Stanford University

Hoover Institution

Central Bank Governance and Oversight Reform: A Policy Conference

May 21, 2015

Institutional Settings: Designs, Deliberations and Decisions

Remarks by

Kevin Warsh^{***}

^{***} Distinguished Visiting Fellow, Hoover Institution, and Lecturer, Stanford University Graduate School of Business; previously, member of the board of governors of the Federal Reserve and member of the Federal Open Market Committee.

Introduction

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.

Considerable 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 on 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 (the Bank), 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

¹ http://www.bankofengland.co.uk/publications/Pages/news/2014/168.aspx.

transparency to its international peers, and recommended certain reforms.² In the course of the review, I listened to the discussions 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 policy-making committees.

How consequential is a policy-making 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 1 illustrates the pre-requisites for sound decision-making: high-quality inputs, optimal design of decision-making bodies, and crucially, an institutional setting that fosters genuine deliberation.

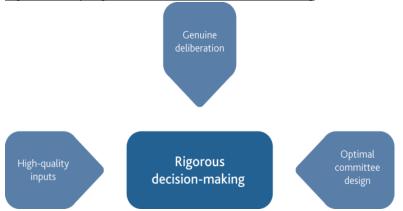


Figure 1: Key Ingredients to Sound Decision-making

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 this paper.

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.

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

- Janis' 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."

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

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."

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 characterised by persuasion and lobbying.
- Deliberation of multiple alternatives; encouragement of dissension. Inquiry cultivates and values
 minority views, and participants are comfortable raising alternatives. Inquiry processes tend to be
 characterised by thoughtful analysis of multiple alternatives, and usually avoid settling on the easy,
 obvious answer too quickly. Advocacy, by contrast, tends to supress 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 characterises inquiry processes. It allows people to express differences openly and challenge underlying assumptions; participants in inquiry tend to be accepting of constructive criticism.

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

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 – either in the private sector 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

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 matter is consequential. The superiority of smaller committees with committee members of 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 **Figure 2** below.

Figure 2: Elements of Optimal Committee Design'	

Clear objectives and independence	Clearly defined goal and efficient instrumentsHigh degree of central bank independence					
Size	Not much larger than five members					
Measures to avoid free-riding	Easy identification and evaluation of individual contributions					
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 					

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

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

⁷ As outlined by Maier (2010)

<u>From Theory to Practice: Design Features of Monetary Policy Committees</u> 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 **Figure 3** shows, the number of decision-makers, decision-making protocol, and principals in attendance diverge markedly among leading central banks.

Figure 3:	Comparison of Committee Designs	

	Bank of Canada	Bank of England	Bank of Japan	F	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: Warsh Review, Bank of England (a)

The ECB and Bank of England have each announced their intention to move to 8 monetary policy meetings per year rather than 12, as is recent practice.

(b) As of January 2015. (c)

(d) Monetary policy decisions at the RBNZ are made by the Governor.

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

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 policy makers 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.

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, in part, due to the relatively small number of people in attendance at the policy meeting. There are typically around fifteen people present at the MPC's monthly policy meetings – the nine Committee members, a representative of HM 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

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 analysis.

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 decision. Most members were in fully advocacy mode. They tried to persuade others of the merits of their position. Members defended their positions, and marshalled particular, sometimes selective, data to buttress their preferred policy stance. Members tended to devote their speaking time to advocate their positions, seeking to influence the views of their colleagues in anticipation of future policy decisions.

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

In sum, the MPC is endowed with certain institutional attributes that lends itself 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 12 voting members. When fully constituted, seven of the 12 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 that of up to 14 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. 19 people convene in the discussion (voters and non-voters alike), and about a total 60 people are in attendance, including a range of subject-matter experts on key aspects of the economic and financial landscape.

While each of 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.

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 fully 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

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

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 the 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 distil 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 be less willing to change policy positions over time. For example, the number of dissenting opinions expressed by voting members fell from 48 (between 1989 and 1992) to 27 (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 U.S. 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 dyamics 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 riskaversion 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 in the institution's environment. Those that 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 bi-weekly 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 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 importance to delivering sound policy outcomes for the benefit of the overall economy.

 $^{^{10}}$ See http://www.federalreserve.gov/aboutthefed/boardmeetings/sunshine.htm for more.

References

Barabas, J (2004), 'How Deliberation Affects Policy Opinions' *American Political Science Review*, 98(4) pp. 687-701

Blinder, A (2002), 'Through the Looking Glass: Central Bank Transparency', CEPS working paper no. 86. Princeton University

Blinder, A and Morgan, J (2005), 'Are Two Heads Better than One?: Monetary Policy by Committee' Journal of Money, Credit and Banking 37(5), pp. 789-811

Chambers, S (2004), 'Behind Closed Doors: Publicity, Secrecy, and the Quality of Deliberation' *The Journal of Political Philosophy* 12(4) pp. 389-410

Dincer, N and Eichengreen, B (2014), 'Central Bank Transparency and Independence: Updates and New Measures' *International Journal of Central Banking*, 38(3), pp. 189-253

Eijffinger, S and Geraats, P (2006), 'How transparent are central banks?', *European Journal of Political Economy*, 22(1), pp. 1-21

Fishkin, J (1991), *Democracy and Deliberation: New Directions for Democratic Reform*. New York: Yale University Press.

Garvin, D and Roberto, M (2001), 'What You Don't Know About Making Decisions' *Harvard Business Review* 79(8), pp. 108-116

Geraats, P M (2002), 'Central Bank Transparency' Economic Journal, 112; F532-F565

Hansen, S, McMahon, M and Prat, A (2014), 'Transparency and Deliberation within the FOMC: A Computational Linguistics Approach', Centre for Macroeconomics

Hambrick, D and Mason, P (1984), 'Upper Echelons: The Organization as a Reflection of Its Top Managers' *The Academy of Management Review*, 9(2), pp. 193-206

Janis, I (1972), Victims of Groupthink. New York: Houghton Mifflin

Janis, I (1982), *Groupthink: Psychological Studies of Policy Decisions and Fiascoes.* 2nd edn. New York: Houghton Mifflin

Lombardelli, C, Proudman, J and Talbot, J (2005), 'Committees Versus Individuals: An Experimental Analysis of Monetary Policy Decision Making' *International Journal of Central Banking*, 1(1) pp. 181-205

Maier, P (2010), 'How Central Banks Take Decisions: An Analysis of Monetary Policy Meetings', in P. Siklos, M. Bohl, and M. Wohar (Eds.), Challenges in Central Banking: Cambridge University Press, 320-356.

Meade, E and Stasavage, D (2008), 'Publicity of Debate and the Incentive to Dissent: Evidence from the US Federal Reserve' *The Economic Journal* 118(528) pp. 695-717

Mellahi, K and Wilkinson, A (2004), 'Organizational Failure: A Critique of Recent Research and a Proposed Integrative Framework' *International Journal of Management Reviews* 5-6(1) pp. 21-41

Mill, J (1859), On Liberty. 2nd edn. London: Savill and Edwards

Reis, R (2013), 'Central Bank Design', Journal of Economic Perspectives, 27(4): 17-44

Schonhardt-Bailey, C (2013), Deliberating American Monetary Policy A Textual Analysis. Massachusetts: MIT Press

Schumpeter, J A (1942), Capitalism, Socialism and Democracy. New York: Harper & Row

Sibert, A (2006), 'Central Banking By Committee' International Finance 9(2) pp. 145-168

Staw, B, Sandelands, L and Dutton, J (1981), 'Threat Rigidity Effects in Organizational Behavior: A Multilevel Analysis' *Administrative Science Quarterly* 26(4) pp. 501-524

Warsh, K (2014), Transparency and the Bank of England's Monetary Policy Committee