1 A beginner's guide to central banking

> When I went to Washington in 1979, most people thought the Federal Reserve was either a bonded bourbon or a branch of the National Guard.
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> Frederick H. Schultz, Vice-Chairman of the Board of Governors of the Federal Reserve System, 1979–82 (Schultz 2005: 343)

> Central banking is a strange profession little understood by members of the public whose interests it exists to protect, by governments with which it shares responsibilities, or by financial institutions whose activities it to some degree controls. Those who practise it often feel themselves to be members of an international freemasonry, a kind of 'mystery' in the medieval sense of a group who possess some exclusive knowledge or skill, and indeed there has always been an element of mystery … about what central bankers do.
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> H. C. (Nugget) Coombs, Governor of the Australian Central Bank 1949–68 (Coombs, H. C. 1981: 141)

Most central banks nowadays claim to abide by the principle of transparency, yet the world of central banking retains an element of inscrutability. This partly reflects the nature of the subject. Central banking is a weightier and more technical business than chicken farming or running a bus company. Though central banking might not be as delicate as brain surgery, or as complicated as the exploration of space, it is evidently a highly skilled trade. Until transparency became fashionable in the late twentieth century, central bankers did little to promote a wider understanding of their role. Shunning the limelight, their rare public statements were notable for brevity and calculated vagueness. Such reticence was often excused by referring to the (central) banker's duty to respect client confidentiality.

The public knew that central banks were important and powerful even if they did not fully understand them, and this created a problem. As Dan Brown readers will understand, there is a market for blockbusters on powerful and esoteric organisations. Some years ago, William Greider (1987), a journalist, published an 800-page exposé of the Federal Reserve System entitled *Secrets of the Temple*. Greider argued that the Fed was a mysterious, capricious, and immensely powerful force in the US economy. More recently, an economic historian, Peter Temin, has remarked upon the curious ability of central banks to alter the behaviour of those who come into contact with them: 'There is a theory of personality that says when in church people act church and I think that the economic analog of that is when in central bank people act central bank' (quoted in Parker 2002: 37–8). At the time of writing, in August 2009, Congressman Ron Paul was campaigning for the more intrusive auditing of the Fed: 'What information are they hiding from the American people?' (Paul 2009b).

By coincidence, *Secrets of the Temple* was published at a time when academic economists and even some central bankers were beginning to show greater interest in matters of transparency and accountability. In an important paper on 'Monetary mystique', Marvin Goodfriend (1986), an economist at the Federal Reserve Bank of Richmond, called for more research into the pros and cons of central bank secrecy. This research programme gathered pace over the following decade. Of course, secrecy had its uses. Central banks conducted many transactions on behalf of governments and needed to obtain the best deal for their clients. In the short run, moreover, central banks could exert a bigger impact on financial markets by taking them by surprise, though this was at the cost of generating uncertainty and mistrust in the long run. Nevertheless, there was a strong case for public policy agencies such as central banks to become more transparent.

By 2000 most central banks were much more open than they had been in 1990, and even expressed pride in this transformation. People in the early twenty-first century had better access to information about central banks and their activities than ever before. In order to understand any type of organisation, however, it is necessary to examine its history. Organisations and their functions and methods evolve over time. Their attitudes and behaviour are moulded by past successes and failures. Central banks today are in many respects very different from central banks one hundred years ago. Telling the history of central banking is an important aspect of the process of demystification. The purpose of this volume is not to unearth conspiracies; rather it is to make the central banking past more transparent by synthesising the work of hundreds of economists, historians, and political scientists, and even the writings of central bankers themselves.

Central bank histories

There is already a substantial literature on the history of central banks. The most useful previous synthesis is provided by Goodhart, Capie, and Schnadt (1994) in a volume marking the tercentenary of the Bank of England. The thickest books on central banking history have been commissioned by central banks themselves. Central banks have a strong corporate culture (Mooij 2005), and sponsoring an institutional history is one way of preserving and celebrating that culture.

The Bank of England was a pioneer, commissioning a two-volume work, totalling 765 pages, on the period from 1694 to 1914, which was published to mark the bank's 250th anniversary in 1944 (Clapham 1944). Further massive instalments appeared in 1976 and 1992 (Sayers 1976; Fforde 1992), and the volume on the 1960s and 1970s is in press. There was a trickle of imitators. For example, a massive history of the Reserve Bank of India (RBI) up to 1951 (Simha 1970), and a briefer history of the Reserve Bank of New Zealand (RBNZ), appeared in the early 1970s (Hawke 1973).

With increased openness in the 1990s, more official histories appeared. Schedvin (1992) published a hefty volume on central banking in Australia up to the mid 1970s. The second enormous volume of the history of the RBI (Balachandran 1998) dealt with the period from 1951 to 1967. A collectively authored history of the Deutsche Bundesbank (1999), running to 836 pages – a typical length for this type of work – came out just as the Bundesbank was being subsumed into the Eurosystem and subordinated to the European Central Bank (ECB). The first volume of Meltzer's (2003) authoritative history of the Fed, covering the years until 1951, was published early in the new century, and weighed in at 800 pages. The Swedish Riksbank marked 350 years of existence with the launch of a historical volume at the Bank of England (Wetterberg 2009), the British being reminded that the Swedes regard the Bank of England as a little sister.

With respect to length and attention to detail, central bank histories merit comparison with official histories of military and naval campaigns. Central bank histories are usually written by external academics but sometimes by retired insiders. Their authors seem to have at least as much freedom to view evidence as do the historians of other institutions in the private or public sectors. Sometimes they might discover that important evidence has been lost or destroyed, but this would also be the case in any other kind of organisation. The possibility that central bank historians have 'gone native' cannot be ruled out. On the other hand, recent central bank histories appear to be more critical of their subjects than were some earlier ones.

Most central banking histories are unforthcoming on the recent past. This could be because recent events are too sensitive to cover. In some cases, though, several volumes will have to be completed in order to bring the story up to the present. And only a conspiracy theorist would regard the slow progress of the Bank of England, RBI, and Fed histories as indicative of Machiavellian intent. There are some exceptions to the rule about coverage of recent times, including the second volume of the history of the RBNZ (Singleton *et al.* 2006), which comments on events up to 2002, including matters that were still topical at the time of publication.

A considerable investment of time and effort is required to read the larger central bank histories. Some may prefer to search for alternative sources of analysis. Biographies and autobiographies of important central bankers (see Chapter 2) appeal to those with a strong interest in the human dimension of central banking. Readers concerned with international comparisons may turn to several excellent volumes on the evolution of central banking, the fall and rise of the concept of central bank independence, the development of policies relating to financial stability, and the growth of central bank cooperation (Goodhart 1988; Holtfrerich, Reis, and Toniolo 1999; De Rosa 2003, Toniolo 2005; Borio, Toniolo, and Clement 2008). They may also find much of value in the collection of historical case studies of central banks edited by Toniolo (1988), and the three-volume set of classic literature edited by Michael Collins (1993).

It would not be practicable here to chronicle the history of each central bank. In fact the purpose of this book is different: it is to identify and assess broad trends in central banking since the early twentieth century. These developments will be illustrated with examples from the major central banks, as well as from some smaller, but no less interesting, institutions, especially those in the British Commonwealth.

Central bank functions

The narrowest definition of a central bank is a bank at which other banks hold deposits and use them for the settlement of interbank payments. However, all central banks have additional functions, several of which are of at least equal importance. Observers have struggled to capture the essence of central banking in one sentence. Hawke (1973) came close when he described a central bank as an organisation that stands 'between governments and banks'. Kisch and Elkin (1932: 67), two of the classic authorities, concluded that a central bank was 'an organ of public policy and not an instrument of private advantage'. Central banks implement (and often help to formulate) public policy towards the banking sector, and in relation to those economic variables that can be influenced through the banking sector.

Economists and central bankers have strained to come up with a satisfactory list of central banking functions. Price (1998), for example, identified five main activities – setting interest rates, supervising commercial banks, managing government debt, running payment systems, and operating a branch network. He used this framework to compare the institutional footprints of European central banks. Bruni (2001) offered a more complicated framework extending to eight policy areas. An older work by M. H. De Kock (1949), a South African central banking authority, devoted separate chapters to the central bank's various roles: (i) the bank of issue; (ii) the government's banker, agent, and adviser; (iii) the custodian of the cash reserves of the commercial banks; (iv) the custodian of the nation's reserves of gold and international currency; (v) the bank of rediscount and lender of last resort; (vi) the bank of central clearance, settlement, and transfer; and (vii) the controller of credit. While this list is more comprehensive than Price's, it is rather quaint in at least two respects. First, De Kock uses the term 'controller of credit', whereas most people today would say 'monetary policy agent'. Secondly, he does not discuss the banking supervision function, which became an important duty of many central banks, especially between the 1970s and 1990s.

Perhaps we should start afresh, and offer our own schedule of central bank activities, bearing in mind that there have been substantial variations, both between countries and within the same country over time (Singleton *et al*. 2006: 5):

1. *Central banks commonly issue legal tender banknotes (and often coins) to meet the requirements of the public*. Sometimes they are also responsible for related activities such as the printing of notes, and their processing and distribution to the banking industry. It is worth pointing out that the right to issue non-interest bearing liabilities in the form of banknotes is a valuable privilege. Banknotes are cheap to manufacture: a Canadian $20 note costs about 6 cents (Bank of Canada 2001). If the central bank is not required to back the face value of the banknotes issued on a one for one basis (if at all) with reserves of precious metal, then there will be an opportunity for earning seigniorage. This type of income is generated when the central bank uses non-interest-bearing notes to purchase securities that do pay interest. Gains from seigniorage typically allow the central bank to support a high level of internal costs (a 'gold plated' institution) while having ample profit left over to share with the government and/or private shareholders.
2. *Central banks implement and may formulate monetary policy*. This aspect of central banking has attracted most interest from

economists and other observers. As a result of their strategic position in the financial sector, central banks can influence monetary and credit conditions, the aggregate level of spending, and, with more or less accuracy, key economic variables such as the rate of inflation and the short run level of output and unemployment. Several tools are available to the central bank. Bindseil (2004) provides a good survey of their history and current use. First, the central bank may adjust the interest rate at which it is prepared to lend money, either on a routine or an emergency basis, to commercial banks and other eligible institutions. The bank rate or discount rate or rediscount rate – the latter is the most accurate term – is in fact a charge equivalent to an interest rate that is imposed when financial institutions offer securities for sale at the central bank's discount window. Second, the central bank may engage in open market operations (OMOs) or the purchase and sale of eligible securities such as commercial bills or Treasury bills. Such transactions may be outright, or there may be an agreement to reverse them after a specified interval, in which case they are called repurchases or repos. Third, the central bank may offer various loan facilities to commercial banks. Fourth, the central bank may employ administrative measures, such as variations in required levels of bank reserves, caps on commercial interest rates, and limits on the permissible level of bank loans. Fifth, it could use moral (per)suasion, backed by the implicit or explicit threat of other action, to influence the behaviour of banks. Whichever technique or mix of techniques is used the central bank aims to influence bank lending and aggregate spending in the economy. Whether monetary policy decisions should be taken by the central bank alone or by the central bank and the government together or by the government alone is one of the biggest questions in central banking.

3. *Central banks carry out banking and agency services for the government, and often manage the public debt.* The central bank is usually the main, though not always the exclusive, supplier of banking services to the government. Settlement of payments between the government and commercial banks normally takes place through accounts at the central bank. When governments wish to borrow, whether domestically or abroad, they often ask the central bank to act on their behalf. Central banks may be requested, or even required, to make loans to the government or other public sector agencies. But there may be strict limits on the amount of credit that the central bank is permitted to extend to the government, either directly or through the purchase of Treasury bills and government securities

on the secondary market. In some cases, such lending is prohibited on the grounds that 'printing money' to assist the government is inflationary.

4. *Central banks act as the custodian of the cash reserves of commercial banks and assist in the settlement of clearance balances between them.* The central bank is a convenient and highly secure location for the reserves of other banks. Commercial banks willingly hold some cash reserves at the central bank. These may be used in the settlement of interbank payments and payments between banks and the government. (Whether or not the authorities compel banks to hold additional reserves at the central bank varies according to the circumstances.) In some countries the central bank also owns and/or operates some of the payment systems through which payment instructions are exchanged among banks and aggregated in preparation for settlement.
5. *Central banks endeavour to preserve the integrity of the financial system, and in some circumstances act as an emergency lender of last resort and prudential supervisor of banks.* Banking crises can be highly damaging to the economy: they may wipe out deposits and make it difficult for individuals and businesses to obtain new credit (a credit crunch). The failure of systemically important banks may create log jams and havoc in the payment and settlement system. The central bank has a responsibility to uphold the overall stability of the banking system. It may discharge this duty in one or more of several ways: by managing the settlement system, by standing ready to intervene as the lender of last resort to the banking system (and perhaps also to individual banks), and by regulating, monitoring, or supervising individual banks. Central banks may also have a role in the resolution of bank failures and the management of deposit insurance schemes. (Most central bank lending to commercial banks occurs during the conduct of normal business – lender of last resort lending is exceptional.) In some instances, central banks have powers of supervision over the wider financial sector, including finance companies and insurers. Practice varies enormously, as do the views of economists as to which arrangements are most beneficial (Goodhart and Schoenmaker 1995). Nowadays the central bank's oversight of the banking system as a whole is called macroprudential policy. The supervision of individual banks falls within the microprudential sphere. In practice a tidy distinction between these categories often proves elusive. The classic prescription is for the central bank to provide emergency assistance at a penalty interest rate to illiquid but solvent banks. But when a snap

decision is required the solvency of a bank may be hard to determine (Bordo 2002). Ideally, central banks would prefer to provide emergency liquidity to the banking system instead of picking and choosing between individual banks, but this might not be practicable. Governments often insist on a role in the lender of last resort function, either because of the political implications of bank failures or because they are not prepared to allow the central bank to expose the taxpayer (the ultimate lender of last resort) to potentially large losses.

6. *Central banks may carry out government policy on the exchange rate and on custody of the national reserves of international currency and may assist in their management*. Central banks have often been assigned the task of implementing exchange rate policy. This has frequently involved the buying and selling of gold or foreign currencies in order to influence market conditions, resulting in additions to or subtractions from the external reserves, which are held on the balance sheet of the central bank and/or the government. Central banks may also influence the exchange rate by adjusting interest rates, or by operating administrative controls over external transactions.
7. *Central banks may intervene to promote economic development*. Especially in developing economies, central banks have often been given a broad mandate to foster economic development. In the absence of a strong commercial banking sector, the central bank may step in as a substitute and operate its own branch network. (The establishment of a central bank may also give potential new entrants to the banking industry the confidence to proceed.) The central bank sometimes plays a part in the financing of development projects and corporations, and in borrowing externally for the promotion of such activities. Central banking experts in the core countries of North America and western Europe are inclined to overlook these aspects of central banking in other parts of the world.
8. *Central banks advise their governments on economic policy*. Central banks possess considerable expertise on a range of economic and financial matters, and since the 1960s have been in the forefront of economic modelling. Ministers find it useful to be able to supplement advice from treasury officials with counsel from central bankers. As Malcolm Fraser, the Australian prime minister (1975–83) put it, 'there is safety in having advice from different sources. If you get two points of view, you're more likely to make better decisions … it's just prudent management' (quoted in Weller 1989: 22).
9. *Central banks participate in cooperative international monetary arrangements*. Central banks may cooperate in the management of the

international monetary system and the regulation of the international banking system by exchanging information, by formulating and discussing new policy initiatives, and by making credit available to their peers. Central bankers from different countries have often talked to one another even when their nations were at odds. Since 1930 the main hub for central bank cooperation has been the Bank for International Settlements in Basel.

10. *Other functions*. As an agency with a close relationship to the government, the central bank may be asked to take on additional tasks, such as the provision of banking services to the public, consumer protection (as in the USA), the part ownership of a stock exchange, or the operation of a stock registry (McKinley and Banaian 2005: 51–6).

This is quite a list. The RBNZ, for example, prides itself on being a ‘full service’ central bank, though it currently has no involvement in the promotion of economic development. In truth, no two central banks are identical. It is worth stressing that a central bank is not absolutely necessary to perform any of the functions described above. Commercial banks and governments could (and often have) issued money under their own names. Monetary policy could be implemented by a department of Treasury. Commercial banks could provide the government with a full range of banking services including the management of the external reserves. Large commercial banks or specialist institutions could hold the reserves of other banks and offer settlement services. Other agencies could promote economic development and tender economic advice to the government. How then can the dominance of central banks be explained? Clearly the advocates of central banking have been able to persuade governments that they can perform some important functions more efficiently and/or securely than other entities. Governments generally do not know much about the technicalities of banking and monetary affairs (though this obviously does not inhibit them from having strong views on policy). Once the central bank has opened for business, it may become the obvious institution to be entrusted (or dumped) with other responsibilities in the banking and monetary arena.

Some important central bank activities are closely interrelated, and this may be a source of difficulty for the external observer. De Kock (1949: 25) explains this accurately, if somewhat wordily:

> [A] specific loan operation of a central bank (i.e. in its capacity as a bank of rediscount) might have been caused by a commercial bank requiring more note currency (involving the central bank as the bank of issue) or foreign exchange or gold (involving the central bank as the custodian of the nation’s reserves),

or having to replenish its cash reserves and clearing balances (involving the central bank as the custodian of the commercial banks and the bank of central clearance) which it could not obtain from any other source owing to general monetary stringency (involving the central bank as lender of last resort); and before effecting the rediscount, the central bank might have raised its discount rate or imposed certain conditions in its capacity as the controller of credit.

Sometimes the functions of the central bank may clash. For example, monetary policy objectives could be compromised if the central bank felt impelled to create a large amount of new liquidity in order to avert a banking crisis. But monetary and financial stability go hand in hand most of the time.

Core and peripheral functions

We would expect some central banking activities to be more important than others. Several long standing functions pertain only tangentially to the essence of central banking. There is no compelling reason why the central bank should be involved in the manufacture of banknotes. McKinley and Banaian (2005: 52–3) list seven core areas of business: monetary policy management; foreign exchange and reserves management; the lender of last resort; the supervision and regulation of commercial banks; the management of payment and settlement systems; currency and coin management; and the fiscal agency. Seven is a large number, and universities make do with teaching and research.

Assessing the overall performance of an organisation with overlapping functions is difficult, but demerging such an organisation could result in a decline in effectiveness. Crucial information flows could be obstructed by new institutional rivalries or simply by reduced contact between former colleagues. During the late 1990s several central banks were stripped of their role in banking supervision, but the experience of the early twenty-first century does not suggest that better outcomes have been achieved in either the macroprudential or the microprudential areas.

The core versus periphery, or 'wide versus narrow bank', debate was considered by the RBNZ in the early 1990s. The RBNZ was responsible for promoting monetary stability and financial stability and efficiency. This mandate was deemed broad enough to embrace several functions, including monetary policy, a limited form of prudential oversight, and the supply (but not production) of banknotes and coins. There was room for debate over the future of other activities, including foreign reserves management, the provision of registry services, and the staffing of the Overseas Investment Commission. The more diversified the central