^T(1) - \sigma_i^T(0)) \right] \right]^{-1} \quad (\text{D1})$$

and her posterior belief that agent i is an expert after observing $(1, v_{-i})$ is

$$P_i^T(1, v_{-i}) = \left[1 + \frac{1 - p_i}{p_i} \left[\left(\frac{\sigma_i^T(0)}{\tilde{\rho}_i(v_{-i}; \gamma_{-i}^T)} \right) + (\sigma_i^T(1) - \sigma_i^T(0)) \right] \right]^{-1}, \quad (\text{D2})$$

where $\tilde{\rho}_i(v_{-i}; \gamma_{-i}^T) \equiv \Pr(\omega = 1 | v_{-i}, x_i; \gamma_{-i}^T)$ is given by

$$\tilde{\rho}_i(v_{-i}; \gamma_{-i}^T) = \left[1 + \left(\frac{1 - \rho}{\rho} \right) \prod_{j \neq i} \left(\frac{\gamma_{j0}^T}{\gamma_{j1}^T} \right)^{v_j} \left(\frac{1 - \gamma_{j0}^T}{1 - \gamma_{j1}^T} \right)^{1 - v_j} \exp(2\tau^2 x_i) \right]^{-1}. \quad (\text{D3})$$

Lemma D.2. *$E_\omega [\Psi_i^T(\omega; \beta^T) | s_i]$ is weakly decreasing in s_i , and strictly decreasing in s_i if $\gamma_{0,j} \neq \gamma_{1,j}$ for some $j \neq i$.*

Proof of Lemma D.2. 1. We want to show that

$$\sum_{v_{-i}} \sum_{\omega} [P_i^T(0, v_{-i}; \beta_i, \gamma_{-i}^T) - P_i^T(1, v_{-i}; \beta_i, \gamma_{-i}^T)] \Pr(v_{-i} | \omega) \Pr(\omega | s_i),$$

is decreasing in s_i . Given that $\frac{\partial \Pr(\omega=1 | s_i)}{\partial s_i} > 0$, this is equivalent to showing that

$$\sum_{v_{-i}} [P_i^T(0, v_{-i}; \beta_i, \gamma_{-i}^T) - P_i^T(1, v_{-i}; \beta_i, \gamma_{-i}^T)] [\Pr(v_{-i} | \omega = 1) - \Pr(v_{-i} | \omega = 0)] < 0, \quad (\text{D4})$$

or $\Psi_i^r(1; \beta_i^r, \gamma_{-i, \omega}^r) < \Psi_i^r(0; \beta_i^r, \gamma_{-i, \omega}^r)$; i.e., that the expected reputation gain from playing 0 instead of 1 is higher if $\omega = 0$ than if $\omega = 1$. Letting $q_k(v_{-i}) \equiv \Pr(v_{-i} | \omega = k)$ for $k \in \{0, 1\}$ for convenience, (D4) is

$$\sum_{v_{-i}} [P_i^T(0, v_{-i}) - P_i^T(1, v_{-i})] [q_1(v_{-i}) - q_0(v_{-i})] < 0. \quad (\text{D5})$$

2. Define the posterior gap $D(v_{-i}) \equiv P_i^T(0, v_{-i}) - P_i^T(1, v_{-i})$. Let $P(v_{-i}) \equiv \Pr(v_{-i}) =$

$\rho q_1(v_{-i}) + (1 - \rho) q_0(v_{-i})$ denote the unconditional distribution of v_{-i} . By Bayes' rule,

$$\tilde{\rho}(v_{-i}) = \Pr(\omega = 1 \mid v_{-i}) = \frac{\rho q_1(v_{-i})}{P(v_{-i})}$$

$$\implies P(v_{-i})(\tilde{\rho}(v_{-i}) - \rho) = \rho(1 - \rho)(q_1(v_{-i}) - q_0(v_{-i})).$$

Hence the left-hand side of (D5) is

$$S \equiv \sum_{v_{-i}} D(v_{-i}) [q_1(v_{-i}) - q_0(v_{-i})] = \frac{1}{\rho(1 - \rho)} \sum_{v_{-i}} P(v_{-i}) D(v_{-i}) (\tilde{\rho}(v_{-i}) - \rho).$$

By the law of iterated expectations, $\mathbb{E}_P[\tilde{\rho}] = \rho$. Then

$$S = \frac{1}{\rho(1 - \rho)} \text{Cov}_P(D(v_{-i}), \tilde{\rho}(v_{-i})), \quad (\text{D6})$$

and in order to prove (D4), it suffices to show $\text{Cov}_P(D, \tilde{\rho}) < 0$.²

3. From direct examination of (D7)–(D8) it follows that D is strictly decreasing in $\tilde{\rho}$. We prove this formally here for completeness, the reader can skip to point 4 if satisfied. Let $s_0 \equiv \sigma_i^T(0) \in [0, 1]$, $s_1 \equiv \sigma_i^T(1) \in [0, 1]$, $\Delta\sigma \equiv s_1 - s_0$, and $A \equiv (1 - p_i)/p_i > 0$. By Lemma D.1, for every v_{-i} :

$$P_i^T(0, v_{-i}) = \left[1 + A_i \left(\frac{1 - s_1}{1 - \tilde{\rho}(v_{-i})} + \Delta\sigma \right) \right]^{-1}, \quad (\text{D7})$$

$$P_i^T(1, v_{-i}) = \left[1 + A_i \left(\frac{s_0}{\tilde{\rho}(v_{-i})} + \Delta\sigma \right) \right]^{-1}. \quad (\text{D8})$$

Fix v_{-i} and abbreviate $\tilde{\rho} \equiv \tilde{\rho}(v_{-i})$. From (D7)–(D8), set

$$g_0(\tilde{\rho}) \equiv 1 + A_i \left(\frac{1 - s_1}{1 - \tilde{\rho}} + \Delta\sigma \right), \quad g_1(\tilde{\rho}) \equiv 1 + A_i \left(\frac{s_0}{\tilde{\rho}} + \Delta\sigma \right),$$

²For further clarification, let $X \equiv P_i^T(0, v_{-i}) - P_i^T(1, v_{-i})$ and $Y \equiv \tilde{\rho}(v_{-i})$, where $\mathbb{E}[Y] = \rho$. Then

$$\mathbb{E}[X(Y - \rho)] = \mathbb{E}[XY] - \rho \mathbb{E}[X] = \underbrace{(\mathbb{E}[XY] - \mathbb{E}[X]\mathbb{E}[Y])}_{\text{Cov}(X, Y)} + \underbrace{\mathbb{E}[X](\mathbb{E}[Y] - \rho)}_0 = \text{Cov}(X, Y).$$

so that $P_i^T(0, v_{-i}) = g_0(\tilde{\rho})^{-1}$ and $P_i^T(1, v_{-i}) = g_1(\tilde{\rho})^{-1}$, with $g_0(\tilde{\rho}), g_1(\tilde{\rho}) > 1$. Differentiating,

$$g'_0(\tilde{\rho}) = A_i \frac{1 - s_1}{(1 - \tilde{\rho})^2}, \quad g'_1(\tilde{\rho}) = -A_i \frac{s_0}{\tilde{\rho}^2}.$$

By the chain rule,

$$\begin{aligned} \frac{d}{d\tilde{\rho}} P_i^T(0, v_{-i}) &= -\frac{g'_0(\tilde{\rho})}{g_0(\tilde{\rho})^2} = -A_i \frac{1 - s_1}{(1 - \tilde{\rho})^2} \frac{1}{g_0(\tilde{\rho})^2} \leq 0, \\ \frac{d}{d\tilde{\rho}} P_i^T(1, v_{-i}) &= -\frac{g'_1(\tilde{\rho})}{g_1(\tilde{\rho})^2} = A_i \frac{s_0}{\tilde{\rho}^2} \frac{1}{g_1(\tilde{\rho})^2} \geq 0. \end{aligned}$$

where the first inequality is strict if $s_1 < 1$ and the second inequality is strict if $s_0 > 0$. Therefore

$$\frac{d}{d\tilde{\rho}} D(v_{-i}) = \frac{d}{d\tilde{\rho}} P_i^T(0, v_{-i}) - \frac{d}{d\tilde{\rho}} P_i^T(1, v_{-i}) = -A_i \left[\frac{1 - s_1}{(1 - \tilde{\rho})^2} \frac{1}{g_0(\tilde{\rho})^2} + \frac{s_0}{\tilde{\rho}^2} \frac{1}{g_1(\tilde{\rho})^2} \right] \leq 0, \quad (\text{D9})$$

with strict inequality for all $\tilde{\rho} \in (0, 1)$, since $(1 - s_1) + s_0 = 1 - \sigma_i^T(1) + \sigma_i^T(0) > 0$. It follows that D is strictly decreasing in $\tilde{\rho}$.

4. Under the unconditional distribution P , the random variable $\tilde{\rho}(v_{-i}) = \Pr(\omega = 1 \mid v_{-i})$ is non-degenerate whenever $q_1 \neq q_0$, which is satisfied, since we assumed $\gamma_{0,j} \neq \gamma_{1,j}$ for some $j \neq i$. Since D is (strictly) decreasing in $\tilde{\rho}$ by (D9), $\text{Cov}_P(D(v_{-i}), \tilde{\rho}(v_{-i})) < 0$, wrapping up the proof.³ $\square$

Proof of Proposition 4.2 . In lemma D.2 we show that for any given β_i^T and β_{-i}^T , $e(s_i) \equiv E_\omega [\Psi_i^T(\omega; \beta^T) | s_i]$ is decreasing in s_i . Given $\Delta_i > 0$, the RHS of 4.4, $RHS(s_i) \equiv \pi_i + \Delta_i e(s_i)$, is decreasing in s_i . On the other hand, the LHS of 4.4, $LHS(s_i) \equiv \Pr(\omega = 1 | s_i)$ is increasing in s_i . Since voting in favor of a hawkish monetary policy is a best response for i given signal s_i iff $LHS(s_i) \geq RHS(s_i)$, this means that i 's BR is either an increasing cutoff strategy (if $LHS(s_i) = RHS(s_i)$ for some s_i) or an unresponsive strategy (a mixed strategy cannot be a best response).

Suppose i plays a hawkish (unresponsive) strategy. $e(s_i)$ is a decreasing function that is bounded between $1 - p_i$ and 1 for all s_i . Moreover, for any given $\pi_i \in (0, 1)$ and $\Delta_i > 0$, there exists $h > 0$ such that the RHS is $\pi_i + \Delta_i e(s_i) > h$ for all s_i . On the other hand, the LHS, $\lim_{s_i \rightarrow -\infty} \Pr(\omega = 1 | s_i) = 0$ and $\lim_{s_i \rightarrow \infty} \Pr(\omega = 1 | s_i) = 1$. Thus, there exists an $\underline{s}$ such that for $s_i < \underline{s}$, the LHS is smaller than the RHS. This in turn implies that the LHS either cuts the RHS from below or is always below the RHS. If it cuts from below, we have

³If $q_1 = q_0$, the left-hand side of (D4) vanishes, implying the weak monotonicity.

a contradiction, since i would deviate for s_i sufficiently low. If instead the LHS is always below the RHS, we have a contradiction, since i would want to deviate to playing $v_i = 0$ for all s_i .

Next, suppose i plays a dovish (unresponsive) strategy. In this case, $e(s_i)$ is a decreasing function that is bounded between $-(1 - p_i)$ and -1 . If $\lim_{s_i \rightarrow -\infty} [\pi_i + \Delta_i e(s_i)] = \pi_i + \Delta_i \Psi_i^T(0; \underline{\beta}, \gamma_{-i}^T) \leq 0$, we have a contradiction, since i would want to deviate to $v_i = 1$ for all s_i . If $\pi_i + \Delta_i \Psi_i^T(0; \underline{\beta}, \gamma_{-i}^T) > 0$, we have two possibilities. The first is that $\pi_i + \Delta_i e(s_i) < 1$ for some s_i . In this case, we would have a contradiction, since i would want to play $v_i = 1$ for large s_i . The second possibility is that $\pi_i + \Delta_i e(s_i) > 1$ for all s_i , or $\pi_i + \Delta_i \Psi_i^T(1; \underline{\beta}, \gamma_{-i}^T) > 1$. But note that since $\Psi_i^T(1; \underline{\beta}, \gamma_{-i}^T) < 0$, then $\pi_i + \Delta_i \Psi_i^T(1; \underline{\beta}, \gamma_{-i}^T) < 1$ for all $\pi_i < 1$ and $\Delta_i > 0$.

Since we know an equilibrium exists, and the BR must be in pure strategies, i 's best response must therefore be an increasing cutoff strategy. Note that an equilibrium cutpoint x_i must satisfy

$$f_i^T(x_i) \equiv \Pr(\omega = 1|x_i) [1 - \Delta_i(\Psi_i^T(1; x_i, \gamma_{-i}^T) - \Psi_i^T(0; x_i, \gamma_{-i}^T))] - \pi_i - \Delta_i \Psi_i^T(0; x_i) = 0 \quad (\text{D10})$$

Note that if β_i^T is an increasing cutoff strategy with cutoff x_i ,

$$\lim_{x_i \rightarrow -\infty} f_i^T(x_i) = -\pi_i - \Delta_i \lim_{x_i \rightarrow -\infty} \Psi_i^T(0; x_i, \gamma_{-i}^T) = -\pi_i - \Delta_i \underbrace{\Psi_i^T(0; \bar{\beta}, \gamma_{-i}^T)}_{> 0} < 0.$$

$$\lim_{x_i \rightarrow \infty} f_i^T(x_i) = -\pi_i - \Delta_i \lim_{x_i \rightarrow \infty} \Psi_i^T(1; x_i, \gamma_{-i}^T) = 1 - \pi_i - \Delta_i \underbrace{\Psi_i^T(1; \underline{\beta}, \gamma_{-i}^T)}_{< 0} > 0.$$

Since $f_i^T(\cdot)$ is continuous, there exists an x_i that solves (D10), call it ξ_i^T . Since i is best responding with this strategy, we must have that $\beta(s_i) = 1$ iff

$$\Pr(\omega = 1|s_i) \geq \pi_i + \Delta_i \sum_{\omega} \Psi_i^T(\omega; \xi_i^T, \gamma_{-i}^T) \Pr(\omega|s_i)$$

or equivalently, $\beta(s_i) = 1$ iff

$$\Pr(\omega = 1|s_i) [1 - \Delta_i(\Psi_i^T(1; \xi_i^T, \gamma_{-i}^T) - \Psi_i^T(0; \xi_i^T, \gamma_{-i}^T))] \geq \pi_i + \Delta_i \Psi_i^T(0; \xi_i^T, \gamma_{-i}^T)$$

But then we must have that in equilibrium, $1 - \Delta_i(\Psi_i^T(1; \xi_i^T, \gamma_{-i}^T) - \Psi_i^T(0; \xi_i^T, \gamma_{-i}^T)) > 0$, and then

$$\beta_i^T(s_i) = 1 \Leftrightarrow \Pr(\omega = 1|s_i) \geq \frac{\pi_i + \Delta_i \Psi_i^T(0; \xi_i^T, \gamma_{-i}^T)}{1 - \Delta_i[\Psi_i^T(1; \xi_i^T, \gamma_{-i}^T) - \Psi_i^T(0; \xi_i^T, \gamma_{-i}^T)]} \quad (\text{D11})$$

For uniqueness, note that we can write $f_i^T(x_i)$ as

$$f_i^T(x_i) \equiv \Pr(\omega = 1|x_i) [1 - \Delta_i(\Psi_i(1; x_i, \gamma_{-i}^T) - \Psi_i(0; x_i, \gamma_{-i}^T))] - \pi_i - \Delta_i \Psi_i(0; x_i, \gamma_{-i}^T)$$

Taking derivatives,

$$\begin{aligned} \frac{\partial}{\partial x_i} f_i^T(x_i) &= \frac{\partial}{\partial x_i} \Pr(\omega = 1|x_i) [1 - \Delta_i(\Psi_i(1; x_i, \gamma_{-i}^T) - \Psi_i(0; x_i, \gamma_{-i}^T))] \\ &\quad - \Delta_i \left[\Pr(\omega = 1|x_i) \frac{\partial}{\partial x_i} \Psi_i(1; x_i) + \Pr(\omega = 0|x_i) \frac{\partial}{\partial x_i} \Psi_i(0; x_i, \gamma_{-i}^T) \right] \end{aligned}$$

The first line is positive iff $\Delta_i[\Psi_i(1|x_i, \gamma_{-i}^T) - \Psi_i(0|x_i, \gamma_{-i}^T)] < 1$, which we showed must hold at the solution. Now consider the second line. If β_i^T is an increasing cutoff strategy, $\Psi_i(\omega; x_i, \gamma_{-i}^T)$ is decreasing in x_i . Thus, the bracket is negative. It follows that the second line is positive given $\Delta_i > 0$. Thus $f_i^T(\cdot)$ is strictly increasing, and there is a unique increasing cutoff strategy BR. $\square$

Lemma D.3. *In the Opaque regime, the Principal's posterior beliefs that agent i is an expert conditional on the committee outcome being $y = 0, 1$ are given by*

$$P_i^O(1; \sigma_i^O, \gamma_{-i}^O) = \left[1 + \frac{1 - p_i}{p_i} \left(\frac{\bar{w}_i(\gamma_{-i}^O) + \sum_{\omega} \rho_i(\omega) t_i(\omega; \gamma_{-i}^O) \sigma_i^O(\omega)}{\bar{w}_i(\gamma_{-i}^O) + t_i(1; \gamma_{-i}^O)} \right) \right]^{-1} \quad (\text{D12})$$

and

$$P_i^O(0; \sigma_i^O, \gamma_{-i}^O) = \left[1 + \frac{1 - p_i}{p_i} \left(\frac{1 - \bar{w}_i(\gamma_{-i}^O) - \sum_{\omega} \rho_i(\omega) t_i(\omega; \gamma_{-i}^O) \sigma_i^O(\omega)}{1 - \bar{w}_i(\gamma_{-i}^O) - t_i(1; \gamma_{-i}^O)} \right) \right]^{-1}, \quad (\text{D13})$$

where the probability that i is pivotal for the committee's decision in state ω , $t_i(\omega; \gamma_{-i}^O)$, is given by

$$t_i(\omega; \gamma_{-i}^O) \equiv \sum_{C \in \mathcal{C}_{-i}: |C| = \frac{n-1}{2}} \left[\prod_{j \in C} \gamma_{j\omega}^O \prod_{j \notin C} (1 - \gamma_{j\omega}^O) \right], \quad (\text{D14})$$

and the probability that the committee chooses $y = 1$ in state ω independently of i 's behavior, $w_i(\omega | \gamma_{-i}^O)$ is given by

$$w_i(\omega; \gamma_{-i}^O) \equiv \sum_{C \in \mathcal{C}_{-i}: |C| \geq q} \prod_{j \in C} \gamma_{j\omega}^O \prod_{j \notin C} (1 - \gamma_{j\omega}^O) \quad \text{and} \quad \bar{w}_i(\gamma_{-i}^O) \equiv \sum_{\omega} \rho(\omega) w_i(\omega; \gamma_{-i}^O), \quad (\text{D15})$$

Proof of Proposition 4.3. In the text we showed that any best response β_i^O must either be a cutoff strategy or an unconditional strategy. From (4.3c), we have that for any $s_i \in \mathbb{R}$,

$\beta_i^O(s_i) = 1$ if and only if

$$\Pr(\omega = 1|s_i)a(\sigma_i^O, \gamma_{-i}^O) \geq b(\sigma_i^O, \gamma_{-i}^O),$$

where $a \equiv 1 - \Delta_i [P_i^O(0) - P_i^O(1)] (t_i(1) - t_i(0))$ and $b \equiv \pi_i + \Delta_i [P_i^O(0) - P_i^O(1)] t_i(0)$. For a hawkish strategy to be a best response, we need that (4.3c) holds for all $s_i \in \mathbb{R}$. Since we are assuming $a > 0$, a necessary and sufficient condition for no profitable deviations for any s_i that this condition holds as $s_i \rightarrow -\infty$, which implies $\Pr(\omega = 1|s_i) \rightarrow 0$. This is $b \leq 0$, or

$$\pi_i \leq h_i^O \equiv -\Delta_i [P_i^O(0; \bar{\beta}_i^O, \gamma_{-i}^O) - P_i^O(1; \bar{\beta}_i^O, \gamma_{-i}^O)] t_i(0|\gamma_{-i}^O) < 0$$

For a dovish strategy to be a best response, we need that (4.3c) does not hold for all $s_i \in \mathbb{R}$. Since we are assuming $a > 0$, a necessary and sufficient condition for no profitable deviations for any s_i is that this condition is contradicted as $s_i \rightarrow +\infty$, which implies $\Pr(\omega = 1|s_i) \rightarrow 1$. This is $a \leq b$, or

$$\pi_i \geq H_i^O \equiv 1 - \Delta_i (P_i^O(0; \underline{\beta}_i^O, \gamma_{-i}^O) - P_i^O(1; \underline{\beta}_i^O, \gamma_{-i}^O)) t_i(1; \gamma_{-i}^O) > 1$$

Finally, consider an increasing cutoff strategy, with cutoff ξ_i^O . Since $a > 0$, the LHS of (4.3c) is increasing in s_i , and the RHS is constant. Thus, we only need to show that there exists a crossing. This happens iff

$$\lim_{s_i \rightarrow -\infty} \{\Pr(\omega = 1|s_i)a - b\} < 0 \Leftrightarrow b > 0$$

and

$$\lim_{s_i \rightarrow +\infty} \{\Pr(\omega = 1|s_i)a - b\} > 0 \Leftrightarrow a > b$$

or

$$h_i^O < \pi_i < H_i^O,$$

which always holds since $\pi_i \in (0, 1)$ for all i , $h_i^O < 0$, and $H_i^O > 1$. □

E Model Fit

In-sample fit. The left panel of Figure E1 shows that our model incorporating reputational concerns correctly predicts 69% of the observed binary policy recommendations in the data, with a 95% confidence interval between 66% and 70%.⁴ To contextualize this performance, we compare it to the fit of an expressive model, which is nested within the reputational model and corresponds to the special case where reputational incentives are absent (i.e., $\Delta_i = 0$). A likelihood ratio test strongly favors the reputational model over the expressive alternative ($LR = 103.69$, $p - value < 0.0001$), indicating that the inclusion of reputational concerns significantly improves the model’s fit to the data.

The right panel of Figure E1 compares the choice probabilities implied by each model to the reduced-form ones recovered in the first stage estimation that flexibly relates choices to meeting- and member-level covariates. The reputational model more closely captures the distribution of the reduced-form probabilities than the expressive model. Although both models tend to under-predict choice probabilities relative to the data, the reputational model does so to a lesser extent.

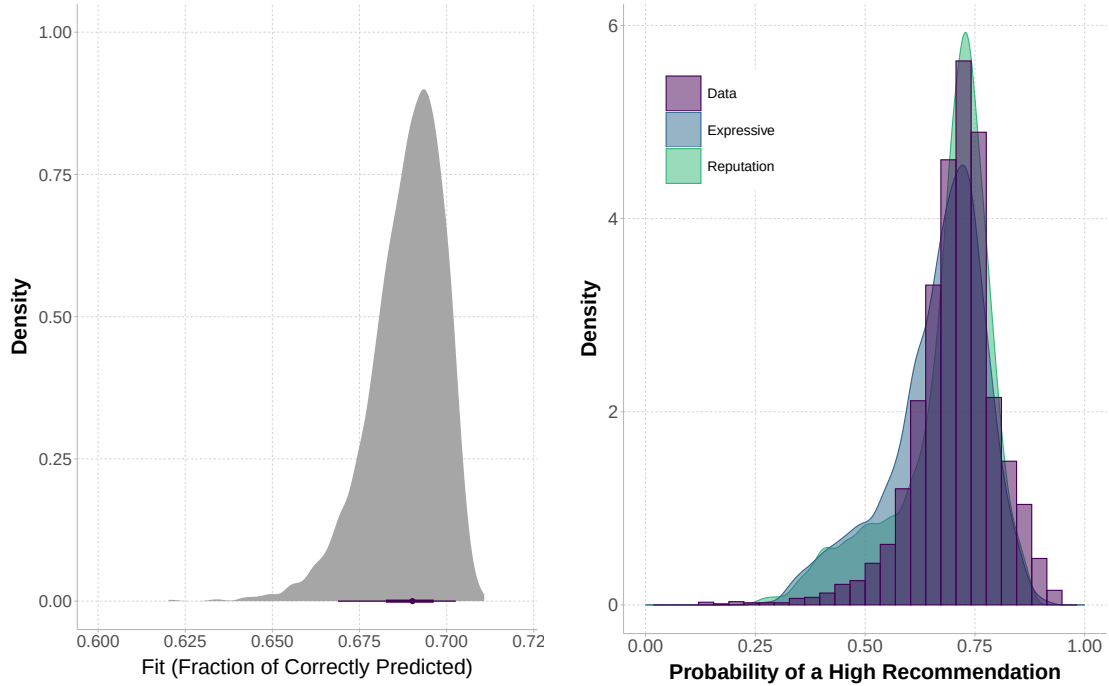


Figure E1: Model Fit. Left panel: In-sample fit measured by the fraction of correctly predicted voiced recommendations, where the model prediction is given by $\hat{v}_{it} = \mathbb{1}\{\hat{\gamma}_{it} \geq \frac{1}{2}\}$. Right panel: Kernel densities of median ex-ante choice probabilities γ_{it} implied by the reputational and sincere models, compared to the reduced-form ex-ante choice probabilities.

⁴To recover the model’s binary policy recommendation, $\hat{r}_{it}$, we define $\hat{r}_{it} = \mathbb{1}_{\hat{\gamma}_{it} \geq 0.5}$

Out-of-Sample Fit. Beyond the in-sample fit of policy recommendations, we also assess the performance of the reputational model on quantities of interest not directly targeted in the estimation. In particular, we examine the model’s ability to capture patterns of disagreement among committee members. To do so, we compare the level of disagreement generated by the model to empirical disagreement measures documented in the reduced-form analysis of Section 3. In the model, disagreement is defined as the complement of the conformity measure introduced in equation (6.3). Specifically, it captures the probability that member i and the chairperson issue different policy recommendations, such that $D_i \equiv 1 - C_i$.

	Disagreement					
	Rate (Indicator)				Topic	
	(1)	(2)	(3)	(4)	(5)	(6)
Disagreement (Model)		1.066** (0.527)			10.780*** (3.838)	
Strategic Disagreement			1.442*** (0.544)			3.156 (3.548)
Female	0.044* (0.026)	0.023 (0.023)	0.027 (0.023)	1.423*** (0.219)	1.230*** (0.253)	1.393*** (0.234)
Finance (Experience)	0.029 (0.099)	0.058 (0.094)	−0.055 (0.108)	−1.516** (0.681)	−1.373* (0.803)	−1.697** (0.746)
Central Bank (Experience)	−0.061 (0.101)	−0.011 (0.096)	−0.138 (0.109)	−0.245 (0.706)	0.108 (0.811)	−0.409 (0.768)
Economics (Experience)	−0.049 (0.103)	0.006 (0.100)	−0.160 (0.119)	0.983 (0.747)	1.365* (0.826)	0.746 (0.855)
Business (Experience)	−0.092 (0.104)	−0.017 (0.102)	−0.239* (0.127)	0.929 (0.710)	1.544** (0.777)	0.619 (0.856)
Government (Experience)	−0.086 (0.110)	−0.026 (0.106)	−0.214* (0.129)	−1.468* (0.831)	−1.084 (0.920)	−1.756* (0.901)
Rookie	−0.007 (0.012)	−0.020 (0.014)	0.0002 (0.012)	0.264** (0.126)	0.126 (0.125)	0.276** (0.131)
President × Trans	0.052* (0.028)	0.047* (0.028)	0.032 (0.030)	1.096*** (0.256)	0.992*** (0.257)	1.035*** (0.272)
Mean D.V.	0.225	0.225	0.225	7.027	7.027	7.027
Affiliation FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,714	4,714	4,714	3,542	3,542	3,542
R ²	0.029	0.031	0.031	0.222	0.226	0.223

Note: *p<0.1; **p<0.05; ***p<0.01
Driscoll-Kraay Standard Errors in Parentheses

Table E1: Model and Observed Disagreement

Table E1 presents the results of augmenting the reduced-form regressions from Section 3 with the disagreement measure implied by our reputational model as an additional explanatory variable. All specifications include member-level covariates, as well as affiliation and time fixed effects. For the binary disagreement outcome, the comparison between columns

(1) and (2) shows that the model-implied disagreement is a significant predictor of observed disagreement in the data, even after accounting for covariates and fixed effects. Specifically, a one-percentage-point increase in model-implied disagreement is associated with a one-percentage-point increase in observed disagreement in the data. In column (3), we also find a significant effect when including our measure of disagreement that isolates strategic behavior from interdependent values (defined as $\bar{D}_i \equiv D_i - D_i^{noCC}$, where D_i^{noCC} denotes the level of disagreement implied by the expressive model, absent career concerns). The comparison between columns (4) and (5) shows that the disagreement implied by the reputational model significantly predicts topic-level disagreement between a member and the chairperson, as measured from the FOMC policy deliberation transcripts. While column (6) also suggests a positive relationship between strategic disagreement and textual dissent, this association is not statistically significant.

F Dissent in Formal Votes

The empirical model in the main text assumes that, under the *Opaque* regime – where individual policy recommendations are kept secret – only the final policy decision, y , is observed by the public. In practice, however, the twelve designated FOMC voting members still casted a formal vote on the Chair’s policy directive, *after* observing members’ recommendations during the discussion stage. While transcripts were not publicly available, formal votes were in fact observable by the public. Formal votes, however, are thought to carry less informational content than the original policy recommendations (Meade (2005), Swank, Visser, and Swank (2008)), as members have a concern – separate from their individual reputation – to protect the reputation of the institution (Sibert (2003), Visser and Swank (2007)). This separate voting motive is sufficiently strong that formal votes in the FOMC are largely consensus-driven, with rare instances of dissent. In fact, as we discussed in the paper, *every* adopted policy aligns with the Chair’s directive, which in turn generally reflects the majority view expressed during the policy discussion (see Table A). In this Section, we show that if we include a cost of dissenting in formal votes, our model – evaluated at our main structural parameter estimates – explains variation in formal votes well. We conclude that our simplified representation of the Opaque regime does not introduce a significant bias in our estimates.

Throughout this exercise, we assume that individual formal votes are observed by the public in the Opaque regime, while individual recommendations are observed in the Transparent regime, as before. To model formal voting choices, we introduce a disagreement cost parameter κ_i , which captures members’ potential incentives to present a united front by supporting the policy directive proposed by the Chair at the voting stage. Thus, agent i ’s expected utility of voting $v_i \in \{0, 1\}$ in regime O when observing signal s_i given strategy profile β is

$$U_i^O(v_i|s_i) = E[u_i(v_i, \omega)|s_i] + \Delta_i \sum_{\omega} E_{v_{-i}}[P_i^O(\mathcal{Y}^O(v_i, v_{-i}); \gamma_{-i, \omega}^O)|\omega] \Pr(\omega|s_i) - c_i(v_i, d), \quad (\text{F1})$$

where $c_i(v_i, d)$ denotes i ’s cost from voting $v_i \in \{0, 1\}$ when the Chair’s policy directive is $d \in \{0, 1\}$. Agent i pays a cost $c_i(0, 0) = c_i(1, 1) = 0$ when their votes match the policy directive and a cost of $c_i(v_i, 1 - v_i) = \kappa_i$ when they dissent. As in the Transparent regime in the baseline model, in the revised Opaque regime there exists a unique best response in cutoff strategies with cutoff $\xi_i^{O'}$, given as the solution to

$$\Pr(\omega = 1; \xi_i^T) \equiv \pi_i + \Delta_i \sum_{\omega} \Psi_i^T(\omega; \xi_i^T, \gamma_{-i}^T) \Pr(\omega; \xi_i^T) - \kappa_i(\mathbb{1}\{d = 1\} - \mathbb{1}\{d = 0\}). \quad (\text{F2})$$

We fix the individual structural parameters recovered from the baseline model, and estimate κ_i with individual votes in the Opaque regime. Conditional on the other structural parameters, the individual disagreement cost κ_i is identified from i 's frequency of dissenting votes during the Opaque regime. For estimation, we allow κ_i to be a function of member-specific covariates Z_i :

$$\kappa_i = \exp(Z_i' \lambda_\kappa); \quad (\text{F3})$$

As in the main text, we estimate the model in two steps. First, we obtain estimates for members' prior beliefs ρ and their conditional choice probabilities during the Opaque ($\gamma_{i\omega O'}$) and Transparent ($\gamma_{i\omega O''}$) regimes. For the Opaque regime, we re-estimate the first stage parameters using the variation in formal votes as a function of macroeconomic fundamentals and member-specific covariates. In the second step, we recover $\{\kappa_i\}_{i=1}^N$ as a function of covariates, conditional on $\{\pi_i, \theta_i, \Delta_i\}_{i=1}^N$ from the baseline estimation.

The left panel of Figure F2 reports median estimates of dissent costs by affiliation. Frequent dissenters, such as the Cleveland Fed and Republican Governors, exhibit relatively lower dissent costs, whereas Democratic-appointed Governors and district banks such as New York and Dallas face substantially higher costs of dissent. In terms of voter characteristics, the right panel of Figure F2 shows that rookie voters as well as those with prior experience as central bankers or in government, incur significantly higher dissent costs than female voters and those with prior experience as economic analysts.

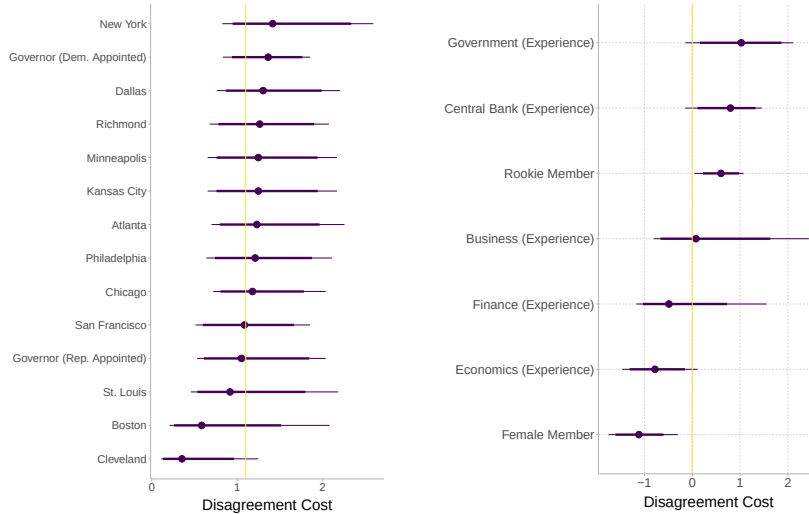


Figure F2: Cost of Disagreement (κ) covariates. Right panel: Median estimates of κ by affiliation. Left panel: Estimates of the coefficients for the marginal effect of the individual-level covariates Z in the $\kappa(Z_i, \hat{\kappa})$ function. Thick (thin) lines represent 90%(95%) confidence intervals.

Figure F3 plots the median dissent cost over time for Fed Presidents and Board Governors, together with the yearly number of dissents by affiliation. The figure reports the dissent cost

estimates for the Opaque regime used in the estimation, as well as the extrapolated values for the Transparent regime obtained from the covariate function in equation (F3). During the early Burns period, Governors exhibited relatively higher dissent costs, with Presidents dissenting almost twice as often. For the remainder of the Opaque regime, Governors' dissent costs declined substantially relative to those of Presidents, coinciding with an increase in Governors' voting dissents, which made up the majority of dissents during this period. In the Transparent regime, the model predicts a sustained increase in dissent costs for Governors relative to Presidents, consistent with the near absence of Governor dissents.

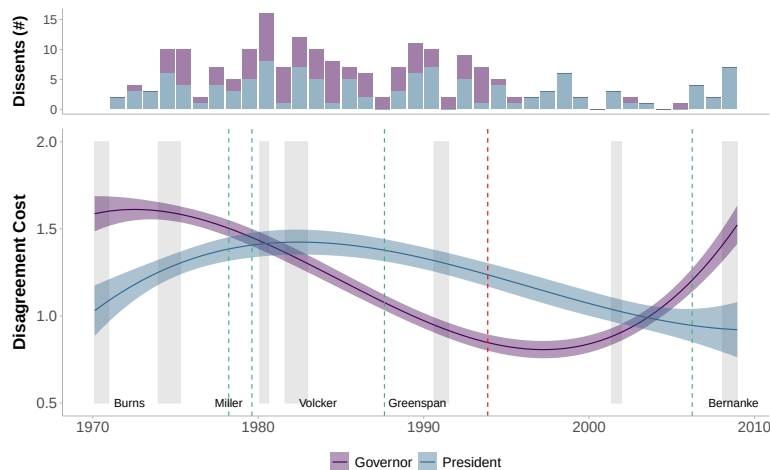


Figure F3: Dynamics of the Disagreement Cost and Voting Dissents. Top panel: Counts of yearly voting dissents by Board Governors and Fed Presidents. Bottom Panel: Cubic polynomial fit of the median cost of disagreement (κ) per meeting with corresponding 95% confidence intervals.

Figure F4 shows the effectiveness of the FOMC under the observability of dissenting votes in the Opaque regime. The left panel plots the ex ante probability of a correct recommendation, $\bar{\gamma}$, for the median President and median Governor in each meeting. Consistent with the baseline results in Figure 6, Governors exhibit a higher probability of making correct recommendations than Presidents across both regimes, with the difference especially pronounced during the Volcker and Greenspan periods. The right panel of Figure F4 compares the outcomes with and without career concerns. As in the baseline results, career concerns generally have a small impact on the probability of a correct recommendation in the revised Opaque regime, with the exception of generating higher losses in specific periods (in particular during the Volcker chairmanship).

Data Fit In terms of data fit, Figure F5 shows that the reputational model with dissent costs fit the pattern of formal votes in the Opaque regime remarkably well, correctly pre-

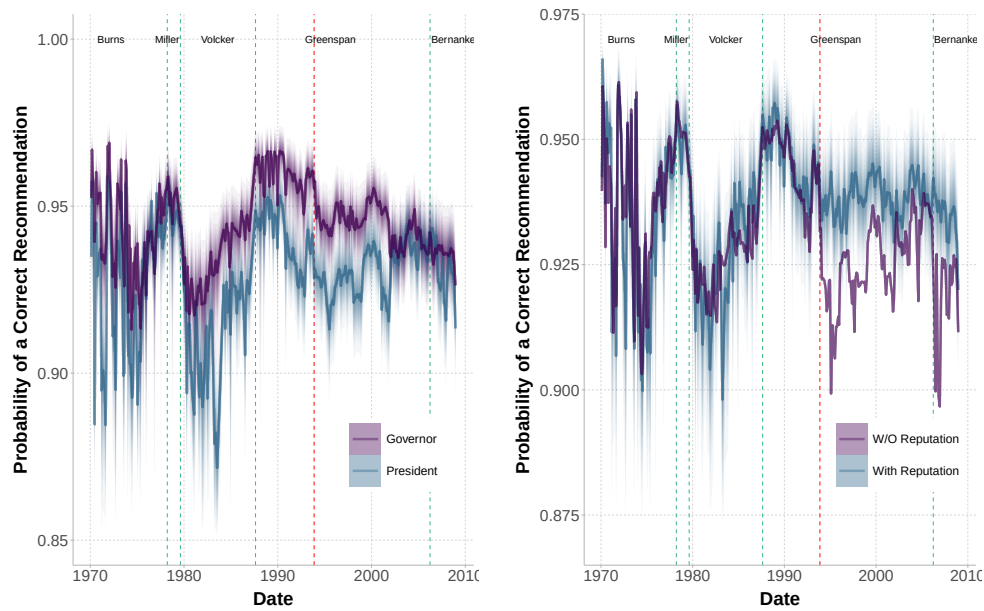


Figure F4: Conditional Choice Probabilities for Presidents and Governors under an Opaque Regime with Individual Votes. Probability of a Correct Recommendation in booms (γ_1), recessions ($1 - \gamma_0$) and ex ante ($\bar{\gamma}$) for the median President and Governor in each meeting. Solid lines represent the median estimate, shaded region represents the 95% confidence interval.

dicting 76% of observed votes in the sample. Moreover, the reputational model with dissent costs continues to provide a superior fit than an expressive model ($\Delta = 0, \kappa = 0$) estimated on the same data.

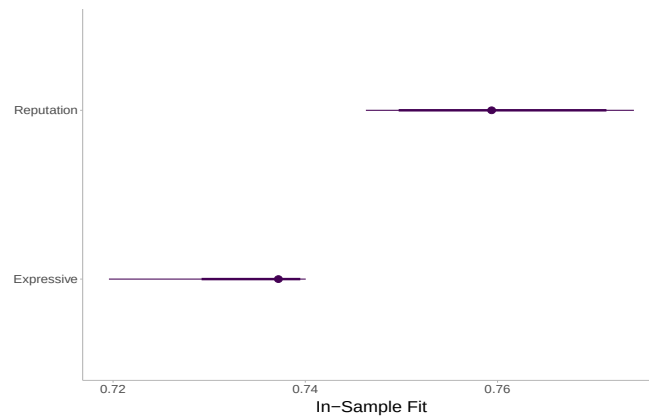


Figure F5: Model Fit (Votes in Opaque Regime). In-sample fit measured by the fraction of correctly predicted voiced recommendations.

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