

Robust Design Principles for Monetary Policy Committees

David Archer and Andrew T Levin*

1. Introduction

During the 1980s and 1990s, economists reached a broad consensus about the rationale for central bank independence. Generally speaking, that consensus emphasised the role of statutory provisions to insulate monetary policymaking from fiscal pressures and from political interference aimed at short-term electoral outcomes. Such provisions included various aspects of the central bank's governance (e.g. staggered terms of office), clarification of the monetary policy objectives in its legal mandate, and removal of constraints on its ability to adjust its policy instruments in order to achieve those objectives.

In the light of subsequent experience, however, it has become increasingly evident that the institutional design of monetary policymaking needs to be revisited.

- *Statutory provisions are not sufficient to protect the central bank from political interference aimed at short-term electoral outcomes.* One obvious pitfall is that such statutes can be weakened or removed by subsequent governments. In the absence of mechanisms for the orderly involvement of elected officials in periodic strategic choices, politicians may opt for disruptive legal changes or seek to exert pressure via informal channels. Better governance mechanisms can help alleviate such risks, but ultimately the operational independence of the central bank can only be sustained over time by fostering broad public support for its mission.
- *The objectives of monetary policy need to be transparent but cannot be adequately encapsulated and enshrined in a static legal mandate.* Analytical studies have often represented the monetary policy committee's (MPC's) goals in terms of a quadratic loss function, but such a formulation assumes that the optimal monetary policy is completely invariant to uncertainty about the economic outlook. By contrast, the experience of the past decade has underscored the importance of risk management in determining the appropriate policy strategy.
- *Expert judgement is required at all levels of the monetary policy process.* There is evidently no single 'correct' model or analytical approach for setting the course of monetary policy. Thus, the role of judgemental input is not merely a matter of using anecdotal information

* David Archer is the head of the Central Banking Studies section at the Bank for International Settlements (BIS). Andrew Levin is a professor of economics at Dartmouth College. We appreciate helpful comments from Andrew Berg, Danny Blanchflower, Michael Bordo, Claudio Borio, Alina Carare, Chris Erceg, Peter Fisher, Jinill Kim, John Murray, Hyun Shin, Masaaki Shirakawa, Lars Svensson, Harald Uhlig, Tsutomu Watanabe and Tack Yun. The views expressed here are solely those of the authors and should not be interpreted as representing the views of the BIS or any other person or institution.

to gauge current economic and financial conditions. Rather, good judgement is essential in characterising the dynamic behaviour of the economy, identifying material risks to the economic outlook, and formulating contingency plans to address such risks.

- *Excessive insularity and groupthink can hinder the effectiveness of monetary policymaking.* Risk management necessarily involves questioning standard assumptions and encouraging outside-the-box thinking. Thus, even a committee of experts can be susceptible to groupthink if its members have similar educational and professional backgrounds and hence naturally tend to share a common perspective. Groupthink can also emerge from a policy process that emphasises consensus rather than individual accountability.

In this paper, we formulate a set of robust design principles for MPCs, that is, the decision-making body within the central bank that is responsible for setting the course of monetary policy. This set of principles is intended to strengthen the MPC's transparency and accountability while mitigating the risk of severe policy errors resulting from political interference or groupthink. Thus, these principles encompass the MPC's governance as well as the procedures for determining its policy strategy.

The governance principles can be summarised as follows. The MPC should be a fully public institution. Its size and voting procedures should foster genuine engagement and diminish the influence of any single member. Each member should serve a staggered non-renewable term that lasts longer than the political cycle. The procedures for selecting MPC members should foster a diverse set of perspectives and forms of expertise. Each member should be individually accountable to elected officials and the public. And the MPC should undergo periodic external reviews of its strategy, procedures and operations.

The procedures for determining the MPC's policy strategy should facilitate its democratic legitimacy and accountability while protecting the MPC's operational independence. Therefore, this determination should involve a multilayered approach as follows:¹

1. The MPC's legal mandate should establish its goals and authority in fairly broad terms, so that this statute can remain in place over a time frame of multiple decades.
2. The law should require the MPC to specify its targets and instruments in a policy framework document that is approved or endorsed by elected officials, and this framework should be revisited regularly every five years.
3. Given those targets and instruments, the MPC should formulate a systematic and transparent strategy that guides its policy decisions, and the MPC should reconsider its strategy on an annual basis.
4. The MPC should publish regular reports explaining its specific policy decisions in terms of its framework and strategy; these reports should also convey the diversity of views of MPC members.

1 In terms more familiar to academic macroeconomists, the overarching objective function should be determined in layer 1; selection of the policy framework in layer 2; selection of a policy reaction function in layer 3; and tactical choices on instrument settings in layer 4.

Over the past couple of decades, academics and government officials have collaborated with the World Bank to produce a 'body of knowledge' about the institutional design of regulatory agencies overseeing utilities in the energy, transportation and telecommunications sectors.² That work has emphasised the importance of operational independence and accountability, thereby ensuring that the regulator promotes the general welfare rather than catering to politicians or special interests. Moreover, a recurring theme is the crucial role of legitimacy because an agency's operational independence rests on sustaining public confidence in the integrity and effectiveness of its decisions.

While the practical challenges of monetary policymaking are distinct from those of utility regulation, many of the underlying institutional issues are remarkably similar. For example, electricity producers and end users make forward-looking decisions that hinge on the rate structure and its expected path. Hence the regulatory framework needs to be systematic and transparent. Moreover, a given rate structure cannot be set in stone because regulators face substantial uncertainty about technical innovation and other structural factors that may warrant adjustments to the regulatory framework.

As emphasised by Tucker (2018), issues of public legitimacy and operational independence are also crucial for the design of financial regulatory agencies. Indeed, the onset of the global financial crisis (GFC) underscored the complex and subtle linkages between monetary policy and financial stability. Many central banks now have responsibility for monitoring the financial system and identifying emerging risks, and some central banks have direct oversight of commercial banks and other systemically important financial institutions. However, a detailed consideration of such arrangements is beyond the scope of our analysis.

The remainder of this paper is organised as follows. Section 2 considers the key pitfalls that can induce severe monetary policy errors. Section 3 identifies design principles for governance and transparency. Section 4 concludes.

2. Basic Risks

Unlike stylised academic models, the actual conduct of monetary policymaking inevitably involves some degree of judgement – at least in economies where the foreign exchange value of the currency is not permanently fixed. In effect, such judgements may be open to question in 'real time' (at the time when a given decision is made) and often remain so for many years afterwards. The quality of such judgements can certainly be enhanced through quantitative research and conjunctural analysis. But the future remains unknowable, and the dynamics shaping lingering responses to past events remain extraordinarily complex. Predicting future paths will likely always confront pervasive uncertainty; policy choices will rarely be black or white in nature. The crucial task in designing an effective governance structure is thus to mitigate the risk of severe policy errors.

Effective monetary policymaking cannot be achieved through the mechanical application of fixed rules; rather, careful judgement is an intrinsic necessity. Against that background,

² See <<http://regulationbodyofknowledge.org/regulatory-process/institutional-design/>>.

the experiences of many central banks over recent decades highlight two basic types of risk exposure in monetary policymaking: (1) electoral politics are allowed to affect tactical monetary policy decisions, and (2) excessive insularity and groupthink fosters complacency about tacit assumptions, lack of attention to material risks, and failure to prepare contingency plans for adverse scenarios. A comprehensive historical and global review of such experiences is beyond the scope of this paper. Our analysis here focuses on selected case studies that illustrate salient characteristics of these pitfalls.

2.1 Political interference

The collapse of the Bretton Woods system was associated with burgeoning inflation in many advanced and emerging market economies. Monetisation of fiscal deficits was *not* a significant impetus for most of those episodes. Analytical misconceptions of the causes of inflation certainly contributed to these inflation outcomes (Meltzer 2010a, 2010b; DiCecio and Nelson 2013). The truly endemic problem was short-term political pressures, which induced excessively accommodative monetary policies, especially in the lead-up to elections, and kept policy from tightening enough to avoid or reverse the inflationary consequences of earlier mistakes.

Over subsequent decades, many countries around the globe succeeded in fostering low and stable inflation. However, it is essential to recognise that legislative reforms were neither necessary nor sufficient for achieving that outcome. Rather, the fundamental challenge is to develop and sustain the *transparency* and *legitimacy* of the monetary policy framework, because those characteristics can effectively curtail politicians' ability to interfere with the monetary policymaking process. To illustrate these points, we consider two specific case studies: the roots of the US Great Inflation of 1965–79, and the Venezuelan banking crisis of 1994.

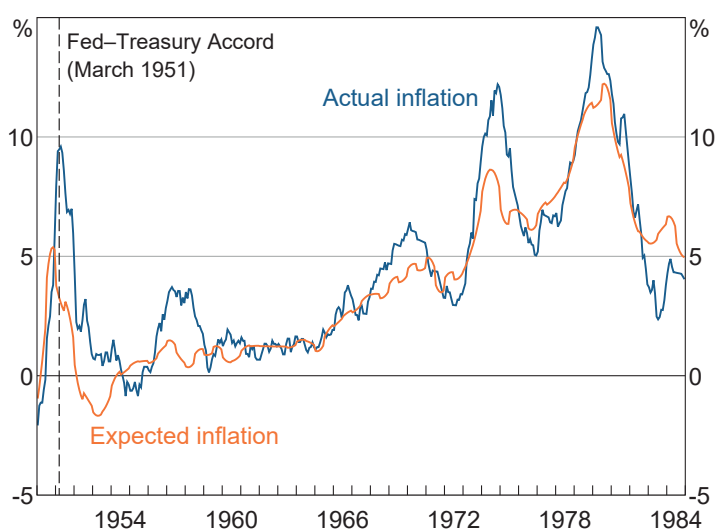
2.1.1 The roots of the US Great Inflation

The Federal Reserve System was established in 1913 but its governance structure was overhauled during the Great Depression in the mid 1930s. In particular, the Banking Act of 1933 established the Federal Open Market Committee (FOMC) as the monetary policymaking body. The voting members of the FOMC include the seven members of the Board of Governors, the president of the Federal Reserve Bank of New York, and four of the presidents from the other eleven regional Federal Reserve Banks who cast votes on a rotating basis.

From a legal standpoint, the FOMC's structure might have seemed sufficient to insulate its policy decisions from political interference. After all, the members of the Board of Governors – who are nominated by the US President and confirmed by the Senate – have staggered 14-year terms of office and can only be removed by the US President 'for cause' (e.g. serious misconduct or malfeasance). Moreover, the president of each regional Federal Reserve Bank is appointed by its board of directors and can only be removed 'for cause' by the Board of Governors, but not by the US President or Congress.

Nonetheless, the FOMC remained subservient to the executive branch for nearly two decades.³ That relationship finally changed in 1951, when the Federal Reserve and the Treasury Department issued a joint accord that distinguished the responsibilities of monetary policy and debt management, and enunciated a commitment to ‘minimize monetization of the public debt’ (Treasury and FOMC 1951). In effect, the FOMC acquired a large degree of operational independence without the enactment of any legislation at all. Over the subsequent decade and a half, the Federal Reserve was remarkably successful in fostering price stability (Romer and Romer 2002; Meltzer 2010a). As shown in Figure 1, actual inflation exhibited significant fluctuations but inflation expectations remained relatively stable until the mid 1960s.

Figure 1: US Consumer Price Inflation



Notes: Actual inflation is measured by the twelve-month change in the consumer price index (CPI); expected inflation is measured by the Livingston Survey of one-year-ahead CPI projections
Sources: Bureau of Labor Statistics; Federal Reserve Bank of Philadelphia

Political interference in FOMC decisions re-emerged during the mid-to-late 1960s and 1970s (Mayer 1999; Meltzer 2010a, 2010b; Levin and Taylor 2013). One stark example is the occasion in which President Johnson took Federal Reserve Chair Martin ‘out to the woodshed’ in 1965 following a hike in the Federal Reserve’s discount rate. Transcripts of President Nixon’s office recordings revealed the behind-the-scenes pressures faced by Chairman Burns in the early 1970s. Federal Reserve officials were also subject to intense political pressures during the early years of the Carter Administration. Consequently, inflation expectations drifted upwards along with actual inflation, indicating that forecasters no longer anticipated that upswings in actual inflation would be purely transitory. By the late 1970s, inflation reached double-digit levels and became known as the Great Inflation (Bordo and Orphanides 2013).

³ During World War II, the Federal Reserve held the short-term Treasury bill rate close to zero and capped the yield on long-term Treasury bonds. After the war ended, the Truman Administration pushed the FOMC to keep providing the Treasury with cheap financing that induced recurring bouts of double-digit inflation (Romero 2013).

At the end of the 1970s, the FOMC finally acted to bring inflation down to low single digits, and since then the conduct of US monetary policy has remained fairly well insulated from political pressures. Several distinct factors are responsible for that outcome: (1) legislative reforms enacted in 1977–78 strengthened the Federal Reserve’s transparency and accountability and required presidential appointees for Federal Reserve chair and vice-chair to be confirmed by the US Senate; (2) President Reagan consistently supported the Fed’s operational independence, and subsequent administrations have generally refrained from commenting on specific FOMC decisions; (3) during the 1970s, the US public became acutely aware of the costs of elevated inflation as well as the macroeconomic instability induced by stop-start monetary policies.

Over subsequent decades, the public became increasingly cognisant that the Federal Reserve is an independent agency, *not* a cabinet office reporting to the President.

2.1.2 The Venezuelan banking crisis of 1994

In the wake of the US Great Inflation, as well as inflationary episodes in numerous other economies, a burgeoning number of studies analysed and documented the merits of insulating monetary policy from short-term political pressures.⁴ In light of that research, central bank independence became a key element of the so-called ‘Washington Consensus’ advocated by the International Monetary Fund (IMF) and other organisations during the late 1980s and early 1990s (Williamson 1990). Soon thereafter, however, events in Venezuela demonstrated that legislation alone cannot insulate monetary policymakers from political interference.

In late 1992, the government of Venezuela granted statutory independence to the central bank in a reform bill that was seen as a paragon of the Washington Consensus. Under that legislation, the central bank would be governed by board members serving staggered six-year terms who could only be dismissed for grave malfeasance.⁵ The central bank was prohibited from lending directly to the government and could only transfer net realised gains. Its board was given full control of its own budget and the central bank would publish semi-annual reports explaining its monetary policy decisions.

However, these reforms were enacted in the midst of severe political turmoil, including mass riots and repeated coup attempts.⁶ During 1993, the incumbent president was impeached on corruption charges and removed from office, and the next presidential administration was elected on a platform that promised a rapid return to populist policies. If the Venezuelan economy had remained quiescent, perhaps the central bank might still have been able to retain its operational independence. But in January 1994, a major commercial bank ran out of funds and triggered a fully-fledged banking crisis.

4 Following the seminal work of Kydland and Prescott (1977), subsequent contributions include Barro and Gordon (1983), Rogoff (1985), Alesina (1988), Rogoff and Sibert (1988), Cukierman (1992), Alesina and Summers (1993), and Persson and Tabellini (1993). For a contrarian view, see Posen (1993).

5 As noted by de Krivoy (2000), one of the seven members of the central bank board was designated as representing the government, but all board members were prohibited from engaging in political activities.

6 In 1989, Carlos Andrés Pérez was elected president on a populist platform but quickly reversed course and accepted an IMF assistance package that included sharp price increases for gasoline and public transport, which in turn generated an intense public backlash. A similar case of abrupt policy reversal can be seen in the 2015 film *Our Brand Is Crisis*.

The central bank had no role in supervision or regulation and hence could not be blamed for the crisis, but it faced intense pressures to monetise the bank bailout. In particular, the central bank extended large amounts of short-term funding to the deposit insurance agency (equivalent to about 4 per cent of Venezuelan gross domestic product (GDP)). That financing was extended on the understanding that the fiscal authorities would refinance those funds in the open market, thereby enabling the central bank to restore its balance sheet and resume its focus on fostering price stability (de Krivoy 2000, pp 137–144). By spring 1994, however, the administration indicated that it expected the central bank to cover the full costs of the banking crisis by drawing down its foreign exchange reserves and expanding the monetary base. Consequently, the central bank chief and two other board members resigned from office and were replaced by officials who were willing to carry out the administration’s new policies.⁷

2.2 Groupthink

Many decades ago sociologists identified ‘groupthink’ as a key form of organisational dysfunction.⁸ In particular, groupthink is characterised by excessive insularity and consensus-oriented decisions that foster complacency and leave an organisation susceptible to catastrophic failure. This phenomenon has been studied extensively by political scientists and business management analysts but has been largely ignored in monetary economics and central banking, apart from the path-breaking study of Sibert (2006).⁹

Prior to the GFC, the dearth of concerns about groupthink among monetary economists likely stemmed from a widespread perception of monetary policymaking as an essentially objective technical task that could be carried out by experts using state-of-the-art analytical tools (Mishkin 2007; Blanchard 2008). By the 1990s and early 2000s, it had become fairly standard for monetary policy decisions to be made by a committee, but that arrangement was mostly viewed as a means of aggregating diverse sources of information about the current state of the economy. There was a broad consensus about the monetary transmission mechanism, as embedded in dynamic stochastic general equilibrium (DSGE) models. And adjustments to the stance of policy were generally framed in terms of the inflation outlook over the medium run: that is, ‘flexible inflation targeting’.

In retrospect, however, it is evident that groupthink was a pervasive problem in monetary policymaking as well as in financial supervision and regulation during the run-up to the GFC. For example, in a retrospective evaluation of the IMF performance, its Independent Evaluation Office stated that, ‘The IMF’s ability to correctly identify the mounting risks was hindered by a high degree of groupthink, intellectual capture, a general mindset that a major financial crisis in large advanced economies was unlikely, and inadequate analytical approaches’ (IMF Independent Evaluation Office 2011, p 1). In the remainder of this section, we highlight some generic elements of the prevailing groupthink and then consider case studies of decision-making during 2007–08 at the FOMC and at the Bank of England.

7 For a vivid recounting of that impasse, see de Krivoy (2000, pp 148–152).

8 See the seminal work of Asch (1951), Whyte (1956), and Janis (1971). For discussion of organisational management issues, see Mellahi and Wilkinson (2004) and Campbell, Whitehead and Finkelstein (2009).

9 See also Buiter (2007, pp 76–80) and Warsh (2016).

2.2.1 Generic elements

Analytical tools. In conducting macroeconomic analysis and forecasting, central banks predominantly relied on linear methods using DSGE models and vector autoregressions (VARs). For example, even though the generic structure of a DSGE model is nonlinear, the standard methodology utilised log-linear approximations around the model's deterministic steady state. Those methods were quite effective in encapsulating the typical macroeconomic dynamics of the 'Great Moderation' era – modest economic disturbances and fairly rapid mean reversion – but proved completely inadequate for assessing nonlinear feedback loops that transpire rapidly during the onset of a crisis.

Core assumptions. A widely held tenet among academic economists and monetary policymakers was that macroeconomic analysis could be de-linked from the analysis of credit markets and institutions. There were a few notable exceptions, including the seminal work of Bernanke, Gertler and Gilchrist (1999) and Christiano, Motto and Rostagno (2003). Moreover, BIS officials repeatedly drew attention to empirical evidence regarding the links between credit and macroeconomic boom-bust cycles (Borio and Lowe 2002; Borio and Drehmann 2009; Drehmann, Borio and Tsatsaronis 2011). But such linkages remained largely absent from the workhorse models of central banks as well as the discussions of most MPCs.

Uncertainty and risks. Prior to the GFC, the mainstream approach in monetary economics characterised the central bank's goals in terms of a quadratic objective function, usually specified in terms of output gaps and inflation gaps (Clarida, Galí and Gertler 1999; Woodford 2003). This formulation, in conjunction with linear macroeconomic dynamics and additive disturbances, implied that the optimal monetary policy could be expressed as a linear targeting rule with the property of *certainty equivalence*: policy could be formulated based solely on the modal outlook without reference to the balance of risks. In practice, many inflation-targeting central banks regularly published fan charts to convey the uncertainty surrounding their benchmark outlook but paid little attention to identifying any specific material risks to that outlook.

Central bank culture. Some former central bankers have occasionally suggested that no-one could have possibly foreseen the onset of the GFC. Nonetheless, as Shiller (2008) noted in an incisive commentary, numerous warnings were indeed raised well in advance of the crisis but were largely ignored by policymakers. For example, in the second edition of his book on irrational exuberance, Shiller (2005) clearly stated that a catastrophic collapse of the housing boom could induce a worldwide recession. Similarly, in a presentation at a major central banking conference, Rajan (2005) flagged the dangers of growing financial imbalances but was harshly criticised by other attendees (see Lahart (2009)). Unfortunately, such reactions were symptomatic of an excessively insular and complacent central banking culture.

2.2.2 Case Study #1: The September 2008 FOMC meeting

From September 2007 to April 2008, the FOMC slashed the target federal funds rate by a total of 3 percentage points to a level that was still a percentage point higher than the trough reached in the previous (and relatively mild) recession a half-decade earlier. At its

meeting in mid June 2008, the FOMC decided to retain that policy setting, stating that the downside risks to economic growth had diminished and that upside risks to the inflation outlook had increased. At the subsequent meeting in early August, the FOMC stated that, 'Although downside risks to growth remain, the upside risks to inflation are also of significant concern to the Committee' (FOMC 2008a).

The next FOMC meeting was held on 16 September 2008, just one day after the failure of Lehman Brothers. Lehman Brothers was the fourth largest US investment bank and key counterparty to a huge array of outstanding financial transactions. At that juncture, one might reasonably have expected the FOMC to take decisive action while issuing a sober but reassuring press release. But in fact the FOMC took no action at all, and its statement was very sanguine, noting that financial strains had 'increased significantly' and that '[t]ight credit conditions, the ongoing housing contraction, and some slowing in export growth are likely to weigh on economic growth over the next few quarters', concluding that '[t]he downside risks to growth and the upside risks to inflation are both of significant concern to the Committee' (FOMC 2008b). Perhaps most remarkably, this was a unanimous FOMC decision, with a recorded vote of 10 ayes and 0 dissents.

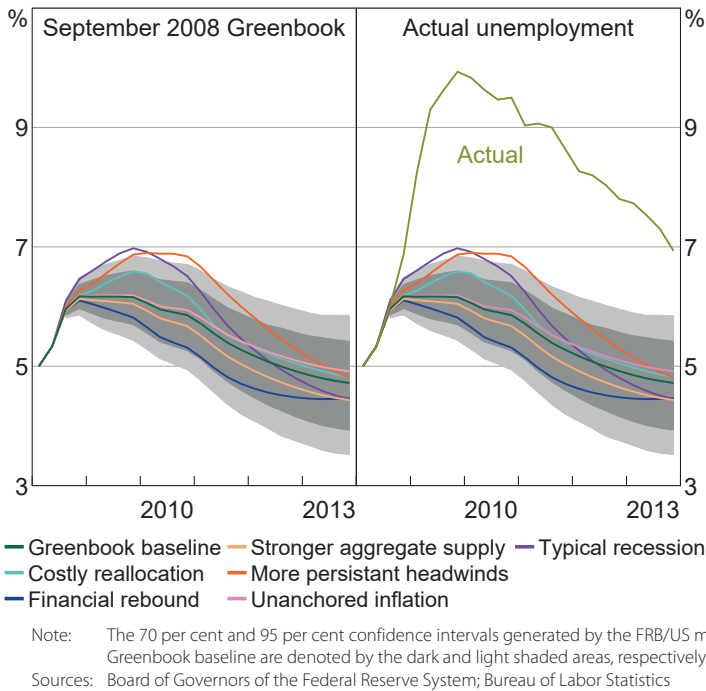
Of course, a public display of unanimity may simply serve as a veneer in instances where the actual debate behind closed doors was highly contentious. In this case, that notion is utterly dispelled by the FOMC meeting transcripts, which are regularly released to the public after a five-year time lag.

The discussion at this particular FOMC meeting was calm, relaxed and light-hearted, with 22 outbursts of laughter that were specifically noted in the transcript (FOMC 2008c). Although the National Bureau of Economic Research subsequently determined that the downturn in US economic activity began in December 2007, the participants at the September 2008 FOMC meeting never referred to the possibility of a 'downturn' and the words 'contraction' and 'recession' were only used a couple of times in reference to credit aggregates. The lone exception was Chairman Bernanke, who refrained from expressing his own views until the end of the discussion and then noted the likelihood that a mild recession was already underway. Moreover, the views of FOMC participants were broadly in line with the analysis provided by the staff. The staff outlook – referred to as the Greenbook – had been circulated a few days earlier. The chief domestic economist provided an update at the FOMC meeting and characterised the macroeconomic outlook as follows:

... certainly the story behind our forecast is very similar to the one that we had last time, which is that we're still expecting a very gradual pickup in GDP growth over the next year and a little more rapid pickup in 2010 (FOMC 2008c, p 20).

Further insight into the staff outlook can be garnered from the Tealbook itself, which is also released to the public after a five-year lag. In particular, Figure 2 reproduces the unemployment outlook that was presented in the September 2008 outlook compared with the actual trajectory of the unemployment rate.

Figure 2: The Evolution of the US Unemployment Rate



While the Federal Reserve Board (FRB) staff benchmark outlook was constructed via a judgemental process, the FRB/US model was used to quantify the degree of forecast uncertainty and to simulate alternative scenarios. The basic specification of the FRB/US model is broadly similar to the DSGE models in use at many other central banks, and its dynamic properties are quite close to those of a VAR fitted to recent decades of US macroeconomic data.¹⁰

The left panel of the figure reproduces the fan chart and alternative scenarios for the US unemployment rate that were shown in the September 2008 Greenbook. The shaded areas denote the 70 and 95 per cent confidence intervals for the benchmark forecast; these confidence intervals were obtained via stochastic simulations using shocks drawn from the estimated distribution of model residuals from 1987 to 2007 (the Great Moderation era). Given the approximate linearity of the model and symmetry of the shocks, these confidence bands imply a very low probability (odds of roughly 50:1) that the unemployment rate would exceed 7 per cent at the end of 2009. The six alternative scenarios illustrated various sources of risks to the outlook, including benign developments (such as a financial rebound) as well as adverse developments (such as persistent headwinds or a typical recession).

Nonetheless, as shown in the right panel, this analysis was grossly deficient in gauging the true magnitude of risks to the US economic outlook. The generic elements noted above are evident in this deficiency:

¹⁰ See Brayton *et al* (1997). For the current FRB/US model, see <<https://www.federalreserve.gov/econres/us-models-about.htm>>.

1. The dynamics of the FRB/US model are essentially linear and cannot capture adverse feedback loops.
2. FRB/US does not explicitly model the banking sector or credit market frictions, which are assumed to be purely exogenous.
3. The confidence bands were generated under sanguine assumptions about the distribution of shocks.
4. The set of alternative scenarios was routinely determined in order to illustrate a range of macroeconomic outcomes that would be broadly consistent with the model-based confidence intervals.

2.2.3 Case Study #2: Voting patterns at the Bank of England in 2007–08

Of course, the Federal Reserve was not the only central bank that was hindered by groupthink during the period leading up to the GFC. For example, this pitfall was also apparent at the Bank of England (BoE). Such an outcome might seem rather surprising, because the design of the BoE's MPC – which had been created just a decade earlier – was specifically intended to foster diverse views and individual accountability. Each policy decision was determined by a simple majority vote, and the tally was recorded in the meeting minutes that were published shortly thereafter. The MPC comprised five 'internal' members (the governor, two deputy governors, and two other senior BoE officials) and four 'external' members who were not full-time employees of the BoE. All MPC members were accountable for explaining their individual views to the BoE's oversight body, whose title ('Court of Directors') reflected its historical roots in the era when the BoE had been a government-chartered private institution. During late 2007 and early 2008, the MPC remained sanguine about domestic and international economic developments. As noted above, the FOMC had slashed the target federal funds rate by 3 percentage points over that timeframe, whereas the MPC cut its policy rate by a modest 0.75 points. Through the spring and summer of 2008, the MPC's predominant concern was the upside risks to inflation. In fact, one member even cast consecutive votes in favour of rate hikes.

Nonetheless, one lone member of the MPC, David Blanchflower, was a consistent advocate for more aggressive monetary easing, which is evident in Figure 3. His remarks to the Royal Society in April 2008 proved remarkably prescient:

For some time now I have been gloomy about prospects in the United States, which now seems clearly to be in recession

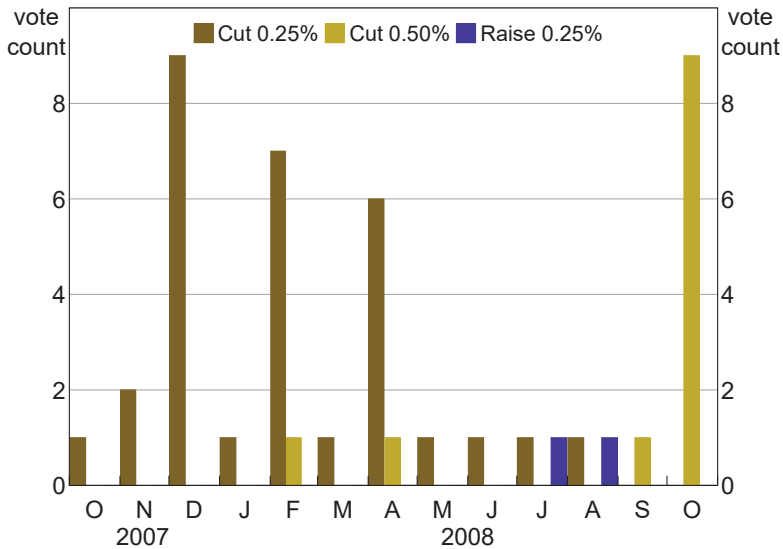
...

Developments in the UK are starting to look eerily similar

...

My biggest concern right now is that the credit crisis will trigger a rapid downward spiral in activity. Now it is time to get ahead of the curve (Blanchflower 2008, pp 16, 21, 23).

Figure 3: Voting Patterns at the Bank of England’s MPC Meetings



Notes: Each bar indicates the number of MPC members who voted in favour of a rate cut of 0.25 per cent, a rate cut of 0.5 per cent, or a rate increase of 0.25 per cent; all other MPC members voted in favour of an unchanged policy rate (not shown)

Source: Bank of England

Blanchflower’s remarks were not mere handwaving: he was a highly distinguished empirical economist, and the comprehensive details of his analysis were issued in a companion paper. The speech itself was published soon thereafter in the BoE’s quarterly bulletin. Unfortunately, his analysis was never discussed internally by the BoE’s Court of Directors, and none of the other MPC members made any public comments endorsing or refuting it (Pilkington 2008; Papadopoulos 2015).

The MPC took no further policy actions until December quarter 2008, when the financial crisis had become truly global and utterly catastrophic. The MPC finally agreed to reduce the policy rate by 0.5 per cent in October and by a further 1.5 per cent in November, thereby slashing the policy rate to its lowest level since the mid 1950s.

Parliament’s Treasury Select Committee subsequently investigated the MPC’s decision-making processes during the lead-up to the financial crisis, and the Committee chair concluded that ‘The Bank appears to have been a very hierarchical organisation, with clear signs of “groupthink” among its leadership’ (as quoted in Papadopoulos (2015)). In particular, all of the generic factors noted in Section 2.2.1 were evidently at work in fostering the prevailing degree of groupthink at the BoE:

- The staff’s macroeconomic analysis was conducted using BEQM, a log-linearised macroeconomic model that was essentially similar to the FRB/US model and to the DSGE models in use at many other central banks.

- The BoE's economic outlook and policy decisions were strongly influenced by the core assumption that macroeconomic analysis could be conducted without referring to commercial banks or credit markets.
- The forecasting process was largely focused on refining the details of the benchmark outlook, while uncertainty was conveyed by fan charts that were generated by stochastic simulations of BEQM using the estimated disturbances from the Great Moderation era.
- The culture of the BoE's staff was highly conservative and hierarchical, with no tolerance for questioning of conventional wisdom or outside-the-box thinking.¹¹

Beyond those generic patterns, it became clear that the extent of groupthink was magnified by specific shortcomings in the BoE's governance:

- The MPC's structure was intended to foster diversity of views, but, in fact, its decision-making process remained highly autocratic. One of the deputy governors, Sir John Gieve, stated that 'It is a monarchy and always has been – sometimes constitutional, other times autocratic'. Kate Barker, who served as an external member from 2001 to 2010, subsequently indicated that 'My overriding feeling was how old-fashioned and hierarchical the Bank was'. A former head of division noted, 'If the governor has the inclination, he can decide anything'.¹² Blanchflower (2012) gave an essentially similar but more colourful characterisation, stating that the governor 'controlled the Bank with an iron fist, slaying any dissenters in his path'.
- The Court of Directors was intended to oversee the BoE's strategic direction and processes, but in practice its role was constrained by lack of information, formality, and deference to the governor's views. Indeed, Sir John Gieve acknowledged that 'Court was largely out of the loop' (Giles 2012) and the chair of the parliamentary committee stated, 'The Court was almost entirely reactive: there is hardly any sign of its non-executives coming forward with suggestions or constructive challenges to the assumptions of the executive' (Giles 2015).
- Parliament's oversight of the BoE was deficient for similar reasons. Rachel Lomax, deputy governor between 2003 and 2008, subsequently emphasised that '... the Select Committee should expect to hear from the deputies as well as the governor, and if there are differences of view, they should be aired, even though the governor will normally have the last word' (as quoted in Giles (2012)).

3. Robust Design Principles

Taking lessons learned from these case studies, we have formulated a set of design principles for MPCs to strengthen their governance and transparency.

¹¹ As reported by Giles (2012), one former BoE official stated that 'As a member of staff, there is no incentive to rock the boat' and another indicated that 'Within the Bank of England hierarchy, the staff dance to the governor's tune'.

¹² All three quotations are taken from Giles (2012).

3.1 Governance principles

Principle #1: The MPC should be a fully public institution whose members are accountable to elected officials and the general public.

Among the other advanced economies, the Sveriges Riskbank is the oldest central bank and has been fully public since its inception in 1768. The Bank of England was originally chartered as a private corporation but became public in 1946. The Bank of Canada was established in 1934 as a private corporation but was converted into a public institution just a few years later. The Bank of Japan has outstanding shares of stock, but a majority of those shares are held by the national government and private shareholders have no role in its governance. Likewise, a majority of the outstanding shares of the Swiss National Bank are held by Swiss public institutions.¹³

The European Central Bank has been a public institution since its inception in the 1990s, and 16 of the 19 national central banks (NCBs) in the euro area are fully public. (The most recent ownership transition occurred at the Oesterreichische Nationalbank, which became a public institution in 2010.) The National Bank of Belgium has outstanding shares but a majority are held by public institutions. Thus, the central banks of Greece and Italy are now the only remaining NCBs that are majority-owned by private shareholders.

In nearly all of the emerging market economies, the central bank is a fully public institution. The two exceptions are the Central Bank of the Republic of Turkey and the South African Reserve Bank.¹⁴ In both cases, private shareholders have no role in selecting central bank executives or in the monetary policymaking process.

Finally, the US Federal Reserve System has a complex governance structure involving both public and private elements. The Federal Reserve Board of Governors is an agency of the federal government. By contrast, each regional Federal Reserve Bank is owned by commercial banks which select two-thirds of its directors – half of whom are involved in selecting its president, who sits at the FOMC and votes regularly on monetary policy.

Principle #2: The selection of MPC members should ensure diverse perspectives and expertise.

Earlier studies of MPCs were mostly focused on heterogeneous preferences (hawks/doves) or the heterogeneity of anecdotal information. In contrast, this principle combats groupthink by appointing experts with diverse educational backgrounds and professional experiences. In large countries and federated systems, geographical diversity may also be important for fostering and maintaining public legitimacy. As discussed below, diversity may be enhanced significantly by having a substantial portion of members of the MPC who are not full-time employees of the central bank.

13 The paid-in capital of the Bank of Japan has a nominal value of 100 million yen (roughly US\$1 million), and 55 per cent of those shares are held by the Japanese government. The paid-in capital of the Swiss National Bank has a nominal value of 25 million Swiss francs (roughly US\$25 million), and about two-thirds of those shares are held by Swiss public institutions.

14 The South African Reserve Bank (SARB) has 2 million shares with a nominal value of 1 rand per share and a dividend rate of 10 per cent, so that the total annual dividend payout is 200 000 rands (about US\$15 000). In December 2017, the African National Congress approved a resolution to make the SARB fully public, and its executive committee has recently initiated a process of preparing draft legislation to implement that resolution.

Principle #3: The process of selecting MPC members should be systematic, transparent, and consistent with democratic legitimacy.

The process should have ‘checks and balances’: multiple steps involving different sets of decision-makers. Transparency mitigates the risk of undue influence by special interests. The process should foster public confidence in the integrity of the institution.

Principle #4: The MPC’s size and voting rules should foster genuine engagement among members and diminish the influence of any single individual.

This principle mitigates the risks of autocracy, which has pitfalls like those of groupthink. Previous analysis generally prescribed a fairly small size as optimal for engagement (e.g. five members), but a somewhat larger size may be needed to encompass sufficiently diverse perspectives.

Principle #5: Terms of office of MPC officials should be staggered, non-renewable, and last longer than the political cycle, with removal only in cases of malfeasance or grossly inadequate performance.

Staggered terms are fairly conventional but only effective if members serve out a full term. Foreclosing the possibility of reappointment mitigates risks of political interference and avoids the entrenchment of power bases. The heads of many MPCs serve terms of 7–10 years, whereas the Federal Reserve’s chair and vice chairs have renewable 4-year terms.

Principle #6: Each MPC member should be individually accountable to elected officials and the public.

Individual accountability is crucial for mitigating the risk of groupthink. Such accountability should occur through MPC communications, speeches and interviews, and hearings before elected officials. MPC communications should diminish the risk of cacophony by elucidating the range of individual views of MPC members.

Principle #7: The MPC should be subject to periodic external reviews of its strategy and operations, but not its specific policy decisions.

External reviews can be invaluable in identifying and mitigating groupthink. Such reviews should occur on a regular schedule rather than triggered by political motives or idiosyncratic factors. These reviews should focus on assessing past and prospective performance, not on evaluating individual policy decisions.

3.2 Transparency principles

Principle #8: The MPC should have a legal mandate that sets forth its governance, goals, and tools.

Some previous analysts have advocated that the MPC’s objectives and priorities should be clarified in its statutory mandate. With pervasive and persistent model uncertainty, the appropriate specification of those goals and priorities may be complex and time-varying.

Thus, the mandate should set forth the MPC's responsibilities and tools in fairly broad terms to minimise the need to amend that statute.

Principle #9: The MPC's medium-term policy framework should be approved or endorsed by elected officials roughly once every five years.

This framework should provide a quantitative description of the MPC's goals, priorities, intermediate targets, and main operating methods. The approval or endorsement of elected officials is crucial for the legitimacy and credibility of the policy framework.

Principle #10: The MPC should formulate a systematic and transparent strategy that guides its specific policy decisions over the coming year or so.

This near-term strategy effectively clarifies the MPC's 'policy reaction function'. The strategy may be characterised using model-based forecasts, simple rules, scenario analysis or contingency plans. The MPC should have operational independence in determining its near-term strategy, but should be held accountable for that decision.

Principle #11: The MPC should regularly publish reports explaining the rationale for its specific decisions in terms of its policy framework and strategy.

The MPC should generally meet on a regular schedule with meeting dates that are determined and communicated well in advance. The MPC should promptly announce each policy decision. Its reports should be published on a fixed schedule, roughly once per quarter. These reports should explain the rationale for the majority's decision along with concurring and dissenting opinions that convey the range of views of individual MPC members.

4. Conclusion

The MPC has responsibility for a critically important task. The institutional design of the MPC is crucial for mitigating the risk of severe policy errors due to political interference or groupthink. The principles formulated here are framed with that purpose, but the specific application necessarily depends on the particular context of any given central bank. Finally, it should be reiterated that a number of other key governance issues remain beyond the scope of this paper, including: (i) governance arrangements to ensure appropriate consultation or coordination between monetary policy and macroprudential regulation; (ii) the terms of office and responsibilities of external MPC members; and (iii) appointment processes for senior central bank officials who serve major public policy roles (such as the chief legal counsellor).

References

- Alesina A (1988)**, 'Macroeconomics and Politics', in S Fischer (ed), *NBER Macroeconomics Annual 1988*, 3, The MIT Press, Cambridge, pp 13–52.
- Alesina A and LH Summers (1993)**, 'Central Bank Independence and Macroeconomic Performance: Some Comparative Evidence', *Journal of Money, Credit and Banking*, 25(2), pp 151–162.
- Asch SE (1951)**, 'Effects of Group Pressure upon the Modification and Distortion of Judgments', in H Guetzkow (ed), *Groups, Leadership and Men: Research in Human Relations*, Carnegie Press, Pittsburgh, pp 177–190.
- Barro RJ and DB Gordon (1983)**, 'Rules, Discretion and Reputation in a Model of Monetary Policy', *Journal of Monetary Economics*, 12(1), pp 101–121.
- Bernanke BS, M Gertler and S Gilchrist (1999)**, 'The Financial Accelerator in a Quantitative Business Cycle Framework', in JB Taylor and M Woodford (eds), *Handbook of Macroeconomics: Volume 1C*, Handbooks in Economics 15, Elsevier Science, Amsterdam, pp 1341–1393.
- Blanchard OJ (2008)**, 'The State of Macro', NBER Working Paper No 12459.
- Blanchflower D (2008)**, 'Inflation, Expectations and Monetary Policy', Speech given to the Royal Society, Edinburgh, 29 April.
- Blanchflower D (2012)**, 'Mervyn King is a Tyrant, but Who Will Succeed Him at the Bank?', *New Statesman* online, 18 April, viewed February 2018. Available at <<https://www.newstatesman.com/politics/2012/04/mervyn-king-tyrant-who-will-succeed-him-bank>>.
- Bordo MD and A Orphanides (eds) (2013)**, *The Great Inflation: The Rebirth of Modern Central Banking*, National Bureau of Economic Research Conference Report, University of Chicago Press, Chicago.
- Borio C and M Drehmann (2009)**, 'Assessing the Risk of Banking Crises – Revisited', *BIS Quarterly Review*, March, pp 29–46.
- Borio C and P Lowe (2002)**, 'Asset Prices, Financial and Monetary Stability: Exploring the Nexus', BIS Working Paper No 114.
- Brayton F, A Levin, R Tryon and JC Williams (1997)**, 'The Evolution of Macro Models at the Federal Reserve Board', *Carnegie-Rochester Conference Series on Public Policy*, 47, pp 43–81.
- Buiter WH (2007)**, 'How Robust is the New Conventional Wisdom in Monetary Policy? The Surprising Fragility of the Theoretical Foundations of Inflation Targeting and Central Bank Independence', Paper presented at the Bank of England Chief Economists' Workshop 'Policy Challenges to Monetary Theory', London, 16–18 April. Available at <<https://www.willembuiter.com/konstanz.pdf>>.
- Campbell A, J Whitehead, and S Finkelstein (2009)**, 'Why Good Leaders Make Bad Decisions', *Harvard Business Review*, February, pp 60–66.
- Christiano L, R Motto and M Rostagno (2003)**, 'The Great Depression and the Friedman–Schwartz Hypothesis', *Journal of Money, Credit, and Banking*, 35(6, Part 2), pp 1119–1197.
- Clarida R, J Galí and M Gertler (1999)**, 'The Science of Monetary Policy: A New Keynesian Perspective', *Journal of Economic Literature*, 37(4), pp 1661–1707.
- Cukierman A (1992)**, *Central Bank Strategy, Credibility, and Independence: Theory and Evidence*, The MIT Press, Cambridge.

de Krivoy R (2000), *Collapse: The Venezuelan Banking Crisis of 1994*, The Group of Thirty, Washington DC.

DiCecio R and E Nelson (2013), 'The Great Inflation in the United States and the United Kingdom: Reconciling Policy Decisions and Data Outcomes', in M Bordo and A Orphanides (eds), *The Great Inflation: The Rebirth of Modern Central Banking*, National Bureau of Economic Research Conference Report, University of Chicago Press, Chicago, pp 393–438.

Drehmann M, C Borio and K Tsatsaronis (2011), 'Anchoring Countercyclical Capital Buffers: The Role of Credit Aggregates', *International Journal of Central Banking*, 7(4), pp 189–240.

FOMC (Federal Open Market Committee) (2008a), 'FOMC Statement', Press release, 5 August.

FOMC (2008b), 'FOMC Statement', Press release, 16 September.

FOMC (2008c), 'Meeting of the Federal Open Market Committee on September 16, 2008', Transcript.

Giles C (2012), 'The Court of King Mervyn', FT.com, 5 March, viewed February 2018. Available at <<https://www.ft.com/content/f853d068-94b7-11e1-bb0d-00144feab49a>>.

Giles C (2015), 'BoE Governing Body Kept in Dark during Crisis', FT.com, 7 January, viewed February 2018. Available at <<https://www.ft.com/content/849be4dc-95c0-11e4-a390-00144feabdc0>>.

IMF Independent Evaluation Office (Independent Evaluation Office of the International Monetary Fund) (2011), 'IMF Performance in the Run-Up to the Financial and Economic Crisis: IMF Surveillance in 2004–07', Evaluation report.

Janis IL (1971), 'Groupthink', *Psychology Today*, 5(6), pp 43–46, 74–76.

Kydland FE and EC Prescott (1977), 'Rules Rather Than Discretion: The Inconsistency of Optimal Plans', *Journal of Political Economy*, 85(3), pp 473–492.

Lahart J (2009), 'Mr. Rajan Was Unpopular (but Prescient) at Greenspan Party', *The Wall Street Journal* online, 2 January, viewed February 2018. Available at <<https://www.wsj.com/articles/SB123086154114948151>>.

Levin A and JB Taylor (2013), 'Falling behind the Curve: A Positive Analysis of Stop-Start Policies and the Great Inflation', in M Bordo and A Orphanides (eds), *The Great Inflation: The Rebirth of Modern Central Banking*, National Bureau of Economic Research Conference Report, University of Chicago Press, Chicago, pp 217–244.

Mayer T (1999), *Monetary Policy and the Great Inflation in the United States: The Federal Reserve and the Failure of Macroeconomic Policy, 1965–79*, Edward Elgar Press, Cheltenham.

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

Meltzer AH (2010a), *A History of the Federal Reserve: Volume 2, Book 1, 1951–1969*, University of Chicago Press, Chicago.

Meltzer AH (2010b), *A History of the Federal Reserve: Volume 2, Book 2, 1970–1986*, University of Chicago Press, Chicago.

Mishkin FS (2007), 'Will Monetary Policy Become More of a Science?', Board of Governors of the Federal Reserve System Finance and Economics Discussion Series No 2007-44.

Papadopoulos C (2015), 'Bank of England Minutes: New Documents Reveal Flaws in Financial Crisis Response', CityAM.com, 7 January, viewed February 2018. Available at <<http://www.cityam.com/206590/new-documents-reveal-flaws-crisis-response>>.

Persson T and G Tabellini (1993), 'Designing Institutions for Monetary Stability', *Carnegie-Rochester Conference Series on Public Policy*, 39, pp 53–84.

Pilkington E (2008), "'They Called Me Bonkers'", *The Guardian* online, 27 November, viewed February 2018. Available at <<https://www.theguardian.com/business/2008/nov/27/economics-interestrates>>.

Posen AS (1993), 'Why Central Bank Independence Does Not Cause Low Inflation: There is No Institutional Fix for Politics', in R O'Brien (ed), *Finance and the International Economy: 7*, The Amex Bank Review Prize Essays: In Memory of Robert Marjolin, Oxford University Press, Oxford, pp 40–65.

Rajan RG (2005), 'Has Financial Development Made the World Riskier?', *The Greenspan Era: Lessons for the Future*, A Symposium sponsored by the Federal Reserve Bank of Kansas City, Kansas City, pp 313–369.

Rogoff K (1985), 'The Optimal Degree of Commitment to an Intermediate Monetary Target', *The Quarterly Journal of Economics*, 100(4), pp 1169–1189.

Rogoff K and A Sibert (1988), 'Elections and Macroeconomic Policy Cycles', *The Review of Economic Studies*, 55(1), pp 1–16.

Romer CD and DH Romer (2002), 'A Rehabilitation of Monetary Policy in the 1950's', *The American Economic Review*, 92(2), pp 121–127.

Romero J (2013), 'Treasury-Fed Accord: March 1951', *Federal Reserve History*, 22 November, viewed February 2018. Available at <https://www.federalreservehistory.org/essays/treasury_fed_accord>.

Shiller RJ (2005), *Irrational Exuberance*, 2nd edn, Princeton University Press, Princeton.

Shiller RJ (2008), 'Challenging the Crowd in Whispers, Not Shouts', *The New York Times*, 1 November, p BU5.

Sibert A (2006), 'Central Banking by Committee', *International Finance*, 9(2), pp 145–168.

Treasury and FOMC (Secretary of the Treasury and the Chairman of the Board of Governors and the Federal Open Market Committee) (1951), 'Joint Announcement by the Secretary of the Treasury and the Chairman of the Board of Governors, and of the Federal Open Market Committee, of the Federal Reserve System', Release Morning Newspapers S-2614, 4 March. Available at <https://www.richmondfed.org/-/media/richmondfedorg/publications/research/special_reports/treasury_fed_accord/historical_documents/pdf/accord_announcement_03_04_1951.pdf>.

Tucker P (2018), *Unelected Power: The Quest for Legitimacy in Central Banking and the Regulatory State*, Princeton University Press, Princeton.

Warsh KM (2016), 'Institutional Design: Deliberations, Decisions, and Committee Dynamics', in JH Cochrane and JB Taylor (eds), *Central Bank Governance and Oversight Reform*, Hoover Institution Press Publication No 666, Hoover Institution Press, Stanford, pp 173–199, 219–220.

Whyte WH, Jr (1956), *The Organization Man*, Simon & Schuster, New York.

Williamson J (1990), 'What Washington Means by Policy Reform', in J Williamson (ed), *Latin American Adjustment: How Much Has Happened?*, Institute for International Economics, Washington DC, pp 5–20.

Woodford M (2003), *Interest and Prices: Foundations of a Theory of Monetary Policy*, Princeton University Press, Princeton.