THE GOVERNANCE OF MONETARY POLICY – PROCESS, STRUCTURE, AND INTERNATIONAL EXPERIENCE*

BACKGROUND REPORT FOR THE RBA REVIEW PANEL

FINAL

Prasanna Gai
University of Auckland
January 2023

* I am grateful to the Review of the RBA Secretariat, especially Sally Clarke, Tim Taylor, Georgia Wiley, and Hamish McDonald for helpful comments and guidance. The views expressed herein are strictly those of the author, and do not in any way reflect those of the Secretariat or other organisations with whom the author is associated. The usual disclaimer applies.

EXECUTIVE SUMMARY

Monetary policy committees are an institutional solution to our ignorance and uncertainty about how monetary policymakers should respond to the changing nature of the economy and the shocks that hit it. The job of committee members is to pool their expertise about the economy to reach the best possible decision. Given the potentially high costs of policy errors, the governance arrangements for collective decision-making matter a great deal.

There is clearly no "right formula". Monetary policy committees around the world vary greatly in their size, composition, collegiality, and accountability. This variation reflects quite different attitudes towards the balance between delegating authority to unelected technocrats on one hand, and democratic legitimacy on the other. It also reflects local political conditions and the relations between the central bank and finance ministry[1].

A rich academic literature has developed that takes a micro-institutional approach to understand monetary policy committees. It sheds light on the processes and structure of monetary policy decision-making. The report reviews this literature and discusses how free riding, polarization of views, committee diversity, the agenda-setting powers of the chair, and the strategic interaction of internal and external members shapes the production and processing of information about the state of the economy. And it highlights some of the risks and key issues that arise when monetary policy is decided by a group.

The report offers a practitioner's perspective of the monetary policy governance arrangements of seven inflation-targeting economies – the United Kingdom, Canada, New Zealand, Sweden, Norway, India, and South Korea. Common features include a high level of economics and policy expertise amongst all committee members, common understanding of the goals of monetary policy, an absence of an active Treasury representation at the table, emerging gender parity, and relatively modest terms of office (3-5 years). The ability to dissent is less common, as are safeguards against free riding and agenda setting by internal members. Other than the UK, committee members are not actively held to account for their individual decisions.

Drawing on these insights, the report makes some observations about current monetary policy decision-making arrangements in Australia. It notes a tendency to appoint "captains of society" to the Board, with scant regard for either macroeconomic/financial economics expertise or broader societal representation. The balance of power lies with the internal members (and the Treasury representative), allowing little scope for proactive challenge. The tenure of many Board members, at 10-15 years, is also overly long. Current arrangements thus compromise information aggregation, create incentives for free riding and groupthink, and have the potential to imperil the independence, credibility, and legitimacy of the central bank.

The report concludes with some recommendations for the Review Panel's consideration. The busy reader who is interested in the gist of the argument may wish to jump to this in the first instance.

[1] In this report, I use the terms Ministry of Finance and Treasury interchangeably, reserving the latter for the Australian context. Australia is relatively unusual in that it has a separate Treasury (i.e. "Ministry of Finance") and a Department of Finance (with a quite separate mandate to support the government achieve its priorities through the budget process and optimally manage public assets).

1. INTRODUCTION

"Uncertainty is at the heart of practical monetary policy making. The best that we – as economists – can do is continually to learn about the changing nature of the economy. It is impossible to write down any stable "reaction function". Even if we could identify the shocks hitting the economy, judgement as to how we should react to each of them cannot be set in stone. The structure of the economy changes through time as does our knowledge of the way it works. The MPC is there to exercise discretion about how to react to shocks. Central to the design of a framework for monetary policy is our ignorance and uncertainty about how monetary policy works. The MPC is an institutional response to that ignorance.

The best way to make technical judgements under uncertainty is by making use of the accumulated wisdom of a committee whose members can pool their knowledge and expertise."

Mervyn King

Monetary policy decision-making arrangements around the world come in a variety of shapes and sizes, yet also share some common elements. This report considers the design features of monetary policy decision-making, including the way in which committees produce and process information about the state of the economy, their voting procedures, size and composition, and the role of the committee chair (the Governor). It also considers the experiences that several inflation-targeting countries have had with monetary policy committees, with a view to identifying aspects of committee design that might reasonably be regarded as "best practice". The intention is to contribute to the debate on what a fit-for-purpose monetary policy decision-making framework in Australia should look like.

The report takes a micro-institutional perspective, focusing on the processes and structures that are internal to monetary policymaking. It combines lessons from the theoretical and empirical literature on monetary policy committees, with a practitioner's perspective on the arrangements pursued by prominent central banks. The report highlights that although committees offer benefits in terms of information production and processing, costly information acquisition for members means that committees are subject to systematic biases. For example, committees can be prone to free riding and moral hazard, and the way in which members interact can either enhance decision-making or exacerbate groupthink. Furthermore, the benefits of a diverse membership need to be weighed up against the level of expertise of the group – the diversity "dividend" may be offset if the levels of expertise within the group are too low. And while consensus-regimes exacerbate free-riding tendencies and strategic behaviour, majority voting arrangements can also suffer from similar problems and trigger disenchantment. The report explores how diversity and committee quality can be sustained and how information cascades and the dominance of the committee chair and insiders can be mitigated.

The decision-making arrangements being pursued internationally by inflation-targeting countries offer case studies that cast a spotlight on some of these issues.

The report attempts to highlight what seems to have worked well and areas where current setups and safeguards seem lacking. What is particularly noticeable is that countries differ quite markedly in the way that they balance the delegation of authority to technocrats on the one hand, and democratic legitimacy of the central bank on the other. Local political conditions and the relationship between the ministry of finance and the central bank all shape the design of the decision-making framework. The report gauges the current monetary policy decision arrangement in Australia in light of these design issues and international central bank practices.

In what follows, Section 2 highlights key insights from the scholarly literature that has developed on the process and structure of monetary policy decision-making. Section 3 evaluates international experience, providing brief pen-portraits of monetary policy governance arrangements in the United Kingdom, Canada, New Zealand, Sweden, Norway, India, and South Korea. Section 4 examines Australian arrangements in light of our knowledge about governance and decision-making, as well as international practices. A final section outlines some key design principles and offers some recommendations for the Review Panel to consider.

2. ANALYTICAL CONSIDERATIONS

Single decision-maker or committee? Misguided central bank decisions can impose significant costs on the economy. Even seemingly small mistakes can lock-in future paths of monetary policy decisions and create problems that can only be straightened out gradually. As Mervyn King notes in the epigraph, the judgement of monetary policymakers is crucial for understanding and reacting to an ever-changing economic environment. Knowing how these judgements are reached – the process and structure of monetary policy decision making – merits close attention.

International central bank practice has evolved from a reliance on a single decisionmaker to committee structures. The reasoning amounts to risk management[2]. For example, Svensson (2001) notes that no two Governors are the same and may react quite differently to economic and political circumstances:

"In spite of the rigorous procedure for appointing the Governor, future Governors may not be of the same standing. Another Governor may not, to the same extent, encourage open and comprehensive discussion and advice within the Bank and support the Board in its monitoring of the Bank. Another Governor may not cope as well with the pressure, criticism and even abuse that seem to go with the territory, and may, in difficult times and under high pressure, lose confidence and let policy go awry in a number of different ways."

[2] The mental breakdown of Governor Montagu-Norman during the sterling crisis of 1931 was an important factor in the indecisive policy actions of the Bank of England at the time (Duley and Gai (2023)).

Decision-making by committee, by contrast, allows for greater diversification benefits and advantages in terms of information gathering and information processing (Blinder, 2009). Gerlach-Kristen (2006) suggests that, in an uncertain world, groups achieve a higher mean quality of decisions alongside a lower variance of outcomes than individual decision-makers. And a wide body of literature highlights that committees are better able to drive out poor judgements, smooth out extreme perspectives, insulate decisions from personal and political pressures, as well as ambiguity about the legal mandate of the central bank (Bhattacharya and Holly, 2015; Goodhart, 2000; Blinder, 2007; Lombardelli et al., 2005). Blinder and Morgan (2005) argue further that committees make *fewer* mistakes and react *faster* to demand shocks than an individual decision-maker. In essence, a committee generates a collective wisdom that makes the whole much greater than the sum of its parts.

Information production. Committees aggregate the views and information of their individual members, and the aggregation process produces a public good – the information on the state of the economy – that is shared by all members of the committee. The Condorcet jury theorem suggests that the majority of an imperfectly informed, but homogenously skilled, group is better able to select the correct signal about the state of the world than any individual member of the group[3]. Implicitly, this suggests that relatively large committees tend to make better choices since they can bring more informational resources to the table. And the more heterogeneous the the signals in the economy, i.e. the more important are differential economic sector and regional characteristics, the more valuable will be a larger group with a diverse set of information at its disposal.

But the Condorcet result assumes that information is costless to produce and share. In reality, information acquisition involves non-trivial effort and committee members have incentives to free ride on the insights of others. As Sibert (2006) notes, individuals who anticipate working alone recall more of what they read than those who anticipate working in groups. The larger the group, the less obvious it becomes to discern individual free riding. Moreover, an individual's effort is less pivotal in a larger group setting and so they may have fewer incentives to generate information. There will be a tendency to fall in line with the proposals of members who actively produce information and advocate policy proposals based on that information. Free riding thus creates a tendency for consensual decision-making that is *superficial*, i.e. without rigorous underpinnings of thorough debate. And it may encourage more extreme or "vocal" viewpoints to gain weight.

Blinder (2009) underplays the free-riding problem. He optimistically portrays the opportunity to serve on the monetary policy committee as "*the most important duty that each committee member has in his or her professional life*". He likens committee

[3] Condorcet, Marquis de (1785). *Essai sur l'application de l'analyse à la probabilitè des decisions rendues a la pluralitè de voix*. See Sibert (2006) for a discussion.

membership to life in an Ivy League Economics Department, where the motivation is to engage in one-upmanship in order to make the most telling points in order to either influence other colleagues or to sound smart. But this is unlikely to be an accurate description of the motivation of most monetary policymakers (academic or otherwise) who typically move well beyond the central bank into more successful and interesting roles.

Hansen et al (2014) observe that the marginal benefits of additional participants in monetary policy committees tapers away rapidly after the committee has reached a size of *about five members*. And since many key developments driving policy decisions are common knowledge, the real-world informational returns to increasing group size markedly beyond this are likely to be limited. In many boardroom contexts, groups of about five or six tend to be liked since they allow for lively in-depth discussion and a diversity of opinion. But much beyond that, participation tends to decline, information exchange is more perfunctory, and members tend to be less engaged.

Information processing. The standard argument for a committee structure in monetary policymaking is that the presence of a diverse range of perspectives helps broaden the discussion and enriches the information set at hand, setting the stage for better decision-making. But although heterogeneity in information processing heuristics can yield different insights from the same informational input, the argument is not without qualification. In particular, if committee members do not share a common understanding of the role and objectives of monetary policy, conflicting interests may prevent successful information aggregation. This is especially apparent when the diversity of the group membership reflects capture by different vested interests. If the underlying interests are not aligned with the central bank's mandate, the negative implications for macroeconomic outcomes can be consequential. Thus, to be properly successful, committees require *goal homogeneity* (Gerling et al. 2005).

For monetary policy committees to benefit from a diversity dividend when it comes to processing information, the heterogeneity of information processing capacities needs to be sustained over time. But when committee members interact and attempt to influence each other, an important trade-off emerges. On the one hand, open communication fosters information exchange and widens the pool of available knowledge but, on the other hand, preferences and judgements can be subject to either negative or positive polarization. Negative polarization implies an absence of dissent or disagreement, whilst positive polarization amplifies differences. The former can manifest itself in a bias towards consensus-seeking by the committee (or in the extreme, "groupthink"). Absent safeguards and careful maintenance, it is all too possible that the interaction of group members over time can cause the initial diversity of preferences and perspectives to permanently converge in a committee setting.

Although recent literature has begun to study interactions inside monetary policy committees, the implications for decision-making quality are not clear-cut. The benefits of diverse thinking are likely to depend on the structure of committees, including collegiality and networks of interaction and influence, as well as underlying macroeconomic uncertainty. Hansen and McMahon (2008) study the Bank of England's MPC and find that, after an initial dove-tailing phase, new external members joining the committee become increasingly polarized away from internal members by systematically voting for lower interest rates. Bhattacharjee and Holly (2015) suggest that the UK MPC structure facilitates positive and negative interdependencies between members – the influence that members exert on each other is both time-varying and asymmetric (though not necessarily because of the Governor). They argue that personalities on the MPC are important in determining the directions of influence – both negatively (i.e., mind changes) and positively (i.e., reinforcement of views). In the case of the US FOMC, Riboni and Ruge-Murcia (2019) find that mind changes by members are more closely related to economic factors than to other considerations, such as a power Governor or reputational concerns. FOMC members are more willing to change their minds as a result of deliberation, and these mind changes occur more frequently when the state of the economy is uncertain (and ensuing deliberations are therefore lengthier).

Bias, inertia and polarization. A common view of committees is that, although they tend to produce fewer extreme outcomes, they move slowly. As Blinder (1998) observes,

"While serving on the FOMC, I was vividly reminded that …[committees] tend to…. adopt compromise positions on difficult questions and…they tend to be inertial."

Theoretical justification for inertia in the monetary policy stance is provided by Riboni and Ruge-Murcia (2008) who provide a model where committee members trade off selecting their preferred policy for today against their bargaining power in future periods. Riboni and Ruge-Murcia (2017) exploit a natural experiment – the move by Israel in 2010 to shift decision-making power from an individual (the Governor) to a monetary policy committee – to shed light on this argument. They show that the change in regime led to an increase in the *status quo bias* of decisions with fewer and smaller interest rate adjustments. While some degree of policy inertia can be positive for macroeconomic stability, it can also be problematic if it becomes self-fulfilling. The more influential a status quo option is for decision-making, the less incentive that committee members may have to gather and process information, particularly if the decision is complex (Anand et al. 2022). Relatedly, Sibert (2006) discusses how, when individuals in a group are pre-disposed towards caution, group deliberation can lead to choices that are more cautious than the mean pre-deliberation choice of the group.

Meeting structure and agenda-setting also have the potential to affect the outcome of committee decision-making. Caillaud and Tirole (2007) provide the classic analysis of how the "sponsor" of a policy proposal can shape the decisions of other committee members by sequentially disclosing information to key members of the committee. These informational "pivots" wield sufficient credibility to convince other members of the committee, especially if their objectives are well aligned. There is also a safety in numbers – Blinder (2009) highlights the desire to "go along to get along", ie. hide private information as more and more speakers express the same opinion as the Governor[4]. While anti-seniority rules that allow junior members of the committee to speak first offer some scope to mitigate the risk of information cascades, Ottaviani and Sorenson (2001) point out that there is no optimal order when members have similar levels of expertise. And if there is a large variance in expertise, then speaking in an anti-seniority fashion can lead to inferior decisions by incentivizing more capable members to conceal their private information.

Diversity. Another way to mitigate the tendency for information cascades is to foster stable diversity within monetary policy committees (Blinder, 2007). He suggests introducing fixed-term external board members, recruited from the ranks of professional economists who might be able to bring fresh perspectives to break the isolation of central bank insiders. Again, the literature is indecisive. Besley et al. (2008) study the voting patterns of UK MPC members and conclude that most of the voting heterogeneity does not reflect the external-internal membership divide. But Gerlach-Kristen (2009) provides results suggesting marked differences in external and internal MPC member voting patterns, particularly during recessions. Hansen et.al (2014) observe that outsiders tend to have lower monetary policy expertise than average and suggest that any positive diversity effect may be quickly negated by a lack of expertise.

Another element of committee diversity that has recently been the focus of research is gender parity. Masciandaro et al (2020) find evidence to suggest that higher shares of women participants are associated with more "hawkish" behaviour. But Ainsley (2019) suggests that female committee members on the FOMC do not tend to vote differently from their male peers. Her results also suggest that women on the FOMC tend to emphasise quite different issues during the deliberation phase. And work by Malmendier et al. (2021) finds that women are less likely to be hawkish dissenters on the FOMC. The relatively small number of studies on this topic means that, at this stage, it is too early to form clear conclusions about the role of gender parity in monetary policy decision-making. But greater gender parity and efforts to make a committee more representative can help with the social contract that the central bank has with its citizens.

Consensus or individual voting? Internal voting procedures also shape decision-making quality. Central bank voting procedures typically take two forms – a

[4] Intuitively, one might expect that "autocratically collegial" committees offer conditions that are more suited to information cascades, reflecting the outsized presence of the Governor. But Horvath et al (2016) suggest that "individualistic committees" like the UK's MPC are as prone to cascading.

consensus-based approach without recourse to formal voting, and explicit majority voting where the votes are publicly known to all.

The case for consensus-based regimes rests on the idea that committee members engage in communication before the decision. This can eliminate incentives to engage in strategic voting. Moreover, when committee members are equally responsible for the decision, coordination problems do not arise. But consensus decision-making may be prone to free riding since members are less able to hold each other to account. And groupthink can arise if members are tempted to overrule their own information. Decision quality also depends on how consensus is obtained. If the committee is fully collegial, in the sense that all information and proposals are considered on an equal footing, consensus regimes can yield better quality discussions than in a majority voting environment. But if the consensus regime is more autocratic, then problems can arise when a member becomes more pivotal and acts as a conduit for information cascades/groupthink.

Majority voting has the advantage of compelling members to justify their decision and hold each other to account. It sets the stage for comprehensive preparation and, arguably, a richer dialogue at the deliberation stage. But majority voting systems may have adverse effects on decision-making quality. Members of the majority can institutionalise the winning coalition and become concerned with maintaining intra-block harmony – this is particularly likely if central bank insiders are in majority. The tyranny of the majority can also disenfranchise members whose views are at odds with the status quo, leading to disquiet and/or disinterest with adverse consequences for information gathering and processing. Blinder and Morgan (2005) find an ambiguous impact of voting rules on decision quality. In the final analysis, the success of either regime will ultimately depend on the extent to which members are encouraged to actively participate, vote sincerely, and feel that their contributions are being taken seriously. Both regimes can encourage or discourage this.

Overmighty citizens. Central bank Governors are the archetypal overmighty citizens (Tucker, 2018). By definition, the Governor is least powerful in an individualistic committee based on majority voting and most powerful in settings best described as autocratically collegial. The Bank of England MPC is a good example of the former, where on several occasions, the Governor has been outvoted. By contrast, the FOMC of the US Federal Reserve is an example of the latter, with several Chairs (notably Alan Greenspan and Paul Volcker) assuming highly dominant roles. Romer and Romer (2004) suggest that even Chairs who were not considered especially able policymakers were also viewed as being influential.

One way in which the Governor can dominate the decision-making process is to move first and, like Greenspan, offer opinions and vote first at the meeting[5]. Such behaviour leaves other members with the stark choice of agreeing or dissenting. Groupthink can easily arise in such settings – as more and more speakers agree with the Governor, a member can become reluctant to dissent and reveal their private information. Committee members who care about wanting to appear informed and their reputations will prefer the safety in numbers and want "to go along to get along".

Other Governors wait to speak and cast their votes last. Some judicial systems also operate with anti-seniority rules. The intention of such rules is to encourage contributions from more junior members of a committee. But Ottaviani and Sorenson (2001) argue that there is no optimal speaking order when committee members have similar levels of expertise. In a survey of 31 MPCs, Maier (2007) finds that most did not operate with any fixed speaking order at meetings, and that the Governor made the interest rate proposal in only one-third of the MPCs.

Maier (2007) further highlights the importance of empowering as many members on the committee as possible to reduce the agenda-setting powers of the Governor. Voting order and speaking slots could be randomized or committee members could be encouraged to cast votes simultaneously rather than in the form of a sequential *tour de table*. Kahnemann (2011) also suggests that one way to mitigate information cascades and free riding is to oblige committee members to compile their views on the policy stance prior to the meeting. These statements would then be centrally collected and circulated ahead of deliberation, forming a basis for discussion. Recent FOMC policy has followed this idea – before their meetings in March, June, September and December each year, FOMC members produce individual views on the policy stance that are summarized as "dot plots" that are published after some delay. The RBNZ also follows a similar approach, but statements are not published. While such an approach does not prevent a member from changing their mind during the meeting, it makes it more difficult to simply follow the herd.

A further approach to equalizing the standing of members on a committee is to allow for the rotation of the chair to external committee members. A rotation procedure breed motivation amongst committee members to stay focused on the mission and makes clear that each member of the committee is valued. It helps ensure that members actively participate, vote sincerely, and perceive their voices to be taken seriously. Rather than diminishing the standing of the Governor, it can enhance it. In the final analysis, by sometimes participating as a lay member, the Governor gives up none of her/his authority and responsibility. Indeed, (s)he has added to the information available and brought out the collective wisdom of the committee to pursue the right course of action. Rotating chairs and co-chair arrangements have

[5] Blinder (2009) discusses how Greenspan's dominance of the FOMC was legendary and included speaking longer in meetings than other members.

been used reasonably effectively in international meetings (e.g., G8, IMF), at the European Systemic Risk Board, and by some corporations.

Committee size, mix, and tenure. To the extent that the advantages of group decision-making derive from sharing information and using different heuristics, larger committees are more beneficial. But against this must be set coordination costs and motivational losses. In practice, monetary policy committees vary considerably in size – the ECB has a membership of 25, the Federal Reserve FOMC has 12 members (and 5 alternates), the Bank of England MPC has 9, whilst the Swiss National Bank relies on a Governing Board of 3 members. The "optimal size" depends on the scope of the committee, the "type" and expertise being sought, and the extent to which a consensus position is viewed as desirable.

Very small groups have the problem that their members tend to avoid dissent. Four-person groups tend to split in pairs, while 5-person committees have the benefit of allowing for a diversity of thought and scope for a majority decision. Overall, there is a tendency for selecting MPCs in the 7–9-member range, although Hansen et al. (2014) suggest that the marginal benefit of additional members declines beyond a committee size of 5. Blinder and Morgan (2008) compare the performance of 4-member and 8-member committees in an experimental setting and conclude that the difference in performance between them was slight.

Should monetary policy committees be comprised of insiders only (e.g., the Swiss central bank) or a mix of insiders and outsiders? Arguably, outsiders bring in specialized knowledge of macroeconomics, business conditions, or banking matters. But, on average, their lower level of expertise offsets the benefits of diverse thinking (Hansen et al, 2014). The traditional approach, typified by the Federal Reserve, places faith in outsiders of recognized standing and professional experience in economics and business. Indeed, the Federal Reserve Act requires the President to make appointments to the role of Governor "*with due regard to…financial, agricultural, industrial and commercial interests and the geographic divisions of the country*."

So the optimal mix of the committee is a finely balanced one. Assuming that the committee is served by a highly expert staff, with graduate-level training in economics, then qualities matter as much as qualifications[6]. In settings dominated by management, the willingness to think independently and ask difficult questions when things don't make sense, be open to fresh perspectives, to engage effectively with experiences in other countries and other time periods, are qualities that matter more than technical research virtuosity. Temperament and breadth of experience matter more, particularly in so far as testing how expert arguments might play in wider public audiences. Effective communication skills are also important. To the extent that there

[6] In countries where the Reserve Bank's internal economics capabilities are weak and staff are inexperienced, the analytical prowess of MPC members takes on far greater importance.

are academic economists with talents and real-world experiences that speak beyond the latest publication in the *Journal of Political Economy*, then they are likely to add value to the Committee. But so too would corporate directors, former bankers, and economists with business or policy backgrounds. External expertise is perhaps most potent if these members remain outside the central bank instead of becoming full-time public servants. As Blinder (2009) observes, "*…thinking about monetary policy is not a full-time job*."

The tenure of members on the monetary policy committee reflects a delicate balance between democratic accountability and legitimacy on the one hand, and central bank independence on the other (Tucker, 2018). If central bank independence was the only consideration, then long terms of office can help shield committee members from political pressures. Reflecting this, Governors of the Federal Reserve Board have 14-year terms. But, in practice, many governments choose shorter terms to ensure a political check on the central bank. For example, the terms of monetary policy committee members in Sweden, Norway and the UK range from 3-6 years. A single term is perhaps best – as Willem Buiter observed upon resigning from the UK MPC "*... both the appearance and the substance of independence of the external members of the MPC are best served by restricting their membership to a single term"*. Reflecting these considerations, removing the option of reappointment and serving a term of no more than five years seems the best option[7].

The length of term also reflects the talent-base from which the committee is drawn. It is often argued that small countries may not have a deep enough talent pool of suitably qualified people to draw upon. In such cases, rapid turnover of committee members may be undesirable. But, as the UK has shown, recruiting foreigners or expatriates to serve on the MPC can be a sensible way around this. That said, maintaining cohort quality over time can be challenging and it may be difficult to sustain the quality of the committee. Even the UK has struggled in this regard – the early committees were of exceptionally high calibre but have gradually given way over time. The UK Treasury Select Committee highlighted this problem as early as 2000, noting that the MPC was losing players of *"Arsenal or Manchester United standard"* and replacing them with players "*from the Vauxhall League, maybe Kidderminster*."

Treasury officials are often found on monetary policy committees, ostensibly to facilitate fiscal and monetary policy coordination. Australia excepted, most MPCs grant observer status rather than voting rights to the Treasury official. On balance, however, the additional contribution to the committee's information from this public sector source is relatively small and it can open the possibility of an "official sector" block that freezes out external challenge. Excluding Treasury representatives from the committee altogether is unlikely to have an adverse impact on committee performance.

---

[7] The staggering of terms is also used as a means of reducing groupthink, smoothing extreme views, and ensuring the institutional memory of the committee.

Communication. Monetary policy cacophony is an additional challenge for a committee. Cacophony can be "benevelont" in that it reflects communication by well-intentioned members who are engaging with stakeholders to convey the rationale for the current or future stance of policy or decisions as transparently as possible. For individualistic committees, the task is to convey how a single stance reflects different arguments without creating confusion over the majority-based path of monetary policy. Ehrmann and Fratzcher (2007) suggest that such committees face more challenges in communicating their decisions and moving financial markets than committees where decisions are based on consensus.

Cacophony can also be "strategic" in that members can express their views in order to enhance their career concerns or reputation. Communication can be used ex ante ahead of meetings by members to influence the agenda and push market expectations in desired directions. Vissing-Jorgenson (2019) argues that members have incentives to compete for market attention because moving markets prior to a meeting can help lock-in other members onto a policy path. Available evidence suggests that informal communication with market participants can have large market impacts, but it is unclear whether such "leaking" enhances policy flexibility (Gai et al, 2022) or diminishes it (Vissing-Jorgenson, 2020). Overall, smaller, more stable, committees may have an advantage in being able to better communicate (to market participants and other stakeholders).

3. INTERNATIONAL EXPERIENCE

United Kingdom. The Bank of England achieved operational independence on 6 May 1997. A nine-member Monetary Policy Committee (MPC) was established under the Bank of England Act 1998, with five internal Bank officials (the Governor, the two Deputy Governors, the two Executive Directors with responsibility for monetary policy analysis and monetary policy operations respectively) and four external experts. The MPC, with its individualistic set-up allowing each member to be personally accountable to Parliament via regular evidence sessions, is often held up as a model for other central banks to emulate (Archer and Levin, 2018). Although under observation by a Treasury official, the MPC is free to choose whatever level of policy instruments it sees fit at its meetings. Each meeting is chaired by the Governor and the MPCs decisions are taken by a simple majority – the Governor has a casting vote if required.

The MPC has now been in existence for 25 years and, by and large, its structure has remained stable implying some large degree of success. Overall, the MPCs credibility has generally felt to have been supported by the transparency of the process and the accountability of its members (not just to Parliament but also to the media and the public). And, until very recently, the track record has also been good. The UK's annual rate of inflation – as measured by CPI – has averaged 2% from May 1997 to May 2022.

Bean and Jenkinson (2001) describe the two-day decision making process of the early MPC in some detail[8]. Staff present information and analysis at a "pre-MPC" meeting attended by all MPC members. MPC-only meetings take place after this briefing, typically starting on 3pm on a Wednesday and conclude with an announcement at noon on a Thursday. The first afternoon is devoted to a review of the economic news since the previous meeting and the implications for the outlook. This discussion is introduced by the Bank's chief economist, and conversation on each broad economic area is then led by the Deputy Governor in charge of Monetary Policy. The Treasury official does not participate in this discussion but, from time to time, brief the MPC on fiscal issues and public policy considerations that may be relevant so as to facilitate effective policy coordination.

Committee members then reflect on the discussion overnight. On Thursday morning, the Governor summarises the key points and invites Committee members to comment. Each member in turn gives their assessment of recent economic developments, and their view on the appropriate stance of monetary policy. The Deputy Governor responsible for monetary policy speaks first, while the Governor usually concludes. Other members are called in random order.

Each member generally takes around ten minutes to present his or her assessment. At the end of each assessment there is an opportunity for other members to ask questions. Usually, members conclude by giving an indication of their preference for the decision on the level of interest rates, but sometimes individuals reserve their position until they have heard the arguments put forward by all Committee members. At the end of the discussion, members initially reserving their position signal their recommendation. Once all Committee members have given their views, the Governor puts a motion that they expect will command a majority and calls for a vote. Members in a minority are then asked to confirm their preferred level of interest rates.

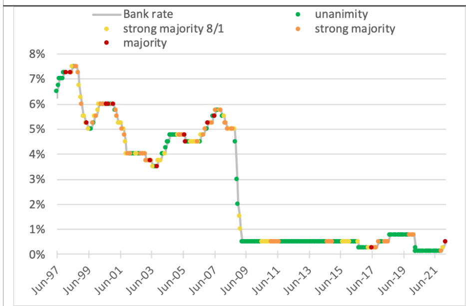
In their study of central bank committees, Riboni and Ruge-Murcia (2010) look at the Bank of England, the Bank of Canada, the ECB and the Fed, and conclude that despite having different formal committee types, all central banks seem to follow a consensus model in the way they take actual interest rate decisions. Figure 1 below provides some evidence on MPC voting. As can be seen, unanimous consensus emerges strongly following the GFC in 2008, with the period before characterised by some degree of dissent. King (2007) observes that this pattern is natural – there are times

[8] More recently, the MPC has adopted a three-meeting approach. As in previous years, the MPC meets on a Thursday to discuss developments, and then meets on the following Monday to discuss and debate. The MPC then reconvenes on Wednesday, at which point the Governor tables a motion for the decision. The Warsh Review in 2014 led to a change in the frequency of MPC meetings from monthly to eight times a year and elimination of the lag for release of MPC minutes. But the spirit of the decision-making process has not changed materially since the Committee's inception.

when the state of the economy is difficult to read and there are naturally differences of interpretation leading to split votes. Equally, there are times when the nature of the economic shocks is not in dispute and the response of the MPC is agreed by all members. That there is occasional substantive disagreement of technical experts who comprise the committee is desirable so as to properly reflect the individual judgement of members rather than attempt to create false consensus. The institutional set-up of the UK MPC, thus, embraces encouragement of open debate.

Figure 1

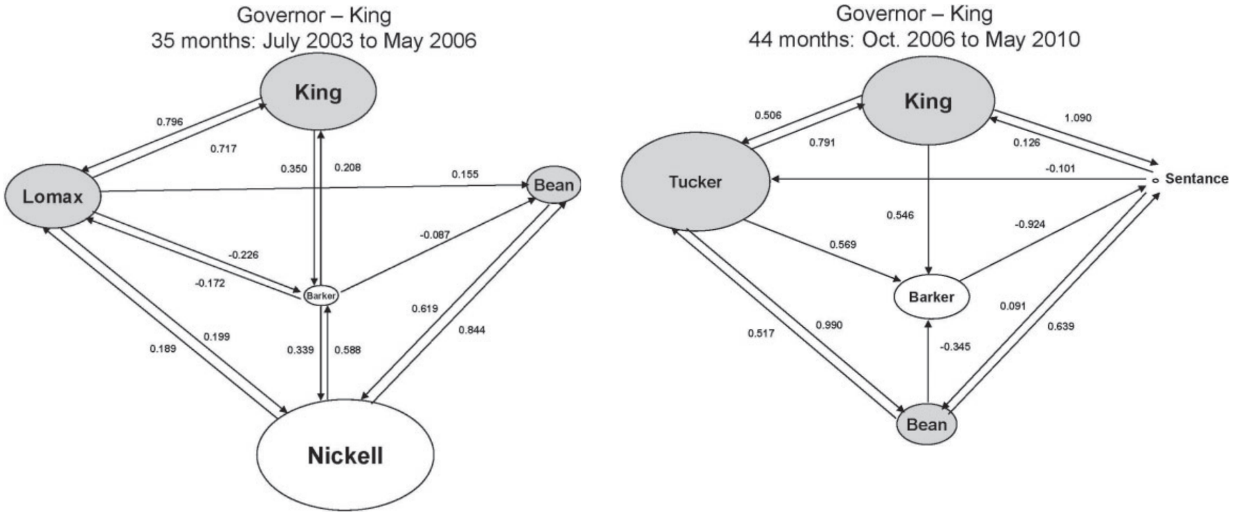
Figure 1a: MPC voting decisions on the bank rate



Source: Bruegel based on Bank of England.
Notes: period from June 1997 to Feb 2022. Unanimity = all votes in support, Strong majority 8/1 = all - 1 one vote, Strong majority = between strong majority 8/1 and majority, Majority = half + 1 votes in support.

As noted previously, committee structure and personalities play an important role in MPC decision-making. Hanson and McMahon (2008) highlight the tendency of new MPC members to initially "go along" with internal members before eventually finding their own voice in the committee room. And Bhattacharjee and Holly (2015) describe the networks of influence that can form between committee members. Some members have been extremely influential in recent times. Figures 2(a) and (b) show how, during the Governorship of Mervyn King, Professor Steve Nickell played an outsized role in deliberations, influencing the decision-making of internals (King, Lomax, Bean). Following Nickell's departure from the committee, Paul Tucker played a similarly influential role on the committee. Interestingly, Bhattacharjee and Holly identify "full-time" externals (e.g Kate Barker) as being the least influential and most prone to being influenced by others.

Figure 2



Maintaining the quality of the MPC cohort has become challenging over time. And the UK has found it difficult to retain the calibre of the earliest MPC cohorts. The debate over the replacement of Charles Goodhart by Chris Allsopp was followed by a similar debate over the replacement of Steve Nickell in 2006. Several former members of the MPC (Willem Buiter, Charles Goodhart, Deanne Julius and Sushil Wadhwani) wrote an open letter urging the UK Government to replace Nickell with someone with technical expertise in economics, rather than a non-economist. They noted that non-economists were less able to challenge the internal views of staff and argued that designing and implementing monetary policy "*was a technical economic subject, albeit a frustratingly imprecise one. It requires an understanding and command of economic theory, statistical methods and data*".[9]

Canada. Since 1994, monetary policy at the Bank of Canada has been the responsibility of the Governing Council. The Governing Council was formed with the objectives of decentralizing the bank's decision-making and providing advice to the Governor (Clark, 1996). It consists of six members, namely the Governor, the Senior Deputy Governor, and four Deputy Governors. The Bank of Canada Act of 1985 gives the Governor a key role in policy decisions, stating that "*[the Governor] has the direction and control of the business of the Bank with authority to act in connection with the conduct of the business of the Bank in all matters that are not by this Act or by the by-laws of the Bank specifically reserved to be done by the Board or by the Executive Committee.*" The Act does not mention the Council or its responsibilities, but states that "*[T]he Board may appoint one or more additional Deputy Governors who shall perform such duties as are assigned to them by the Board*".

[9] "New MPC member must be professional economist", Financial Times, 25 February 2006.

Council members are drawn from the top echelons of the Bank of Canada, but individuals from outside the Bank can be appointed to the Council (whereupon they become Bank employees)[10]. This composition resembles that of the Executive Board of the Swedish Riksbank and differ from that of the MPC at the Bank of England, where external members can be employed on a part-time basis. But like the Bank of England, there is no element of regional representation in the composition of the Governing Council of the Bank of Canada. Council members are all Canadian citizens or residents.

Macklem (2002) provides the seminal account of monetary policy decision-making at the Bank of Canada. The decision process involves extensive collection and analysis of data by bank departments with three key briefings to all members of the Council: the presentation of a staff projection about two weeks before the decision, a major briefing one week before the decision, and a final staff recommendation, usually presented two days after the major briefing. Decision-making is by consensus and announcements are typically made eight times a year, in keeping with the practice at many central banks. In contrast to other central banks like the Federal Reserve and the Bank of England, no minutes or transcripts from meetings are made public.

The key stage of the decision-making process takes place over several days. It begins on a Thursday afternoon, following an extensive staff-led discussion, and resumes on the following Monday. Members of the Governing Council review the information and recommendations that they have received, exchange views, and explore differences in opinion. The Council members begin by developing a common view on the most likely future path for the economy and the underlying trend in inflation. They then come to a common view on the main risks around this outlook, and the overall balance of risks.. Further discussions are held on Tuesday, a decision is reached by consensus, and a press release is drafted and approved. The Governor and the Senior Deputy Governor are the face of the Governing Council and appear in the media and in regular Parliamentary committees to explain the decision.

New Zealand. The Governor of the RBNZ has historically enjoyed sole statutory authority for both the monetary policy and prudential regulatory functions. But despite a recent attempt to reform the Reserve Bank, political economy considerations have meant that the single-decision-making structure remains in place, albeit implicitly.

In March 2019, the Government conferred responsibility for monetary policy on a new Monetary Policy Committee chaired by the RBNZ Governor. The RBNZ board was given powers in relation to the appointment and review of the MPC and its members. The

[10] The Bank of Canada has shifted from this position. In 2022, the advertisement for Deputy Governor makes explicit a desire for an external non-executive outsider (with strong French-speaking capability) willing to serve on a part-time basis for no more than three years.

composition of the MPC – four internal members (Governor, Deputy Governor, Assistant Governor for Monetary Policy and Chief Economist), and three part-time external members – reflects the likely outcome of a power struggle between the Reserve Bank (which wanted to retain the single decision-maker model) and the Treasury (which had initially preferred a UK MPC-style model). The internal members hold a majority by construction and, unusually for a central bank, external members have been appointed without proper regard to their expertise in macroeconomics and monetary policy[11]. External members do not express their views publicly at parliamentary hearings nor do they give speeches about monetary policy (unlike their Canadian, British, or Scandinavian counterparts)[12]. Decisions are made by consensus but these are largely seen by the public as reflecting the views of the Governor[13].

In July 2022, the Government reconstituted the Board of the Reserve Bank – recruiting a new set of Board members and shifting direct statutory responsibility for the RBNZ's prudential regulatory function from the Governor to the new Board. The Board is now permitted, in turn, to delegate prudential regulatory powers back to the Governor (who remains a member of the Board). But the new governance arrangements mean that for any powers the Board chooses to delegate, the Governor is now accountable to the board for their exercise. In principle, one might expect such a setup to resolve the overmighty citizen problem, with the Chair and the Board acting as a counterweight to the Governor. But to perform this task well, Board members – or at least a good number of them – need a deep understanding of financial regulation and financial system stability risks. The Minister of Finance, however, opted for a largely non-expert Board, making it difficult to challenge the Governor and in-house analysis on prudential and financial stability issues as well[14].

Notwithstanding the political economy issues associated with the creation of the RBNZ MPC and the recruitment of non-specialists to the Board, Committee, and senior management, the institutional set-up seeks to explicitly recognise some of the issues

[11] The RBNZ and Minister of Finance agreed to explicitly exclude from consideration to the external MPC, "*any individuals who are engaged in, or likely to engage in future, in active research on monetary policy or macroeconomics*."

[12] This is despite explicit provision in the MPC Charter for MPC Members to give speeches. "*A MPC member who wishes to publicly express his or her view around the balance of risks and/or economic outlook may, but should do so with respect for other members and the MPC as a whole.*"

[13] It is worth noting that even the Governor has not given a single substantive speech on monetary policy or the macroeconomy during his tenure and since the advent of the MPC.

[14] A recent Official Information Act release revealed the following priorities agreed for recruitment for RBNZ board members: governance excellence, cultural awareness and expertise (a Te Ao Māori and/or Pasifika world view), a strong belief in the values of diversity and inclusiveness, senior-level experience in financial and prudential regulation and supervision, financial and commercial acumen, and people leadership, stakeholder engagement, and ESG experience. Of the seven external appointments to the newly constituted RBNZ board on July 1, 2022, four have no background in economics, prudential regulation, or financial stability, while two have investment banking experience.

highlighted in this report[15]. The monetary policy decision starts with a staff briefing to the MPC that is spread over two working days, allowing committee members to absorb information and raise queries in ways that suit them, with staff and the Chief Economist leading discussion. MPC members seek clarification but do not reveal their views[16]. This process is akin to the pre-MPC processes in the UK and Canada (see Figure 3).

Figure 3

M	Tu	W	Th	F	M/Tu	W
Staff present recent develop-ments, issues, and risks.	Staff present outlook and strategy.	MPC discusses risks and strategy.	MPC discusses external messages and tactics.	MPC reviews written advice from MPAG and decides on strategy and key messages.	MPC finalises external messages.	MPC decides level and direction of policy instrument.
						MPS release
Information pooling (Staff as presenters)		MPC deliberations (Staff as advisers)		MPC decisions (Staff not present)		

Following the information pooling meetings, the preliminary opinion of individual MPC members are independently recorded. MPC members fill out a template to record their views and decisions. The template includes some generic questions such as whether to increase or decrease or leave unchanged the interest rate, by how much, and why. These questions are framed around the MPC remit. Ad hoc, "topical" questions, such as the pace of LSAP (Large Scale Asset Purchase) withdrawal are also included. The templates are combined and anonymised, although staff are able to guess who's who. These opinions are then discussed in the final deliberation and decision meetings. But the consensus arrangement and the presence of a dominant Governor make it difficult to judge whether such mechanisms provide an effective guard against information cascades and free riding.

Sweden and Norway. The Swedish Riksbank and Norway's Norges Bank also rely on monetary policy committees. The Executive Board of the Riksbank consists of six members, one of which is the Governor. Members are appointed for a period of five-six years according to a rolling schedule. There is no restriction on the number of terms for which a member may be reappointed – but most members have typically served a single six-year term. All six Riksbank MPC members are internal full-time members and, with few exceptions, most are recruited from outside the Bank from the financial sector, academia, or the policy world. Staff are not assigned to particular

[15] See RBNZ Monetary Policy Handbook (2020). While clear in describing some of the issues, it fails to indicate what the RBNZ does to mitigate them, e.g., its processes to guard against free riding, to insure against a dominant chair, or curb the development of information cascades.
[16] They also receive briefing notes during the quarter and are encouraged to interact with staff on a regular basis.

members (unlike the UK MPC). The committee is individualistic – interest rate decisions are made by voting and members are able to publicly express their views on the policy stance. Like the UK, the minutes of the MPC show that members do dissent reasonably often and the committee has been fairly active – for example, during the period 1999-2013, the policy rate was changed forty-eight times (Apel et al. 2015).

The Norges Bank set-up displays a greater preference for part-time external members. And it is more collegial and less transparent than its Swedish counterpart. The seven person MPC comprises the Governor, the Deputy Governor and five part-time external members. The external members are appointed to a four-year term and can be reappointed twice. They are usually recruited from outside the Bank and have academic, political or business backgrounds. This is because importance is given to ensuring a breadth of expertise, with an emphasis on economics, finance and socio-economic issues. The Governor seeks a consensual decision and, while members are free to dissent, disagreement is uncommon and not made public for twelve years[17]. Apel et al (2015) document that the Norwegian MPC has also been relatively active, raising rates fifty times during the 1999-2013 period.

India. India represents an interesting case study since it adopted both a flexible inflation targeting regime and a monetary policy committee in late 2016, at the initiative of Raghuram Rajan. As such, it has had the benefit of drawing on international best practice and adapting these to local conditions.

The Indian MPC comprises six members – three internal ex officio members (the Governor, the Deputy Governor in charge of monetary policy, and one senior official of the RBI), and three part-time external members. External members are professional economists working in universities or academic thinktanks and serve a fixed four-year term. The MPC meets six times a year and interest rate decisions are made by majority vote.

The RBI MPC appears to do relatively well on free-riding as well as diversity of thought and gender. Dissent is accepted and publicly noted. Of the 22 meetings held between 2016 and 2020 there were 10 occasions where a dissent was been recorded. As with the UK MPC, both internal and external members have recorded dissent (see Figure 4). Indeed, at the February and April 2019 meetings, both internal and external members voted to preserve the status quo and against eventual group decision to cut interest rates. On the surface, at least, there seems to be active participation and an absence of group think, though this may reflect the characteristics of the people selected rather than design safeguards. More careful analysis is warranted to properly understand

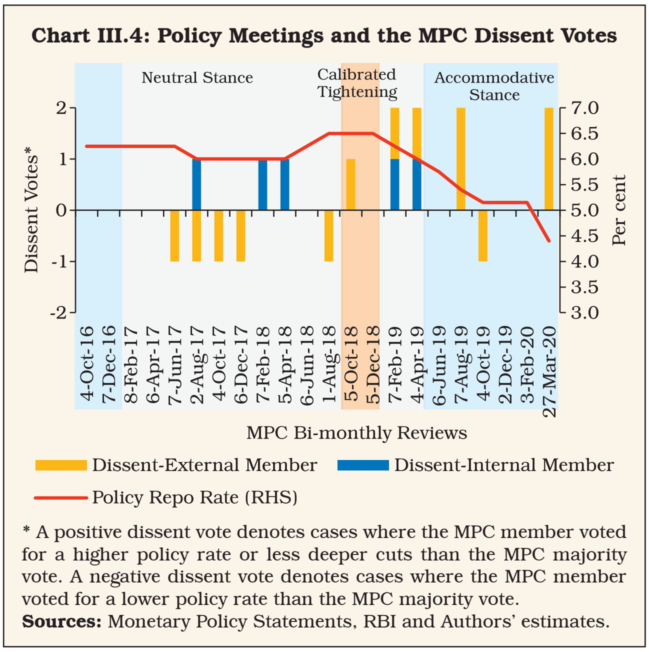
[17] One Norges Bank MPC member notes that "as an external member, you have a limited budget of a few explicit reservations you can make before it comes at the expense of the collegial spirit." (Apel et al, 2015).

committee dynamics. There have been two female external members of the MPC in its short history, both academics.

The decision-making process is a variation on the practices in the other countries noted above. Following a staff briefing on key issues to "top management", an agenda is prepared for the MPC. Senior staff then take the MPC on a deep dive of the issues on the day of the meeting, after which the MPC enters a closed door deliberation. The Governor then makes an announcement on behalf of the committee.

Minutes of MPC meetings are released two weeks after the interest rate decision. But transcripts of the meeting are not made available. Moreover external MPC members do not explain their positions in the form of public speeches on monetary policy or testimony to parliament. The main form of accountability thus takes the form of internal speeches and a report from the RBI to parliament.

Figure 4



Korea. Monetary policy in Korea is conducted by the Monetary Policy Board (MPB), which consists of seven members –The Governor and Senior Deputy Governor and five full-time externals. The five external members are all expert professional economists, with strong PhDs and relevant backgrounds in policy and finance. They are each appointed by the Korean president on recommendations from the Minister of Strategy and Finance, the Governor of the BoK, the Chairman of the Financial Services Commission, the Chairman of the Korea Chamber of Commerce and Industry, and the Chairman of the Korea Federation of Banks. Thus, key stakeholders are given "voice" in the decision making process, but kept (to some degree) at arms-length[18]. Board members are typically appointed for four year terms, although recently the Bank of Korea Act was altered in 2018 to cut the terms for the nominees of the Bank of Korea and the Financial Services Commission to a single three year term.

Appointments to the MPB are usually staggered to provide the Bank political independence as a central bank, ensuring that one president does not take advantage of his/her power to appoint board members by "stacking the deck" with those who support president's policies. But owing to a two-year delay with filling the vacancies in 2010, four members' terms expired in 2016 and 2020, all at once. This raised concerns over central bank independence and the continuity of monetary policy.

The MPB is chaired by the Governor and voting is by majority. Board members are able to speak publicly on monetary policy and dissent is possible. There is currently one female external member of the Board, albeit one with long BoK experience. As in the UK, Canada, and New Zealand, the decision-making process involves a staff briefing of MPB members, after which a members-only deliberation takes place. The main policy decision meeting takes place at 9 a.m. the following day. Minutes are released after two weeks.

Table 1 summarises the monetary policy governance arrangements for thirteen advanced and emerging economies. Table 2 summarises the arrangements for the countries discussed in the report and assesses the governance arrangements against some of the theoretical considerations considered earlier.

[18] Financial stability policy in France follows a similar system. Three distinguished (mainly academic) economists are each appointed by the lower house of parliament, the senate, and the Minister of Finance to sit on the High Council for Financial Stability (HCFS). The HCFS is chaired by the Minister of Finance and also comprises the Governor of the Central Bank, the Chair of the Financial Market Authority, and the Head of the Supervisory and Resolution Authority.

TABLE 1: Monetary policy governance arrangements for advanced and emerging economies

Country	Board/MPC	Year adopted	Number of members	External Members	Decision making process
Canada	GC	1994	6	0	consensus
UK	MPC	1997	9	4	vote
New Zealand	MPC	2019	7	3	consensus
Sweden	Board	1897	6	0	vote
Norway	MPC	1999	8	5	consensus
India	MPC	2016	6	3	vote
Korea	Board	1950	7	5	vote
Thailand	MPC	2008	7	4	vote
Japan	Board	1942	9	6	vote
Israel	MPC	2010	6	3	vote
South Africa	MPC	1999	7	0	vote
Euro-area	Board	1998	25	0	consensus
USA	FOMC	1933	12	0	vote

TABLE 2: Design features of case study countries.

	UK	Canada	NZ	Sweden	Norway	India	Korea
Goal homogeneity	yes	yes	maybe	yes	maybe	yes	yes
Free riding	no	No (probably)	yes	no	yes	no	no
Freedom to dissent	yes	no	no	yes	no	yes	yes
Agenda-setting mitigants	yes	no	yes	n/a	n/a	no	no
Diversity (inc gender)	partial	partial	partial	n/a	n/a	yes	partial
Expertise	yes	yes	no	yes	yes	yes	yes
Tenure	3 years	n/a	4 years	5-6 years	3 years	4 years	3-4 years
Stakeholder accountability	yes	no	no	yes	no	no	yes
Treasury presence	yes	no	yes	no	no	no	no
Full/part-time	both	Full time	Part time	Full time	Part time	Part time	Full time

Summing up, MPC structures vary quite widely across countries. Although there are common elements, there is no clear consensus on a "right" structure. Local political conditions and, in some cases, the relationship between the Ministry of Finance and the Central Bank play an important role in shaping the governance outcome.

Although the UK MPC structure can, in many respects, be regarded as a benchmark for the design of monetary policy governance structures, not many countries have emulated it outright. India is, perhaps, the closest. Interestingly, the UK is alone in requiring that each MPC member be individually accountable to parliament for their decision. The other countries permit accountability to reside with the central bank and in the person of the Governor. This reflects quite different views and comfort levels as to how delegating authority to technocrats and democratic legitimacy should be reconciled.

A serious assessment of how well MPCs have performed in recent years is beyond the scope of this report. Suffice to say, it is an open question as to whether the track record of monetary policy over the past quarter of a century has been due to good luck or good policy. MPCs were created as an *institutional solution* to policymaker ignorance about the shocks affecting the economy. The jury is yet to reach a verdict on how effective this solution has been.

4. MONETARY POLICY ARRANGEMENTS IN AUSTRALIA

The RBA's charter is set out in the Reserve Bank Act 1959 and has three objectives:

i. The stability of the currency of Australia.
ii. The maintenance of full employment in Australia.
iii. The economic prosperity and welfare of the people of Australia.

The RBA meets these objectives by using monetary policy to achieve a flexible inflation target that keeps consumer price inflation between 2 and 3 per cent on average, over time. Otto and Voss (2011) suggest that, in practice, the RBA follows this flexible target by placing weight on both keeping inflation within this band and keeping the labour market close to full employment.

Responsibility for monetary policy lies with a nine-member Board, which also performs a broader governance role. The RBA Governor is the chair and the Deputy Governor and Secretary to the Treasury serve as *ex officio* members. The remaining six external (part-time) members are appointed to terms of up to five years and there is no limit on the number of terms that they can serve. The Board meets eleven times a year and makes its decisions by majority vote. Minutes of the deliberation are available two weeks after each meeting and contain a summary and justification of the policy decision. Dissenting views are not recorded and external members are not allowed to speak publicly about monetary policy.

External members, for the most part, are non-economists. The tradition in Australia has been to appoint "the great and the good" in business and public life to the Board, each bringing their own vested interest (rather than any known competence in economics) to the committee room. Thus, names like Bob Hawke, Bill Kelty, Janet Holmes a' Court, Sir Peter Abeles, Frank Lowy, and Hugh Morgan are typical. Unlike MPCs in other countries, the Treasury Secretary plays an active role in deliberation – acting as an independent board member rather than representing the government. The suggestion is made that the presence of a Treasury official offers an intellectual counter to the views of the insiders, as well as keeping the Board abreast of relevant developments in fiscal policy[19]. A lone academic is typically appointed for some neutrality of view and intellectual challenge to the RBA-Treasury perspective. Indeed, since 1962, only six academic economists have served on the Board[20].

The tendency to appoint captains of industry and society – a relatively homogenous group at many levels – makes it questionable that information aggregation is well served. A lack of economic expertise is likely to limit information pooling and a genuine diversity of intellectual opinion about the state of the economy seems unlikely. Neither does it suggest a committee that has been appointed to better represent society and deliver on the democratic legitimacy of the central bank. Moreover, there are strong tendencies that promote groupthink. Members tend to stay on in the role for far longer than might be considered healthy – many serve ten years, and in some cases (e.g., Jillian Broadbent) much more. This opens the door for group think, policy inertia, and political influence. Other forms of diversity that reflect societal norms, such as gender and race, are noticeable by their absence. For example, since 1981, only ten women (of which one very recent Deputy Governor) have served on the Board, with eight being appointed after 2010. And there seem to have been no Board members or senior executives (i.e. Assistant Governors and above) of Asian origin in the RBA's history[21].

As previously noted, there is a risk of free riding in large committees. The RBA Board is relatively large, and the number of board members with serious economic expertise comprises less than half the Board (The Governor, Deputy Governor, Treasury Secretary and the lone academic). There is no record of individual votes or ability to publicly express views on the monetary policy stance[22]. So it is hard to escape the conclusion that a non-expert Board member will tend to fall in line with proposals of insiders and others who mount convincing arguments. Certainly, as Bullock (2022) notes, there is a substantial effort by Bank staff to produce information about the state of the economy. These internal discussions are presided over by the Governor and Deputy Governor, in the absence of the externals. There is ample opportunity for internal

[19] "Lifting the veil on RBA Board votes risks lobbying", *Australian Financial Review*, 18 September 2022.

[20] Sir Leslie Melville, Trevor Swan, Bob Gregory, Adrian Pagan, Warwick McKibbin, and Ian Harper.

[21] By contrast, DFAT has appointed numerous Ambassadors of different ethnicities in the recent past.

[22] Some commentators suggest that revealing the voting records of Board members could open the door to them being exposed to lobbying pressure. This seems unlikely if mechanisms are in place to ensure accountability. External members of the Board often belong to interest groups in any case (e.g. trade unions), and being publicly held to account (e.g. via a parliamentary select committee and public speeches) forces them to explain why they are not pandering to the interest group from which they hail.

"information cascades" to form as part of such a process. And the final monetary policy recommendation received by the Board before the meeting involves "input" from the Governor and senior management.

Relative to other central banks, e.g the UK and Canada, detail about the deliberation process is scant. Stevens (2009) and Bullock (2022) offer brief accounts of Board room discussion. Senior staff present the key messages and recommendation to the Board members after which there is open discussion and the meeting concludes with the Governor summing up and introducing the policy recommendation. Members then have an opportunity to give a view and their reasoning. As Stevens (2009) notes, "*typically, a consensus emerges*, and the decision is then taken" (emphasis mine). Although Bullock and Stevens claim vigorous debate and challenge in the Boardroom, Preston (2020) is more sceptical. He points to the fact that the minutes of the meetings lack any meaningful discussion of the economic channels and reasoning by which the policy decision will achieve its outcomes. As currently structured, the deliberation process is susceptible to internal dominance, free riding, and superficial consensus.

The role of the Treasury official is also worthy of re-examination. When the UK MPC was initially conceived, the idea of having a senior Treasury official at the monetary policy decision was strictly to assist the MPC to take account of fiscal considerations in their deliberations. But the current set-up envisages that the Treasury Secretary also (a) operates as an independent Board member; and (b) brings the Treasury's economic artillery to bear as a counter to the RBA "insider" view. The appointment of a non-elected (and non-appointed) technocrat from another institution who has voting power runs counter to international best practice, to democratic legitimacy, and central bank independence. And it opens up the possibility of a powerful "RBA-Treasury block" that crowds out perspectives from the non-expert external members who have few resources of their own to rely upon for information generation.

All in all, although monetary policy in Australia has worked relatively well over the past fifty or sixty years, it is likely a reflection of an extremely able central bank staff. The governance framework itself falls well short in terms of the design features discussed in this report and the practices that have been employed by other central banks. Specifically, the appointment process for Board members is opaque and overly focused on selecting "captains of society", there is ample scope to free ride, Board members lack freedom to dissent or speak on monetary policy, they are excluded from agenda-setting, and their lack of technical expertise and diversity hampers information aggregation. The lack of accountability to stakeholders, overly long Board tenure, and the presence of the Treasury Secretary on the Board as an "independent director" also compromises the central bank.

5. TOWARDS AN IDEAL SET-UP

Archer and Levin (2018) provide a useful set of design principles for monetary policy decision-making. These principles, together with the analytical insights and international case studies from this report, set the stage for some recommendations that might form the elements of an ideal monetary policy governance regime.

Principle 1: The process for selecting MPC members should be systematic, transparent, *contestable*, and consistent with democratic legitimacy.

Recommendation 1: External members should be appointed through a merit-based competitive process run at "double arms-length", by a bi-partisan hiring committee appointed by the Treasurer that is diverse, experienced, and representative of society. Treasury Officials should be excluded from the MPC.

Principle 2: Selection of MPC members should ensure diverse perspectives, economics expertise, along with the right temperament and breadth of experience.

Recommendation 2: The threshold for economic expertise and policy acumen should be high. Members should be professional economists, with backgrounds in macroeconomics and financial economics, or offer broader experiences relevant to monetary policy. Gender, ethnicity, and industry diversity should be important considerations in deciding the MPC make-up. Membership should be part-time with a commitment of around 3 days per week on average. Overseas members should be considered, subject to this time commitment.

Principle 3: MPC size and voting rules should foster genuine engagement among members and diminish the influence of any single individual.

Recommendation 3: The MPC should be relatively small (six). There should be two internal members and four externals. The role of Chair of the committee should rotate periodically and external members should be chosen for their capacity to serve in this regard. Pre-deliberation opinions should be sought, recorded (e.g. "dot plots"), and released to the public at an appropriate time. The chair should speak last and members invited to speak randomly. MPC members should be encouraged to interact with RBA staff between meetings.

Principle 4: The terms of office for MPC members should be staggered, and non-renewable to guard against political interference and the entrenchment of groupthink, power bases and vested interests.

Recommendation 4: The term of office be a single, non-renewable term of no more than five years.

Principle 5: Each member should be individually accountable to elected officials and the public.

Recommendation 5: To optimise information production and processing and to ensure democratic accountability, each member of the committee should "own" their decision and regularly explain their thinking to stakeholders at parliament and other fora. Members should have the freedom to dissent and MPC processes should be designed to diminish cacophony. Transcripts of the deliberation meeting should be released after a suitable lag so that stakeholders have a complete picture of the reasoning and debate behind the policy decision.

Principle 6: The MPC should be subject to regular external reviews to judge their past and prospective performance.

Recommendation 6: The MPC should be exposed to a regular schedule of external review by experts in monetary policy at 5-7 year intervals. These experts should be <u>independently commissioned</u> by the Treasury without consultation from the RBA, to avoid claims of partiality. The Treasury should take the lead in ensuring that review recommendations and insights are taken on board by the RBA and MPC.

The institutional design of monetary policy is of great importance if the real costs of policy errors are to be kept to a minimum and to safeguard the social contract that central banks have with the public. To succeed, the RBA needs to adapt to changes in its environment and move forward from a regime that does not reflect the developments in our knowledge of governance and decision making. The analysis and recommendations in this report suggest ways in which monetary policy governance arrangements can, and should, be strengthened. I hope that the RBA Review Panel will find this material useful in informing their work, thereby ensuring that a proud and critical institution continues to rank among the world's best central banks.

REFERENCES

Ainsley, C. (2019). The consequences of gender diversity at the Federal Reserve: an empirical analysis of FOMC voting and discourse. *Mimeo*, University of Washington.

Anand, K., Gai, P. and P. König (2022). Leaping into the dark: a theory of policy gambles. *Journal of Comparative Economics*, forthcoming.

Archer, D. and A. Levin (2018). Robust design principles for monetary policy committees. Conference Proceedings, Annual Conference, Reserve Bank of Australia.

Apel, M., Claussen, A., Lennartsdotter, P., and Ø. Røisland (2015). Monetary policy committees: comparing theory and "inside" information from MPC members. *International Journal of Central Banking*, 11, 47-89.

Bean, C. and N. Jenkinson (2001). The formulation of monetary policy at the Bank of England. *Bank of England Quarterly Bulletin*, Winter, 434-441.

Besley, T., N. Meads and P. Surico (2008). Insiders versus outsiders in monetary policymaking. *American Economic Review, Papers & Proceedings*, 98, 218-223.

Bhattacharjee, A. and S. Holly (2015). Influence, interactions and heterogeneity: taking personalities out of monetary policy decision-making. *Manchester School*, 83, 153-182.

Blinder, A. (1998). *Central Banking in Theory and Practice*. MIT Press, Cambridge (Mass).

Blinder, A. (2007). Monetary policy by committee – why and how? *European Journal of Political Economy*, 23, 106-123.

Blinder, A. (2009). Making monetary policy by committee. *International Finance*, 12, 171-194.

Blinder, A. and J. Morgan (2005). Are two heads better than one? Monetary policy by committee. *Journal of Money, Credit and Banking*, 37, 789-811.

Blinder, A. and J. Morgan (2008). Leadership in groups: a monetary policy experiment. *International Journal of Central Banking*, 4, 117-150.

Bullock, M (2022). Policymaking at the Reserve Bank. *Speech to AFIA Annual Conference*, 18 October.

Caillaud, B. and J. Tirole (2007). Consensus building: how to persuade a group. *American Economic Review*, 97, 1877-1900.

Clark, M. (1996). The Bank of Canada, accountability and legitimacy: some proposals for reform. *Canadian Public Policy*, 22, 330-341.

Duley, C. and P. Gai (2023). Macroeconomic tail risk, currency crises, and the inter-war gold standard. *Canadian Journal of Economics*, forthcoming.

Ehrmann, M. and M. Fratscher (2007). Communication by central bank members: different strategies, same effectiveness? *Journal of Money, Credit and Banking*, 39, 509-541.

Gai, P. Lou, E. and S. Wu (2022). Targeted disclosure and monetary policy flexibility: a simple model. *Economics Letters*, 194, 10937.

Gerlach-Kristen, P. (2006). Monetary policy committees and interest rate setting. *European Economic Review*, 50, 487-507.

Gerlach-Kristen, P (2009). Outsiders at the Bank of England MPC. *Journal of Money, Credit and Banking*, 41, 1099-1115.

Gerling, K., Grüner,H, Kiel, A. and E. Schulte (2005). Information acquisition and decision making in committees: a survey. *European Journal of Political Economy*, 21, 563-597.

Goodhart, C. (2000). The role of the monetary policy committee: strategic considerations and operational independence. In Mahadeva, L and Sterne, G (eds) *Monetary Policy Frameworks in a Global Context*, Routledge, London, 226-242.

Gross, I. and A. Leigh (2022). Assessing Australian monetary policy in the twenty-first century, *Economic Record*, 98, 271-295.

Hansen, S. and M. McMahon (2008). Delayed doves: MPC voting behaviour of externals. *LSE Center for Economic Performance CEP Discussion Paper* 862.

Hansen, S. M. McMahon, and C. Rivera (2014). Preferences or private assessments on a monetary policy committee? *Journal of Monetary Economics*, 67, 16-32.

Hórvath, R. Smídkova, K and J. Zápal (2016). Voting in central banks: theory versus stylized facts. *BE Journal of Economic Analysis and Policy*, 16, 1-62.

Kahneman, D. (2011). *Thinking Fast and Slow*. Farrar, Strauss, Giroux. New York.

King, M (2007). The MPC ten years on. *Lecture to the Society of Business Economists*, 2 May.

Lombardelli, C., J. Proudman, and J. Talbot (2005). Committees versus individuals: an experimental analysis of monetary policy decision making. *International Journal of Central Banking*, 1, 181-205.

Maier, P. (2007). How central banks take decisions: an analysis of monetary policy meetings. *Bank of Canada Working Paper 2007-6*.

Macklem, T (2002). Information and analysis for monetary policy: coming to a decision. *Bank of Canada Review*, Summer, 11-18.

Malmendier, U., S. Nagel, S., and Z. Yan (2021). The making of hawks and doves. *Journal of Monetary Economics*, 117, 19-42.

Masciandaro, D, P. Profeta, and D. Romelli, (2020). Do women matter in monetary policy boards? *Bocconi Working Paper* 148.

Ottaviani, M. and P. Sørenson (2006). Reputational cheap talk. Rand Journal of Economics, 37, 155-175.

Otto, G. and G. Voss (2011), 'What Do the RBA's Forecasts Imply about its Preferences over Inflation and Output Volatility?', *Economic Record*, 87, 509– 24.

Preston, B (2020). The case for reform of the RBA's policy and communication strategy. CAMA Working Paper, 3/2020. ANU, Canberra.

Romer, C. and D. Romer (2004). A new measure of monetary shocks: derivation and implications. American Economic Review, 94, 1055-1084.

Riboni, A. and F. Ruge-Murcia (2010). Monetary policy by committee: consensus, chair dominance, or simple majority? *Quarterly Journal of Economics*, 125, 363-416.

Riboni, A. and F. Ruge-Murcia (2008). The dynamic (in)efficiency of monetary policy by committee. *Journal of Money, Credit and Banking*, 40, 1001-1032.

Riboni, A. and F. Ruge-Murcia (2017). Collective versus individual decision-making: a case study of the Bank of Israel Law. *European Economic Review*, 93, 73-89.

Riboni, A. and F. Ruge-Murcia (2019). Mind changes at the Fed. *Economics Letters*, 184, 1-6.

Sibert, A. (2006). Central banking by committee. *International Finance*, 9, 145-168.

Stevens, G (2009). The conduct of monetary policy in crisis and recovery. *Speech to The John Curtin Institute of Public Policy and the Financial Services Institute of Australasia Public Policy Breakfast Forum*, Perth, 15 October.

Svensson, L (2001). Independent review of the operation of monetary policy in New Zealand. *Report to the Minister of Finance*. Wellington.

Tucker, P. (2018). *Unelected Power*. Princeton University Press.

Vissing-Jorgenson, A. (2019). Central banking with many voices: the communications arms race. *Conference Proceedings, 23rd Annual Conference*, Central Bank of Chile.

Vissing-Jorgenson, A (2020). Informal central bank communication, *NBER Working Paper* 28276.