CHAPTER FOUR

Institutional Design: Deliberations, Decisions, and Committee Dynamics

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Monetary policy is conducted by individuals acting by legislative remit in an institutional setting.

Great attention is paid to the individuals atop the largest central banks. Central bankers today are decidedly recognizable public figures. Some might even be called famous. Their newfound status, however, would make them thoroughly unrecognizable to their predecessors.

The central banks' responsibilities—the legislative remits with which they are charged—are also subject to considerable scrutiny. Monetary policymakers are tasked with keeping fidelity to their legislated mandates. Some, like the European Central Bank (ECB), are granted a single mandate, namely to ensure price stability. Others, like the Federal Reserve, are tasked with a so-called dual mandate, which includes ensuring price stability and maximum sustainable employment. The financial crisis resurrected yet another objective: ensuring financial stability.

Considerably less attention, however, is paid to the institutional setting in which the policymakers meet, deliberate, and ultimately decide on policy. These institutional dynamics alone are not determinative of the policy outcome. But I posit that the institutional dynamics influence policy decisions more than is commonly appreciated.

In business, academia, and government, people and policy converge in institutional settings. These settings matter considerably to

the ultimate success—or failure—of an endeavor. An institution's setting is a function, in part, of its institutional design; that is, the way in which the entity is originally composed and comprised. But institutions are not static. They change with prodding, time, and experience. An institutional setting, thus, is also a function of the personalities populating it, actions undertaken, and cultures which endure.

Inside the marbled walls and grand columns of central banks lie rich histories and deep traditions. When new central bankers are sworn into office, they arrive with predispositions and preferences. But they get acclimated, in varying degrees, to the institutional setting. And for certain leaders, the institutional setting acclimates, at least somewhat, to them. Public policy decisions are ultimately affected by a mix of people, processes, ideas, and settings. Committees tasked with conducting monetary policy are not immune.

In my remarks, I will consider the institutional setting in the conduct of monetary policy. I review the academic literature, describe my own experience as a member of the Federal Open Market Committee (FOMC), and draw upon a recent study of the Bank of England's Monetary Policy Committee (MPC).

In 2014, I was asked by Governor Mark Carney, on behalf of the Bank of England, to undertake an independent review of the transparency of its decision-making. The report, *Transparency and the Bank of England's Monetary Policy Committee*, issued on December 11, 2014, assessed the transparency among monetary policy committees in advanced economies.[1] I benchmarked the Bank's transparency to its international peers and recommended certain reforms.[2] In the course of the review, I listened to the dis-

1. News release, "Bank of England announces measures to bolster transparency and accountability," December 11, 2014, http://www.bankofengland.co.uk/publications/Pages/news/2014/168.aspx; also, Kevin Warsh, "Transparency and the Bank of England's Monetary Policy Committee," Hoover Institution, December 17, 2014, http://www.hoover.org/research/transparency-and-bank-englands-monetary-policy-committee.

2. I owe special thanks to Lea Paterson and Amar Radia of the Bank of England for their valuable contributions, both to the report and to this research paper.

cussions of the MPC and met with most members who served on the committee since 1997. The assignment gave me a valuable—and rare—insight into the workings of the Bank's MPC and made for ready comparison to my own experience at the FOMC and that of my predecessors, captured in part by the published transcripts of FOMC meetings.

The MPC and FOMC have much in common: operational independence from the fiscal authorities, a commitment to price stability, and a strong reputation for integrity of its people and rigor in its analyses. But the institutional dynamics differ across these policymaking committees.

How consequential is a policymaking committee's institutional dynamics to its ultimate decisions? What happens when its people and practices meet amid uncertainty to deliberate and decide upon a policy choice? Is the committee fashioned to foster robust deliberations as part of its decision-making process? Or do the dynamics disincline its members from changing their a priori judgments? To what extent does the committee design foster groupthink? Or does it favor a diversity of views?

These questions cannot be answered definitively. But understanding the institutional dynamics inside monetary policy committees is likely as consequential to sound policy decisions as the skill of the people who lead the committees and the remits they are obliged to follow.

What causes institutions to succeed?

Scholars and practitioners in the fields of management and organizational design have much good work to share with central bankers. The lessons learned from these other disciplines are quite applicable to the evaluation of monetary policy committee dynamics.

Figure 4.1 illustrates the prerequisites for sound decision-making: high-quality inputs, optimal design of decision-making bodies,

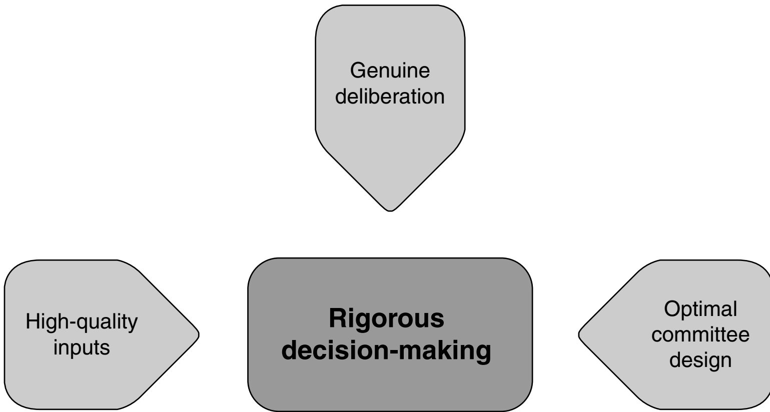

FIGURE 4.1: Key ingredients to sound decision-making
Source: Kevin Warsh, *Transparency and the Bank of England's Monetary Policy Committee,* 2014

and, crucially, an institutional setting that fosters genuine deliberation.

Decision-making and organizational success

Institutional dynamics have an important bearing on the long-term success of an organization.

In their survey of the academic literature, Mellahi and Wilkinson (2004) describe two broad models to account for organizational success or failure. One identifies "external factors" as the predominant force—failure of particular organizations is predominantly a symptom of an industry-wide decline of which management's control is limited.[3] An alternative theory emphasizes the importance of "internal factors," that is, the quality of management decisions and the institutional settings within which they are made.

3. As Mellahi and Wilkinson (2004) note, classic industrial organization literature traces the roots of industry-wide decline to Schumpeterian "creative destruction" (Schumpeter 1942).

The literature identifies numerous interrelated theories that link internal management inadequacies to organizational failure. These include:

- Janis's canonical Groupthink theory (1972, 1982), which highlights the tendency of small, homogenous management teams to make suboptimal decisions;
- Hambrick and Mason's Upper Echelon theory (1984), which links organizational achievements to the composition and background of an organization's senior management team;
- Staw, Sandelands, and Dutton's Threat Rigidity Effect theory (1981), which explains the tendency of management groups to stick rigidly to tried and tested techniques at times of threat and challenge, thereby increasing the risk of organizational failure among incumbents at times of secular change.

The common finding is to tailor institutional settings—that is, the design of decision-making processes and structure of decision-making groups—so that genuine deliberation prevails. This is particularly important in times of regime change in the data or policy paradigm.

That genuine deliberation should play a central role in decision-making is rooted in classical liberalism. John Stuart Mill (1859) championed the importance of free speech and discourse to intellectual progress. He advanced the belief that truth would emerge through the free competition of ideas in public discussion and debate. As Mill wrote in his classic *On Liberty*: "The general or prevailing opinion in any subject is rarely or never the whole truth; it is only by the collision of adverse opinions that the remainder of the truth has any chance of being supplied."

A core aim of deliberation is to achieve consensus among different parties. But, as noted by Barabas (2004) and others, deliberative processes should accomplish more than merely achieving

consensus. Barabas defines "desirable" (or genuine) deliberation as that which succeeds not only in achieving consensus, but also in delivering intellectual progress: "Submissive consensus is clearly undesirable . . . [t]o be desirable, deliberation should improve knowledge so that participants come not only to a consensus, but also to an enlightened view of the problem at hand."

Genuine deliberation is, therefore, the process by which participants not only share information, but also learn from and influence one other. It is the crux of good decision-making processes within both public and private spheres, the "special sauce" to optimize policy.

As Schonhardt-Bailey (2013) describes in her comprehensive analysis of monetary policy deliberations: "Effective deliberation among . . . unelected experts who are being held to account is thus one of engagement and reciprocity where participants talk to one another and take up others' points." The institutional setting should allow genuine deliberation to flourish.

Identifying genuine deliberation: inquiry vs. advocacy

A useful starting point is to identify what effective deliberation should look like. A thorough assessment of the nature and importance of rigorous decision-making processes is provided by Garvin and Roberto (2001). They make a useful delineation between the process of "inquiry" and that of "advocacy."[4]

Inquiry is essential for successful decision-making and organizational success. As Garvin and Roberto put it: "Inquiry is a very open process, designed to generate multiple alternatives, foster the exchange of ideas, and produce a well-tested solution. . . . A process characterized by inquiry rather than advocacy tends to produce decisions of higher quality."

4. I treat "inquiry" and "deliberation" as largely synonymous.

Garvin and Roberto highlight the ways in which inquiry and advocacy differ:

Open and balanced sharing of information

People engaged in inquiry typically share information widely, typically in raw form, and allow participants to draw their own conclusions. Participants in an advocacy process, in contrast, often present information selectively, buttressing their arguments while withholding relevant conflicting data.

Critical thinking and assumption testing

Inquiry processes are ones of testing and evaluation. Effective decision-making groups step back from their arguments in order to confirm their assumptions by examining them critically. Participants do not shy away from asking hard questions. These indicia of critical thinking are not typically present in processes of advocacy, in which the discussions tend to be characterized by persuasion and lobbying.

Deliberation of multiple alternatives and encouragement of dissension

Inquiry cultivates and values minority views, and participants are comfortable raising alternatives. Inquiry processes tend to be characterized by thoughtful analysis of multiple alternatives, and usually avoid settling on the easy, obvious answer too quickly. Advocacy, by contrast, tends to suppress new ideas. Participants are passionate about their preferred solutions; that passion tends to harm their objectivity, limiting their ability to pay attention to opposing arguments.

Conflict is constructive, not personal

"Cognitive" conflict relates to the substance of the issues at hand. "Affective" conflict tends to be personal. Cognitive conflict is constructive, and often characterizes inquiry processes. It allows people to express differences openly and challenge underlying assumptions; participants in inquiry tend to be accepting of constructive criticism. Affective conflict, by contrast, harms the decision-making process. It more often involves personal friction, rivalries, and clashing personalities, and diminishes people's willingness to cooperate.

Active listening

Genuine listening and attentiveness to alternative points of view are typical of inquiry-making processes. Asking questions, probing for deeper explanations, and showing patience when participants explain their positions are all identified as evidence of active listening and are found in well-designed decision-making processes.

The Garvin and Roberto study echoes many of the themes advanced by Fishkin (1991) in his pioneering work on deliberation. He identifies five characteristics of productive deliberations:

- *Informed:* arguments should be supported by appropriate and accurate claims;
- *Balanced:* arguments should be met by contrary arguments;
- *Conscientious:* participants should talk and listen with civility and respect;
- *Substantive:* arguments should be considered solely on their merits, rather than being given weight (or not) based on how they are made, or by whom they are made;
- *Comprehensive:* all points of view held by significant portions of the population should be given attention.

Fishkin used these principles to design a range of experiments conducted in both the United States and the United Kingdom. He demonstrates that well-designed deliberative processes can lead to better outcomes.

Barabas (2004) also stresses the need for deliberation processes to be well-designed if they are to advance intellectual progress, singling out criteria such as the quality and breadth of information provided to decision-makers and the degree of open-mindedness of participants as important contributors to success. He concludes: "Deliberation increases knowledge and alters opinions, but it does so selectively based on the quality and diversity of the messages as well as the willingness of participants to keep an open mind."

In sum, for organizations to thrive over time—in the private or public sector—the institutional setting must ensure genuine deliberation.

Committee dynamics: When do monetary policy committees succeed?

The trend toward committee-based decision-making is among the major developments in the conduct of monetary policy. Committee dynamics—be they related to structure, composition, or culture—can therefore have an important bearing on policy outcomes.

There is considerable literature on optimal design of monetary policy committees (see, for example, Sibert 2006, Maier 2010, and Reis 2013). And there is an emerging consensus that well-designed committees tend to make better-quality decisions than individuals. Perhaps the best known research in the monetary policy arena is that of Blinder and Morgan (2005), which shows that groups tend to outperform individuals in a simple monetary policymaking game.[5]

5. The Blinder and Morgan work was replicated in the United Kingdom by Lombardelli, Proudman, and Talbot (2005).

TABLE 4.1: Elements of Optimal Committee Design[7]

1. Clear objectives and independence	• Clearly defined goal and efficient instructions • High degree of central bank independence
2. Size	• Not much larger than five members
3. Measures to avoid free-riding	• Easy identification and evaluation of individual contributions
4. Polarisation and group-think	• Institutional encouragement of independent thought • Diversity of backgrounds and experiences • Mix of internal and external members • No fixed speaking order to avoid information cascades

Source: Kevin Warsh, *Transparency and the Bank of England's Monetary Policy Committee,* 2014; Philip Maier, "How Central Banks Take Decisions: An Analysis on Monetary Policy," in *Challenges in Central Banking: The Current Institutional Environment and Forces Affecting Monetary Policy,* eds. Pierre L. Siklos, Martin T. Bohl, and Mark E. Wohar (Cambridge, UK: Cambridge University Press, 2010).

Maier (2010) summarizes several hypotheses to explain the rationale for the superiority of committee decisions. These include the potential gains from the pooling of information from different sources and the advantages of processing information from a group comprising different skills and experiences. Other benefits of committee-based decision-making include the provision of "insurance" against the extreme preferences of any one individual.

Committee decision-making, however, is not without potential drawbacks. These include the inefficiency of sharing and processing information among large groups and the risks of the emergence of groupthink. In addition, committee-based decision-making is also often described as prone to inertia, although the empirical evidence is less clear-cut.[6]

Given that committee-based decision-making processes can incur benefits and costs, the matter of committee design is consequential. The superiority of smaller committees with members of

6. Blinder (2002) finds that committees are no more inert than individuals when making decisions.

diverse experiences is a recurring theme. As Sibert (2006) states: "[M]onetary policy committees should have a clear objective, publish individual votes and not have many more than five members. They should be structured so that members do not act as part of a group, perhaps by having short terms in office and members from outside the central bank."

Similar assertions are made in Maier (2010), whose conclusions on optimal committee design are summarized in table 4.1.

From theory to practice: design features of monetary policy committees

What do policy committee dynamics actually look like in practice?

The leading central bank monetary policy committees are designed somewhat differently from one another. As table 4.2 shows, the number of decision-makers, decision-making protocol, and principals in attendance diverge markedly among leading central banks.

A healthy dose of caution should be applied before presuming a direct read-across from the experience of the Fed with the Bank of England, or indeed of any other central bank. But, as Schonhardt-Bailey (2013) describes the policy process: "[M]onetary policy made in a committee setting . . . involves the aggregation of individual preferences of policymakers into a collective decision." So, it is important to consider how the "aggregation of individual preferences" differs by virtue of the institutional arrangements of the MPC and FOMC, which will be discussed in the balance of the paper.

MPC evaluation

The institutional dynamics of the Bank of England's MPC are favorable to genuine deliberation and sound decision-making.

7. As outlined by Maier (2010).

TABLE 4.2: Comparison of committee designs

	Bank of Canada	Bank of England	Bank of Japan	European Central Bank	Federal Reserve	Norges Bank	Reserve Bank of Australia	Reserve Bank of New Zealand	Sveriges Riksbank	Swiss National Bank
Frequency of scheduled meetings (per year)	8	8[a]	14	8[a]	8	6	11	8	6	4
Number of decision-makers (or voting members)	6	9	9	21[b]	12	7	9	1[c]	6	3
Decision-making protocol	Consensus	Vote	Vote	Vote	Vote	Consensus	Vote	Governor	Vote	Consensus
Principals[d]/others in attendance	6/approx. 5	9/6	9/approx. 15	25[b]/ approx. 25	19/ approx. 60	7/10	9/approx. 5	n/a	6/approx. 20	3/10

Source: Kevin Warsh, *Transparency and the Bank of England's Monetary Policy Committee,* 2014

(a) The ECB and Bank of England have announced an intention to move to eight monetary policy meetings per year rather than twelve, as is recent practice.

(b) As of January 2015.

(c) Monetary policy decisions at the RBNZ are made by the governor.

(d) The number of principals is defined as the number of members of the committee who participate at meetings.

The MPC meets many of the criteria for an optimal monetary policy committee, including its relatively small size. Membership of the MPC is drawn from a diverse group—five of the nine members are "internal," typically with prior central banking experience; the remaining four are "external," appointed by the chancellor of the exchequer. The four externals serve a maximum of two three-year terms, and are typically drawn from varied backgrounds, including academia, business, and financial markets.

In my view, the MPC's design facilitates effective deliberation, due in part to the relatively small number of people in attendance at the policy meetings. There are typically around fifteen people present at the MPC's monthly policy meetings—the nine committee members, a representative of Her Majesty's Treasury, and five senior staff members of the Bank's monetary analysis area.

More generally, the one-member, one-vote structure of the MPC, and the associated strong ethos of individual accountability on the committee, ensure that it is possible to identify and evaluate individual contributions. As Sibert (2006) notes: "The solution to groupthink is to get group members to stop thinking and behaving as group members."

As Maier (2010) puts it: "In many ways, the Bank of England's committee structure follows best practice: it has a clear goal, it is made up of diverse members (academics, business representatives, and central bankers) and it is not too big. Also, individual contributions can be identified and evaluated, and its members are encouraged to think for themselves."

Informed by my access to the MPC, I was struck by the nature and quality of the discussion inside of the committee room. I listened to many examples of genuine and effective deliberation, especially during the first day of the MPC's two-day meeting.[8]

8. MPC meetings were structured so that the first day of discussions included a review of economic and market developments. The second day focused largely on the policy deci-

During the first day of discussion, the debate was free-flowing and open, the tone usually courteous and informal. Members routinely queried each other intently on the bases for their opinions, and played devil's advocate as they sought to understand the trends in the economy and financial market developments. Members exhibited behavior indicative of robust inquiry and evaluation processes.

Members sought to test, dismiss, or advance competing hypotheses to solve puzzles in the economic data. The discussion was marked by balanced arguments among participants, who appeared genuinely open to alternative theories of the case. Participants also appeared willing to accept constructive criticism of their proffered analyses.

No less revealing was the markedly different discussion of the second day of the committee meeting, which largely matched the Garvin-Roberto "advocacy" criteria. By then, most members had fully considered the economic data and heard views of their colleagues. They were prepared to explain their individual judgments on the appropriate stance of policy. While the first day was genuinely deliberative, the second day was decisional. And when compared with the ad hoc informality of the first day, the second day was orderly, almost formal in comparison. Members often read from pre-written set pieces to explain their policy decisions. Most members were in full advocacy mode. They tried to persuade others of the merits of their positions. Members defended their positions and marshalled particular, sometimes selective, data to buttress their preferred policy stances. Members tended to devote their speaking time to advocating their positions, seeking to influence the views of their colleagues in anticipation of future policy decisions.

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sion itself. This scheduling of events is expected to change, based in part on the Bank of England's adoption of reforms proposed in my independent review.

In sum, the MPC is endowed with certain institutional attributes that lend themselves favorably to robust deliberation.[9] And the robustness of the discussion is highly conducive to sound policy decisions. Of course, it is no guarantee.

FOMC evaluation: committee dynamics

The FOMC's institutional design is not inconsistent with sound practice. But there are certain institutional aspects of the FOMC which differ somewhat from best practice, at least as identified in the literature.

By statute, the FOMC includes twelve voting members. When fully constituted, seven of the twelve voting members of the FOMC serve as members of the Board of Governors, each nominated by the president and confirmed by the Senate with terms up to fourteen years in duration, subject to renewal. Five of the voters, presidents of a rotating cadre among the Reserve Banks, are chosen by geographically diverse Reserve Bank boards, subject to the approval of the Board of Governors.

Policy deliberations, however, occur in a much larger institutional setting. Nineteeen people convene in the discussion (voters and non-voters alike) and a total of about sixty people are in attendance, including a range of subject-matter experts on key aspects of the economic and financial landscape.

While the Reserve Bank presidents are supported by large, independent staffs of economists to help inform their forecasts and policy judgments, I would note that the economic models and forecasting tools are substantially similar across the Federal Reserve System. This explains, in part, the remarkable conformity of the so-called dot plots in the projections from FOMC participants.

9. In my report to the Bank of England, I sought to advance the cause of transparency without undermining its favorable institutional dynamics.

But the FOMC's institutional setting is different, not only in size, from the optimal committee configuration. Its deliberations and decisions also follow a different institutional pattern. One simple mechanism for evaluating the breadth of views is to review trends in dissent: that is, the number of FOMC members who voted against the majority policy stance.

By both FOMC tradition and practice, the bar for lodging a dissenting vote is high. Neither Chairman Greenspan nor Chairman Bernanke ever cast a vote in the minority. In contrast, the governor of the Bank of England was outvoted on nine occasions since 1997. And governors of the Federal Reserve, unlike Reserve Bank presidents, only rarely dissented in casting of votes. In the past decade, for example, there has been only one instance of dissent by a sitting governor.

This also represents a notable difference with the MPC, where the one-member, one-vote principle is diligently respected by both internal and external members of the MPC and the public at large. Indeed, approximately half of MPC meetings to date have included at least one dissenting vote.

Voting behavior, however, is an imperfect measure of the Fed's institutional dynamics. "Counting the votes" does not give a full accounting of the quality of deliberations or decisions. Among other reasons, FOMC participants in the deliberations include Reserve Bank presidents, only some of whom actually cast votes at each meeting. More important, the conduct of monetary policy is not a simple, binary choice made in isolation between tighter or looser monetary policy. It involves a process of continuous decision-making by central bankers based on changing assessments of historical and contemporaneous data, forward-looking forecasts, and changing understandings of the transmission channels of monetary policy.

For these reasons, study of the actual discussions by policymakers is useful.

The Fed created a valuable trove of transcripts through which more information can be gleaned about how the institutional design actually operates in practice. Following significant congressional scrutiny and public pressure in 1993, the Fed agreed to publish lightly edited transcripts of FOMC meetings with a five-year delay. And, by ultimately releasing transcripts dating to 1976—when participants had virtually no expectation that verbatim transcripts would ever see the light of day— the Fed created a useful natural experiment to evaluate committee dynamics.

FOMC evaluation: transcripts and academic research

The Fed's committee dynamics can be better understood by evaluating the text of the transcripts themselves. With studies seeking to make sense of millions of spoken words, this is a daunting and imperfect exercise.

Still, recent academic research meaningfully advances our understanding of the Fed's deliberations. New research techniques are employed to distill more careful assessments of the FOMC participants' preferences, including systematic textual analysis, language-mapping algorithms, and other more subjective coding of transcript data. No surprise, Fed policymakers far more often reveal their differing judgments on economic variables in their discussion around the table than in their actual votes. Nor should we be surprised that the academic research is divided on the effect of the existence of the transcripts themselves on the FOMC's institutional dynamics.

Meade and Stasavage (2008) find evidence that the Fed's post-1993 transcript policy led to deterioration in the quality of FOMC deliberations. In the authors' formulation, policymakers are motivated to achieve two goals in the policymaking process: making optimal policy decisions and garnering a good reputation in public (often associated with conformity with the prevailing consensus).

The existence of public transcripts, even with a lag, caused FOMC participants to voice less dissent in the meetings themselves and to be less willing to change policy positions over time. For example, the number of dissenting opinions expressed by voting members fell from forty-eight (between 1989 and 1992) to twenty-seven (between 1994 and 1997).

I would note that another important phenomenon may have also contributed to greater conformity in the FOMC's deliberations: the growing reputation of Chairman Greenspan during the period. This is not inconsistent with the authors' formulation, of course—participants may well care how they are perceived. But it is less obvious whether the more stifled debate is owed largely to the changed transcript-release policy.

Schonhardt-Bailey (2013) provides a comprehensive assessment of policy deliberations in the conduct of US monetary policy. She subjects the transcripts to rigorous quantitative and qualitative textual analysis and conducts in-depth interviews with many FOMC participants. In addition, she takes account of the environment in which the deliberations occur. This includes the "quality of deliberations"—that is, whether the committee discussions consist of "argued reasoning" and a "reasonably frank exchange of views" or "pre-prepared, canned" remarks.

She concludes that the publication of transcripts likely had some impact on FOMC deliberations: "[O]ur results provide support for a conclusion that over time a greater emphasis emerged on set-piece interventions by members. This could be a result of the publication of the transcripts after 1993, as the knowledge of the expected publication of the transcripts drove the real deliberation out of the FOMC meetings and into unrecorded 'pre-meetings,' with the FOMC becoming the place for reading of prepared texts. If so, then we have evidence to support the negative impact of what we might call 'extreme transparency' of policymaking. We do,

however, observe that the timing of the shift in the nature of deliberation in the FOMC does not readily fit with the surprise decision in 1993 to publish the transcripts . . . Our overall conclusion here is that while the decision on the publication of the transcripts quite possibly contributed to a change in the style of deliberation, other causes also seem to have been at work."

What other factors might be involved?

My experience at the FOMC suggests that there are several institutional dynamics that influence the nature and quality of deliberations. The "tone at the top" set by the chairman surely impacts the discussion inside the committee room. It is worth considering whether the leader of the committee crowds-in or crowds-out the discussion. The collegiality of the members themselves also matters. This is not just a matter of amity. The deliberative process is enhanced when participants believe they are able to influence the judgments of their colleagues. The willingness to entertain unorthodox views, and to hear perspectives from participants with dissimilar backgrounds, also can prove fertile ground for deliberation.

Hansen, McMahon, and Prat (2014) attempt to identify the factors of greatest significance. They find evidence that published transcripts drive both greater discipline (i.e., stronger preparation to make contributions to meetings), but also greater conformity (i.e., herding of views to minimize reputational harm). They conclude that "the net outcome of these two effects appears to be positive . . . [we] therefore find that the evidence from the 1993 natural experiment points toward an overall positive role for transparency."

The authors' results are more supportive of the benefits of transcripts than previous studies. Their conclusion rests, in part, on identifying the effect of transcripts by comparing the contributions of inexperienced FOMC members ("rookies")—who are likely to feel the discipline and conformity effects more sharply because less is known about their abilities—before and after 1993. They assume

that the power of the discipline and conformity effects on behavior is related to the number of years of experience on the FOMC.

This assumption is not wholly consistent with my assessment. Rookie status and the associated risk-aversion and/or eagerness to impress do not tend to last long at the FOMC. After an introductory period, most quickly achieve whatever comfort and influence they will have in the institution's environment. Those who are comfortable breaking with consensus do just that, while others tend to conform to the prevailing views.

Hansen, McMahon, and Prat (2014) are cognizant of the risk that public transcripts may drive some of the FOMC's deliberations outside of the formal FOMC meeting. So the authors make an understandable assumption: "[They] take as a given that the whole FOMC does not meet outside of the meeting to discuss the decision."

In my experience, there is no attempt by FOMC members to avoid the transcripts per se, but policy deliberations happen on a rather continuous basis. Given the large number of FOMC participants and the even larger number of staff in attendance at meetings, some discussions inevitably happen more routinely in small groups. The Government in the Sunshine Act—a law designed to ensure the public's right to know of policy discussions—is diligently followed.[10] But hallway discussions by two or three members of the committee are not uncommon. Moreover, the Board of Governors (as distinct from the FOMC) typically meets biweekly to discuss, among other things, the state of the economy and the establishment of so-called discount rates. While distinct from the FOMC's policy decision, these discussions by the Board of Governors are not totally unrelated to FOMC policy discussions.

My judgment is consistent with much of the evidence from the academic literature: transcript publication contributed to the

10. See http://www.federalreserve.gov/aboutthefed/boardmeetings/sunshine.htm for more.

changing nature of the FOMC meeting, including less robust deliberation and increased use of prepared speeches by participants. But other factors related to the operating dynamics of the FOMC are also likely to have been associated with less robust deliberations, including the greater perceived deference by members to the views of the chairman.

Conclusion

Monetary policy is made neither by rule nor by unfettered discretion. It is made by committee. And the institutional dynamics of the committee are of considerable consequence to making sound policy decisions amid uncertainty. Institutional settings may attract much less attention than the individuals leading central banks—or the legislative remits that central banks are assigned—but they may be no less important to delivering sound policy outcomes for the benefit of the overall economy.

COMMENTS BY PETER FISHER

Without rehashing what Kevin said and wrote: yes, institutional settings, design, and dynamics matter. We're all going to sign up for that. I'm going to try to be a little less sanguine and a little less polite than my good friend Kevin. I may also try your patience by pointing out that legal scholars and legal philosophers have been working on the question of rules versus discretion and substance versus process for centuries—centuries before the economics profession existed. Notwithstanding the risk of condescension about lawyers, there's some thinking about rules that you have to comply with and an appreciation of the process/substance distinction which I find lacking—at least at some central banks today.

I thought I would talk about effective decision-making bodies I have known, and ineffective ones, not by name but by attributes. Even though I had almost ten years at the FOMC table, reflecting on Kevin's paper helped move my thinking about individual versus group accountability at central banks and now I am less sure of my preference. I thought I understood the awkwardness of group accountability when more than once I saw the FOMC gravitate toward no one's first choice and virtually no one's second choice, and we ended up with third-best outcomes. But now I'm also worried about individual accountability of a pseudo-nature, which I'm afraid is the regime we now have and that I think Kevin was alluding to.

Let me compare and contrast a team of Navy Seals and the US Congress as decision-making bodies, and let's assume the best of each of them. A number of differences come to mind. Size of team is certainly one. But for me, what jumps off the page is how they approach the question of objectives. A commando team has a clear, single objective, and they work together to overcome multiple constraints. We don't tell them that it's equally important not to injure

civilians, and to capture your target, and to gather some intelligence. We don't say those are all three equally important, just go figure it out. Their commanding officer should tell them which is most important, which is the objective and which the constraints.

Now, we don't expect Congress to do that. We expect Congress to be a war of objectives, a competition for resources. And as Paul Tucker knows, my good friend Henry Richardson, a philosopher at Georgetown, spent much of his career merely on the question of whether we can reason about ends—whether we can have reasoned discourse about competing objectives. He's an optimist about this, but it's a near thing. If it's that hard, it can't be very easy.

So, with these two examples in mind, let me note attributes that I think are particularly important in good decision-making bodies. These are, first, a single objective and multiple constraints; second, what I'm going to call "Bayesian candor"—meaning honesty about the unpredictability of the future and about the best way to come to grips with that; and third, my new thoughts on individual vs. group accountability, individual input but collective accountability for the outcome.

Single objective/multiple constraints. I think most problems—I don't want to say all—where you think you've got multiple objectives can be better approached as having a single objective and multiple constraints. I think that can happen with monetary policy. I see that effective decision-making bodies have a shared single objective that they're committed to, however they formulate it, and other "competing objectives" are conceived as constraints.

Bayesian candor. Effective decision-making bodies don't waste a lot of time regurgitating facts to one another. Being good Bayesians (whether they know the work of Thomas Bayes or not), they

are candid about their priors and work to unpack new information symmetrically. That is, as Thomas Bayes taught us, we should both think about the possibility that new information confirms our prior, and be open to the possibility that new information is not consistent with our prior—is either anti our prior or independent of our prior. My experience is that this is the best antidote to groupthink, because it requires you to think hard about the symmetry of the risks. You don't let new information just confirm your prior. You also accept the possibility that new information may not be consistent with your prior. Being a good Bayesian also helps separate the problem of forecasts from the problem of judgment about what to do about the forecasts: there's X amount of uncertainty in our forecast, and we're now going to have to make a judgment about what to do about that.

Individual vs. group accountability. In my view, effective decision-making bodies tend to practice individual input but collective accountability for the outcome. I don't see a lot of great decision-making bodies go out and say, "Well, I actually voted in the majority but I didn't really agree with point seven in the thing we released." And this is where my appreciation of group versus individual accountability is evolving. There's something about inputs, individual accountability for candid inputs and a symmetric consideration of the risks separated from priors, and a collective accountability for output that I think represents best practice.

Now before comparing these attributes to central banks, in the Bayesian spirit I should admit my own priors, especially in present company. Credit Suisse tells us that, as they measure these things, wealth on the planet has doubled the last fifteen years.[11]

11. "Global Wealth Report 2014," Credit Suisse Research Institute, October 2014. See also Josh Zumbrun and Carolyn Cui, "Glut of Capital and Labor Challenge Policy Makers," *Wall Street Journal*, April 24, 2015.

Does anyone here think that the productive potential of assets on the planet has doubled in the last fifteen years? I think not. And the conclusion I come to is that something very odd has happened to monetary conditions. Now some of us may view this as a sign of a great success of monetary policy. I'm admitting my prior that it's something that deeply disturbs me. If I looked back at ancient Rome and saw that the wealth of the Roman republic had doubled in fifteen years, I would be confident that something odd had happened to monetary conditions. So, that's one of my priors.

So how does the Fed stack up, or central banks in general stack up, to the idea of a clear, single objective and multiple constraints? Not very well. I find this interesting because my own reading of section 2A of the Federal Reserve Act is that there *is* a single objective, not something that we call a dual objective. A first-year law student would not be able to turn this into a dual mandate. To do that, you have to get a room full of distinguished economists to torture the English language this much.

Section 2A says that the Federal Reserve *shall maintain—shall*, that's the imperative, that's the mandate, elementary statutory construction tells you to pay attention to what's coming next because this is the thing that you must do, you have no option, you are compelled to—*shall maintain* the long-run growth of the monetary and credit aggregates commensurate with the economy's long-run potential to increase production, so as to promote effectively the goals of—and we have three—maximum employment, stable prices, and moderate long-term interest rates. Would a careful lawyer think you could conform to this mandate by manipulating long-term interest rates as low as you possibly can in order to make people who have control of financial assets better off? No, I don't think you could. I don't think if you put [Fed counsel] Scott Alvarez on a witness stand, he could contort this statement to such an outcome.

Although I try your patience with a lawyer's analysis of the objective, section 2A does have a single objective and three measures of

success. But the Fed doesn't read it that way. The FOMC decided to rewrite it and call it a "dual" objective, a "dual" mandate, two different things that are constantly at war with one another—which leaves wide open the question: what is the rule and what is the discretion?

Now, to Bayesian candor. I think there's certainly a lot of work on forecasts inside most central banks, but in my ten years at the FOMC table and the subsequent fourteen reading transcripts and minutes, I haven't seen a lot of work on the third variable in the Bayesian calculation. I've seen some effort at defining priors. I've seen incorporation of new evidence. I have not seen a systematic effort to try to capture the possibility that the new information does not confirm our prior but is either antithetical to it or completely independent of it. The single best thing that decision-making bodies do is to call BS on each other and to know how to unpack their forecasts.

Finally, collective accountability for the outcome. I don't think we have that now. We have several hundred words produced to explain a point-in-time description of the mood of a committee, and every member then has their own forecast and their own dot. The single most important output of monetary policy is the expected path of short-term interest rates, and yet the current FOMC feels free to allow every man and woman to have their own expected path. They don't even coalesce around a path, let alone a forecast, or a view of the objectives, or the constraints. Everyone gets their own view of the reaction function. Everyone gets their own view of the objectives. Everyone gets their own view of the facts. Everyone gets their own forecast. For me, this does not remotely square with effective decision-making.

Let me just end by saying that I think a single objective and multiple constraints is a discipline we should aspire to. We should take seriously democratic accountability. And before we write new laws, we should try to adhere to the ones we have.

GENERAL DISCUSSION

GEORGE SHULTZ: As you're talking, I'm thinking of a contrast in your description of the national security arena because there are great similarities but there are also some differences. In the first place, in the national security arena there's great concern about any overlaps between intelligence and policy. You're always worried that intelligence people get too close to policy people and they start cooking the intelligence to suit what people want, so you make a big effort. I remember the first National Security Council meeting I ever went to when I was secretary of the treasury. Dick Helms was the director of CIA. He briefed, he answered questions, and then he got up and left the room. He would not be in the room when policy was discussed. He stayed at the White House in case he was called back in for something but he made no policy intrusion. So I think it's not quite the same because people may brief decision-makers on the facts and whatnot, but they come with opinions, probably more than in the national security field, and they probably push into the intelligence more. There's probably more interaction. But I would put forward as a general proposition that it's good to keep these things separate because if people presenting the intelligence get infected with the policy, almost without knowing it, they'll skew it. That's one problem.

Then you have a mission of some kind, and whoever is there from the military will almost inevitably say, "Before I can tell you whether I can do the mission, you have to tell me with some precision what the mission is." Then you decide what you're going to do. One of the great diseases in this area occurs when you've thought about your mission carefully, you've designed your equipment and everything to accomplish it, you go out and you do it, and then you say, "We got this done. Now let's go

out and do something else." You develop what is called mission creep, and pretty soon you're doing things that you didn't plan to do and you fail. The original mission succeeded but you've allowed yourself to get drawn into things that were extraneous and didn't work. Probably some of the same problems exist in economic policymaking; at least as I experienced them, they do. You want to have people who will give you intelligence who are insulated somehow from the policy process. Then you're not always thinking about big, broad policy but you're more focused. It seems to me that with mission creep you change your mission by what you do; you change the situation. You have to be very alert to that or you'll find yourself sideways.

Another thing I couldn't help but reflect on is what you call Bayesian candor. I don't see how you can have Bayesian candor or any other kind of candor if everything is going to be transcribed and publicized. You've got to go to somebody and say, "What do you think?" and have an exchange in private. If you can't have that kind of exchange, you won't be able to trust people. One of the things you should try to do, it seems to me, in the policy arena, is develop a trusting relationship with your counterparts. When I was secretary of state, I called it "gardening." That was one thing I tried very hard to do—to develop relationships with people so that they trusted me, which meant that if they said something to me in confidence, I wasn't going to blare it to the press the next day and embarrass them. It was private. There's a lot to be said for private discussions where you're not sure but you try something out, and you don't want to be embarrassed about it later. So I think these transparency provisions that have been hooked onto the Fed are counterproductive.

It also seems to me in our economy these days that we are plagued with uncertainty and the regulatory maze out there. It keeps changing. It would be nice to know what the Fed is going to do. If five different governors go out and make five differ-

ent speeches, you say, "What is going on here?" I should think there would be some respect for a decision that's made and some curbing of people who go out and express different views because it confuses the people trying to interpret what this very powerful institution is going to do and it clouds the message you're trying to deliver.

BINYAMIN APPELBAUM: I'm curious. Both Kevin and George have raised the idea, which one always hears from Fed officials, that things would be better if you guys weren't required to have transcripts published five years later, if things that you said didn't eventually become public. I'm so puzzled by that. You all seem like strong, independent, forceful thinkers, and you see things like Ben Bernanke since leaving the Fed has become much more combative in his public remarks than he ever seemed to be in the transcripts. What is it about having your remarks published five years later that so constrains your ability to express your views? Why should that be a factor that suppresses debate among people of intellect and conviction?

KEVIN WARSH: So let me take a stab at Binya's question and offer a couple comments on George's comments. So Binya, first, for better or worse, I never felt terribly constrained inside the Fed's board room. Nor was I terribly prepared. [Laughter.] I mean, it would have required significant time to write balanced, beautiful prose to prepare for a typical FOMC meeting. Instead, I've been jotting notes on note cards since I was George and John's student twenty-five years ago. So I don't think it's laziness on my part. Instead, I would reflect and react based on the discussion inside of the room. You can read a lively debate, for example, between [Treasury] Secretary [Timothy] Geithner and me about how to handle Bear Stearns in the 2008 transcripts which are now public.

Outside of the financial crisis, my experience suggests (and Andy and Bill and others here have sat around the FOMC

table) that genuine deliberation—a real give-and-take—does not commonly prevail. I said to a long-serving colleague who sat next to me at the FOMC meetings, "I just heard the long prose of what so-and-so said about the state of the economy and his purported policy preference, and I can't decipher either his analysis or conclusions."

To which my colleague replied, "Exactly."

So I don't want to speak for George, but I am a huge champion of transparency and want to ensure that our central bank explains its decisions forthrightly. Why did we make the decisions we did? But I worry the transcripts now provide only a superficial transparency. Genuine, thought-provoking conversations invariably happen somewhere, and they must. And so in the name of inviting the world into every titillating comment inside of the FOMC room, we may not have actually improved transparency. We may have obfuscated the real issues, and moved the genuine deliberations elsewhere. So instead of John and Charlie and I debating in front of our colleagues the hard questions about productivity, instead during the coffee break, I say to John, "Hey, what do you really think is going on with total factor productivity?" And he offers me his view in candor. This isn't contrary to the Government in the Sunshine Act. It's because policymakers are trying to resolve tough economic riddles. So we have an absolute obligation to the public to get the right answer as best we can, for effectively communicating, for being totally transparent in our decisions. But when policymakers arrive and get acclimated to central banks, they observe what their peers are doing, and as I talk about in the paper, some decide to pull their punches, especially post-1993. The existence of the transcripts is not the only reason, but I think it's part of the explanation. But you shouldn't take that as an excuse to suggest policymakers should be hiding the secrets of the Federal Reserve. They—the public—need to know, and they

have a right to know. But we should understand: real deliberation is essential, too.

Just a couple points on George's comments. First, they—the Fed—tries to preserve the independence of the forecasting process, so there is a staff forecast. And Andy and Bill were intimately involved with it. As best as I can observe from my perch, policymakers try not to interfere. It doesn't mean that, in his day, Don Kohn wouldn't ask about some assumption staff was making about something or another. But the forecast tries to arrive from the economists and staff to the board as *their* forecasts. And in the minutes, the Fed tries to distinguish the staff forecast from that of the policymakers. So I do think there are real attempts to preserve that independence. And I don't want to come across as anything other than totally respectful of that process.

But I think Peter brings up a separate point, which is: in the name of transparency, everybody has a forecast. We have the staff forecast, and twelve Reserve Bank forecasts, and governors are running their forecasts. The amazing thing about the forecasts, all independent, is that the forecasts are all on top of each other. That's really quite a puzzling development. So one very cynical way to conclude is the staff forecast is the modal forecast, and everyone else is doing incremental sensitivities to it, because in the institution of 27,000 people, there may be a groupthink as to how the economy works, or fear to express an independent view. Hence, these forecasts predicted in 2009 that the economy in 2010 would be booming. The same thing occurred in 2010: the forecasts promised that the economy in 2011 would be booming. Similar consensus for 2011, 2012, 2013, 2014, and 2015. And yet, we've still been growing around 2 percent for seven years, far below forecasts throughout the period. The groupthink, I fear, contributed to a systematic error.

It reminds me of something George and I have talked about previously: how to mitigate the groupthink in organizational

settings. In the national security arena, after a series of errors, authorities try to create a red team and a blue team, to challenge one another, and try to understand what happened. Are the same chronic errors being made year after year after year? Does the Fed need to call a time out? Or is it just bad luck seven years in forecasting in a row? So I'd suggest that policymakers have plenty to learn about the reasons for their errors. We should be very tough on ourselves, and examine critically why the Fed seems to be making the same sorts of errors systemically in its forecasts.

And just one final point about communication and about transparency. I think the objective should be effective communication. The objective isn't that every word that's ever been said should be shown on television. The purpose of effective communication is to try to separate cacophony from real insight, noise from signal. And a judgment has to be made. And in the name of transparency, I worry that central banks around the world have fallen into the trap of communicating everything that crosses their minds. And I don't think that that's the right way forward. So I would suggest that we think of communication with that very important modifier.

PETER FISHER: Going back to Binya's question, I was there in 1993 when the transition came, when everyone woke up and realized that there were verbatim transcripts. As the decision was being made to publish them and go forward with the new regime, several of us spent some time looking at transcripts and looking at minutes. It was my view then that the minutes were better than the transcripts at telling you what happened. The transcripts were full of rather raw and funny (odd) references that were hard to decipher. Someone would say "this big" and wave their hands in the air, and the transcript would say "this big." I am afraid that in the name of increasing the transparency, we increased noise to signal.

MICHAEL BORDO: I want to go back to the history of the Fed a bit. And if you look at the FOMC when [William] McChesney Martin was the chairman, there were a lot of dissents. I went through all those transcripts, in the fifties and sixties, and what I found is that in the way he ran his committee, everybody would speak first, and then he'd say something at the end, and then they'd vote. And when you look at the votes, there were often four or five dissents. He didn't quit over them. That was just the way he ran the committee. It was a very congenial committee. Then Arthur Burns came along; his view was totally different. He didn't want any dissents. He was an authoritarian. And that's when things started to change. And again with Volcker, he had some dissents, but the dissents were perceived to be a threat to him. In fact, I think he quit over them. Then Greenspan managed the meetings in such a way that there wouldn't be any dissents, and Bernanke did the same thing. So what your paper told me is it really matters who's running the committee. The culture of these committees really is important. And if you look at history, you really see some interesting contrasts.

CHARLES PLOSSER: Sure. I just want to echo what Michael just said. The notion of governors not dissenting is in fact a fairly recent phenomenon. And I think, from my perspective, it's not a good one.

But I want to go back. There have been so many interesting things said here that it's really hard to know where to start. But I wish the FOMC was more like the MPC or the old Fed when it comes to dissent and the transparency of the debate.

PAUL TUCKER: We do too.

I do wish it was more like that. I think that's actually a credit to transparency, and is preferable to hiding behind so-called consensus decision-making. And I, too, think there ought to be fewer meetings. I've often said the FOMC ought to have a

press conference after every meeting, and there ought to be four meetings a year. And that would be sufficient to make long-term policy decisions. The more frequent the meetings, the greater is the pressure to react to short-term and often transitory events.

The other thing I think is true is about the nature of the debate. Like you, Kevin, I was never really afraid to say what was on my mind. The transcripts never impaired me. But I would say that the debates that we have in FOMC are not necessarily debates at a single meeting. Debates go on and on and on. And many of the prepared statements and the comments that FOMC members are making are in the context of a much longer discussion where there's give and take. Maybe the give and take doesn't always occur in one meeting, but over a number of meetings—maybe even years if you think about the inflation target debate. The debate occurs in reaction to staff memos. It occurs in reaction to what your colleagues have said maybe in the last meeting, where there were some questions left on the table. So I think that there is real debate that goes on. Maybe it's not the most efficient or as extemporaneous as it might be, but I think a lot of healthy debate in fact does go on.

The last point I want to make is that I find the emphasis on the importance of consensus a bit troubling. Everybody gets behind the decision, everybody agrees with it, and you move on. I'm not sure that's the right way to think about monetary policymaking. I actually think that consensus and the pressure for consensus decision-making is the enemy of transparency, is the enemy of good communication. The desire to not have any dissent and to get everybody on the same page means that FOMC policy statements and our communications become so vacuous, so vague, so uninterpretable, just so everybody can sign onto it, that it actually turns out to be very bad communication, and something that nobody's happy with. So I think you'd be better off from a communications standpoint to be more clear

about what the statement really says and get the people behind it who agree with it. The committee and the public should not worry so much if a governor dissents, it should be acceptable. They should not be concerned if there are three, four, or five dissents. Uncertainty and disagreement among nineteen very bright people should be the norm and accepted, especially in difficult circumstances. I just think that pressure for consensus can be counterproductive and lead to a kind of forced groupthink. I am fond of a comment by Walter Lippmann who said that where all men think alike, no one thinks very much.

So I think excessive stress on consensus can be the enemy of good and clear communication. And I don't think monetary policymaking is the same as national security. This is not something where we're going out to fight a war. I think consensus can actually mask not just the communication of [what] the policy is, but it can mask the policymakers' true uncertainty about what we know and what we don't know. And when you think that the FOMC or monetary policy is, "Oh, everybody agreed with it, so it must be right." Well, what do we know? We know it's probably not right. We may not know how wrong it is for five years, but we know it's probably not right. Forecasts are almost always wrong. And if we were making our policy decisions based on those forecasts, they will be incorrect as well.

What people want, and particularly what the financial markets want, is certainty. They want clarity and certainty of what the Fed's going to do. We don't know as policymakers what's going to happen in the future. And being honest about that uncertainty is an important part about the debate. Non-consensus votes can actually be revealing and informative. That's all part of the process. Yes, it's cumbersome. Yes, it's obviously not terribly efficient in some ways. But it is what it is. That's the reality of the world that we live in. And I think that we don't do ourselves a service when we try to make it an autocratic process.

I mean, why have a committee at all? Why not just appoint a person and let him make all the decisions? I don't necessarily think that's an efficient way to do it, either. But to have a committee where you want diverse views to try to hash out a decision, and then try to hide all that, defeats the purpose of having a committee in the first place. Public confidence in the Fed is essential and the committee structure with differing views helps build confidence in the institution. The alternative is a model that depends solely on the views of one powerful individual. That model detracts from the institution but is a tension that exists and the one promulgated by the media and others when they constantly refer to the Greenspan Fed, the Volcker Fed, or the Bernanke Fed. Ben Bernanke wanted to de-personalize the Fed; he believed that the public's trust should be in the institutions, not simply the individual. It is unfortunate that he didn't make more progress toward that goal.

JOHN WILLIAMS: I think that Kevin's paper and presentation—and I agree with Peter's point that your presentation was more pointed than the paper—is really important. I think that first of all, Kevin had this unique opportunity to observe firsthand the Federal Reserve at its critical stages, seeing how it really works from—and I'm going to make a point on this—from a governor's perspective. [Laughter.] Because I think there are some differences. In addition, Kevin has had the opportunity to listen after the fact to the Bank of England's MPC discussions and policy meetings and understand—really understand—how those work. I learned a lot from talking to you about this earlier, and I've learned a lot from this paper. And I think this is the kind of thing I give John credit for organizing this conference. We should be thinking through these issues and questioning the structure of our policy meetings. In this regard, I'm going to bring up a couple things that I think are particularly relevant.

The first is—you didn't talk about this, and maybe Andy and Bill are going to chew me out about this—but the phrase I use to describe how the Federal Reserve works is called the "strong staff model." The staff of the Board of Governors, the hundreds and hundreds of PhD economists and lawyers [laughter] basically are the permanent component, if you will, if I'm going to do a time-series econometrics term here, are the permanent component of the Federal Reserve System. They're the ones who actually have all the information, they're the ones who have all the resources, and they're fantastic at their jobs. The governors come and go. The governors currently have no personal staff resources to them, although I think that is changing somewhat and is part of the bill that's being considered in the Senate. That's very different from how it works at the twelve Federal Reserve Banks. We have dedicated staff supporting us in preparation for FOMC meetings. I have twenty-seven PhD economists. Same goes for Charlie, when he was in Philadelphia with Mike and others, an incredible team. And what do we do a week before the FOMC meeting? We have all those things that Kevin wished he was having. We have those open debates. We have the closed-room discussions—so it's true of all the other banks too—where we constantly challenge each other. And I'll add—apparently, there's no sense at my bank that you can't tell the president of a Federal Reserve Bank that he's completely wrong and doesn't understand anything. And that's a good thing. So I think that in fact, what's interesting about our structure is a lot of what you're talking about is either happening on the third floor of the Federal Reserve Board—that's where the staff are hashing out a lot of issues and the memos and everything—but it's also happening at the twelve Federal Reserve Banks. So really, I come to the FOMC meeting, and I do have prepared remarks. I try to respond to what's happening at the meeting. But I come into

the meeting after having read through all the memos and briefings, having thoroughly talked to people about this, and have thought through a lot of these issues. And so I think there is a difference in terms of how we work, because unlike the Bank of England, the external—because as I understand, Paul correct me—the external members don't have this kind of dedicated staff in the way that we do.

TUCKER: Not in the way that regional Federal Reserve Banks do. But individual policymakers each have a small staff supporting them. I, as a governor, had an economic adviser as well as a private secretary (a central banker), and the four "externals" are supported by their own unit, as well as having access to the main staff directorates.

WILLIAMS: Right. So I think there is a difference there in how our structures work. The second thing I wanted to bring up is the publication of transcripts. To me, it's simply not an issue. I couldn't care less that my words will be made public in five years. Five years to me is an eternity. I go out and speak regularly about the economy and monetary policy, for better or for worse, and I took, Kevin, your remarks that it was a good thing. [Laughter.] For me, what's important is that we've got to get the policy right. Peter, I don't know if you said it, Kevin you said that, we've got to get the policy right. So transcripts don't bother me.

What bothers me is actually the minutes. So what's happened with the minutes is actually very different from what you've talked about. Today, the minutes are incredibly detailed. You know, in the Fed we love all these words like "a few," "some," "many," all of these things, and everybody, whether in the media, or in the markets, is fixated on how many people said what according to the minutes. It's like they are recording how many thought the sun rises in the east, versus the sun rises in the west. So we're literally now in a situation, where if I don't say, "Q1 growth was weak," it might say in the minutes, "A few

members thought Q1 growth was weak." What were the rest of us thinking? That it was strong? I don't know. So we're getting ourselves into this kind of transparency that is getting in the way to having meaningful conversations. But I do think that the points you raised in your paper and in the discussion around this—these are things that we really should be thinking a lot more about. And I've heard Charlie say this. I've heard others say this. The goal is not transparency. The goal is clarity. The goal is making monetary policy more effective.

TUCKER: First of all, to Kevin and Peter, this is incredibly stimulating, really wise words from both of you, if I may say so. And for what it's worth, even though I've never attended an FOMC meeting, I've been hearing accounts of FOMC meetings for about a quarter of a century and I absolutely recognize the distinctions you describe and, at least from the perspective of those of us in the Bank of England when we were granted independence in 1997, they're deliberate. We wanted a very different style of committee. We thought—and, more important, Gordon Brown and Ed Balls thought—that a truly one person-one vote committee was a precondition for independence.

But I want to come back to a couple of points that George Shultz made. One was about separating the role of the staff from that of the policymaker. The UK set-up most definitely reflects that, but with the opposite conclusion in terms of the staff forecasts. There is not one. Because if the staff made the forecasts, every time they presented the labor market data to you, or the GDP data, or anything else, there would be a risk that their forecast would color their interpretation of the data, because they would be invested in *their* forecast. And during my time that created a battle (with a small "b") within the Bank of England, because the staff thought that they would have more rewarding jobs if they produced a staff forecast. And our view was, we would really like your jobs to be more rewarding, but we're even

more keen on you giving us a reading of the monthly and quarterly data that is as objective as possible, plus in a one person-one vote committee we need to forge a collective forecast if we can, as that process exposes our underlying views of what is going on in the economy. I don't know whether you attended those as well, Kevin, but there are half a dozen or so half-day forecast-round meetings each quarter. These are the most remarkable meetings. It is the opposite of the strong staff model. The UK model absolutely depends upon each of the policymakers serving fairly long terms. The regional Fed presidents do so here, but I have a concern that in the United States, governors are serving shorter terms. This relates to what I was talking about this morning. Given the extensiveness of the power of today's central banks, I think a decent case could be made for service on central banking policy bodies coming late in life, with long terms that everyone served, and then straightforward retirement from active life—like Supreme Court justices. I think that with these super-powerful institutions, society has to protect itself from policymakers leaving office early and having other things they want to do rather than gardening, which, as I say, is how things are for our top judges. Coming to the point, I think that what I've just described is absolutely antithetical to a chair-centered committee.

In the same vein, in today's world, which is very different from even only twenty years ago, in order to get governors to serve longer, my guess is that it is important that they do have a staff.

The other points I wanted to pick up were about transparency and transcripts. I think this whole debate about transparency and transcripts, seeing exactly who says what to whom when, is actually very closely linked to this morning's discussion. The more the goals are properly framed, the more the central bank is constrained to reveal its strategy. If that is correct, it reduces

the imperative of the public, journalists, Congress, Parliament seeing everything policymakers have said to each other in order to keep a check on whether the central bank has departed from its objective and is up to something else. The less scope there is for slacking, the less you need to guard against it by having, if you like, tape recordings, transcripts, of everything. That is not a decisive case against transcripts, but it illustrates how the design of regimes has to be holistic.

In the case of the Fed, I think a very important part of the existing regime is that no more than three governors can meet without minutes being published. A worthwhile concern lies behind that, but it means that the kind of deliberation that John and Charlie describe in their institutions is almost impossible. The upshot is that, under Kevin's account, there is in effect a double constraint, where deliberation doesn't happen in the FOMC meeting, and it can't happen outside the meeting without breaking the law. That's the kind of issue that those interested in Fed reform should be debating at the moment.

The final thing I would say about the minutes is that right at the outset of the life of the UK's MPC, when I was part of the secretariat, we decided—i.e., Eddie and Mervyn and the rest of us—very explicitly not to use code words such as "measured pace" or anything like that. We were concerned that code words could become slogans with their own life, where the committee wouldn't be able to keep control of what they meant. There is a risk that you get locked into such code words. As secretary, I was under instruction to just write in English: don't try and fall back on slogans month after month, to represent the discussion. Charlie summed it up: clarity.

The point of saying that is that it is another manifestation of how the design of policy regimes is (or should be) holistic. In a chair-dominated committee, the ordinary members can signal that they will vote against the chair. Consensus can then

end up being forged through drafting of inherently ambiguous language, with members each finding what they want in the words but also with the meaning being determined by the interpretation of financial markets. By contrast, in one person-one vote committees, you get more minority votes (which should not be thought of as "dissents" because they are not dissenting but, rather, expressing their policy preference). But that kind of approach could not work with a very large committee, such as the FOMC.

ANDREW LEVIN: I thought this was a brilliant paper. I'm really glad that you wrote it. Hopefully you'll write sequels. I guess that I've often heard the phrase that the Federal Reserve is among the most transparent central banks in the world. And when I hear that phrase I get frustrated, because it doesn't seem accurate. And I think one rationale that's given for saying so is that the FOMC is practically unique in producing complete meeting transcripts that are published five years later. But the release of those transcripts is completely different from what we were discussing this morning about the need for the FOMC to explain the rationale for its decisions to the public in a timely way. The transcripts have nothing to do with that at all. Therefore, I'd just like to add a few constructive suggestions about where there could be room for improved clarity of explanation.

First, why doesn't the Federal Reserve bring in an outside expert like Paul Tucker or someone else from the Bank of England? Or Lars Svensson? Or Carl Walsh? To my knowledge, many central banks around the world have regular initiatives where they bring in a recognized expert like Kevin to look at how things are done on the forecasts, on the policy process, on how the research is organized, how the research can be more policy-relevant. And that has not happened at the Fed, and it should happen, and it can happen. And it shouldn't have to happen because Congress requires it. It should be voluntary.

Second, I fully agree with John Williams that the staff plays a crucial role at the Federal Reserve. At the European Central Bank, the staff forecast is published four times a year in the ECB monthly bulletin. There's no reason why the Federal Reserve couldn't voluntarily start to do that. Those are all things that can be worked out. But if the Fed wants to be on the frontier of transparency and clear communication, I think that would help a lot, because right now the FOMC minutes only include one or two paragraphs of general qualitative description about the staff forecast. And then Fed watchers are just looking closely at those few words trying to make some inferences about the staff forecast.

Third, the Fed should publish quarterly monetary policy reports. In fact, the Supreme Court provides a reasonably good analogy for this approach. The FOMC needs to have a policy strategy that provides the rationale for its specific decisions. And the FOMC chair is generally the natural person to figure out that strategy, except in rare instances where a chairperson might be too far from the consensus view and hence wouldn't be able to draft the explanation for the committee's decision. And that happens with the Supreme Court once in a while, too. But the chair would generally oversee the drafting of the majority view. And then there can be concurring opinions from committee members who broadly agree with the majority view but maybe have a few qualms. And then there could be dissenting opinions, and those dissenting opinions could be joined together, just like with the Supreme Court. With this sort of approach, the public would be able to see the rationale for the decision as well as the diversity of views, and the deliberations in a sense would become much more transparent through that kind of document.

So these are all ways that I think the Federal Reserve could very substantially improve the clarity of its monetary policy communications.

MICHAEL DOTSEY: A very quick comment on Kevin's remark regarding John Williams giving a speech and moving the two-year rate, yet he might not be moving his colleagues. To me that signals two things—the great credibility that the Fed has and the uncertainty in the market. You're continuously updating your beliefs as you get new information, which is a greatly preferred position to that of a Swiss National Bank, for instance. Right now the market is ignoring it, because they have no more credibility. By the way, Peter, that last remark is my personal one, not that of my employer. [Laughter.]

JOHN COCHRANE: I'd like to relate this to the discussion about rules we were having this morning. Peter said something very important: effective committees agree on a goal. Yet when I look at the Fed I see the opposite picture. The huge debate is really about: What are the goals? I made a little list: inflation, unemployment, employment, labor force participation, and all these broken down by many demographic groups, output gaps, financial stability, asset prices, credit spreads, stocks, the health of big banks, inequality, credit access, and who knows what else. The Fed is fighting about what are the goals, and the goals are rapidly expanding. As I mentioned this morning, perhaps the most crucial part of a rule such as John Taylor's is the implied list of things that the Fed should *not* pay attention to, should not target, and for which the Congress will not hold the Fed accountable.

Of course, it's much more effective if goals and limits come from within the institution, and the institution owns them, rather than having goals shoved down its throat. Among other problems, the institution is likely to subvert externally demanded goals.

Inflation is an interesting example. You said "price stability," mirroring the language of the legislation governing the Fed. The Fed has artfully interpreted that to mean 2 percent inflation

forever. The Fed has invented its own goal. Whatever Congress passes may well be ignored.

I've never been to an FOMC meeting, and I've never been to a Bank of England meeting, but I've been to a meeting that actually functions pretty well—the University of Chicago faculty meeting, where we decide who gets tenure and who doesn't get tenure. A few features seem important and relevant here. First: dissent without reprisal. You can disagree, and offer dissenting opinions, but in the end after the vote is taken, you close ranks and take joint responsibility. We don't re-argue old cases, we don't bear grudges for contrary opinions—or at least doing so, which does happen, is regarded as petulant bad form. We don't later say, "Well, I voted against it," or "I pointed out how bad that paper was." Or, "Now he's a superstar, aren't you ashamed you voted no?" As a result, people do their homework, discuss the papers, think about the case, and revise their opinions when colleagues argue effectively. As a result, cases are argued on the merits, not logrolled: you vote for my candidate, and I'll vote for yours.

This outcome is a result of culture, not rules. That's how it worked at Chicago, but other places are not so effective. People don't read papers, or decide the fix is in and just go along, or logroll.

Second, you're constantly talking about the goals. In most cases, we're really not talking about whether Paul should get tenure or not, we're talking about what are our standards for tenure. The decision at hand is usually decided, but most of the discussion is about resetting the standards for the next decision.

And that argues against something Kevin mentioned. More frequent meetings are useful, even when there's no data, because we've got to keep talking about: What are the goals, what are we really here for?

FISHER: Quickly, I dropped out of my notes the thought that part of what I think effective bodies do, is they know when they're

having a dialectic discussion clarifying the objective, and they can separate that from an argument about the forecasts or a judgment call. They know when they're refining the objective. And that's in part my answer to Charles, which is if I thought that the dissent and the noise and the decision coming out was a rounding error, I'd be less worried. I'm afraid, as John was just saying, it's actually about objectives. And that feels very destructive. And so I'm fine with robust argument, and I'm fine with dissent in principle, but it feels like a jump ball on what the objective function is.

PLOSSER: Well, I was going to say I agree. I think a lot of what is being discussed is about the objectives, and the vagueness of the mandate doesn't help. Mandates that are vague and, perhaps, not even achievable leave room for much debate over policy decisions.

WARSH: Yes, in fifteen seconds, a response to John Williams's last comment: So there's nothing wrong with the meetings themselves, but the meetings beget expectations that there will be outputs: a new forecast, a statement for the press (Binya and the rest of the media), a new policy outcome even based on preciously little data that emerged in the inter-meeting period.

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