2 CENTRAL BANKING: SPONTANEOUS OR IMPOSED?

Central banks are relatively modern institutions, with the notion of 'a central bank' distinct from the rest of the banking system being unknown before the nineteenth century. Because of their modernity, more or less complete historical records to chronicle their progress are available and their origins ought to be uncontroversial. But that is not the case. Instead two conflicting schools of thought have for the last 25 years or so been battling over the correct way to characterise the development of central banking. This battle, of much intellectual interest in its own right, is also relevant to the design of central banks' structure and operations.

Do central banks develop spontaneously?

The first school of thought proposes what might be termed 'the imposed order' model of central banking development. Its argument is that a central bank is the creation of government, since only government can give an institution the right to issue legal-tender notes. The central bank is also often granted powers, by legislation or executive order, to regulate privately owned banks for reasons of wider public policy. Such regulations may include constraints on banks' asset composition, including – for example – requirements that banks hold high ratios of their total

assets in the form of cash (i.e. legal-tender money plus a balance at the central bank) and/or government securities. The regulations may appear to be justified on prudential grounds, in that they improve banks' ability to repay deposits at par. But, according to the imposed-order model, their true purpose is to divert resources to the state. Indeed, in the more extreme statements of the imposed-order model, the central bank is little more than a tax-collecting agency.[1] More generally, according to this school of thought, central banks do not arise 'from below', from the felt and clearly articulated needs of individual citizens and private companies. Instead they are imposed 'from above'; they are derived from 'forces outside the system (or 'exogenously')'.[2]

The alternative school of thought begins by noting that banking emerged many centuries before the establishment of central banks and then emphasises that central banks provide services to commercial banks. From the very start of banking a key management objective was to reduce the ratio of cash (which does not earn interest) to as low a ratio of total assets as possible, while maintaining the convertibility of deposits into cash. In pursuit of this objective the more risk-prone banks tended to keep a proportion of their cash with particularly reliable and well-capitalised banks, so that the latter organisations became 'bankers' banks'. By extension the central bank is interpreted as the ultimate 'bankers' bank', the safest bank of all. In any society government is special,

1 For the link between budget deficits and the levying of an inflation tax, see Tim Congdon, 'The link between budget deficits and inflation: some contrasts between developed and developing countries', in Michael J. Boskin et al. (eds), *Private Saving and Public Debt*, Blackwell, Oxford and New York, 1987, pp. 72–91, and, in particular, p. 77.

2 The phrase is taken from Hayek. See Friedrich A. Hayek, *Law, Legislation and Liberty*, Routledge & Kegan Paul, London, 1973, vol. 1: *Rules and Order*, p. 36.

in that it monopolises the legitimate use of force. Almost inevitably, the banker to the government must therefore be that safest bank. It follows that – spontaneously, naturally – the bankers' bank and the banker to the government become one and the same institution, the central bank. Since banks benefit from the services provided by a central bank, a central bank arises 'from below', from the commercial motivations of private sector agents. Central banking is therefore to be seen as part of the 'spontaneous order'; it may be analysed as a 'self-organising or self-generating system' which evolves from 'endogenous' pressures as a variety of agents, many of whom do not know each other, interact to their mutual advantage.[3]

The debate between the 'imposed order' and 'spontaneous order' schools has enlivened academic journals and spawned a number of fascinating monographs. Advocates of the imposed-order point of view often go farther, by proposing that central banking should be replaced by what they term 'free banking'. According to Vera Smith, a seminal contributor to the imposed-order school, free banking 'denotes a regime where note-issuing banks are allowed to set up in the same way as any other type of business enterprise, so long as they comply with the general company law'.[4] More concisely, free banking would involve the repeal of the legal tender laws.[5] Since legal-tender notes could no longer exist, a central bank – defined in particular by its

3 The phrases are again taken from Hayek, ibid., vol. 1, p. 37.

4 Vera C. Smith, *The Rationale of Central Banking*, Liberty Press, Indianapolis, 1990 (originally published in London by P. S. King & Son, 1936), p. 169.

5 This has numerous implications, leading to a large literature. The International Library of Macroeconomic and Financial History, published by Edward Elgar, has three volumes on *Free Banking* under the editorship of Lawrence White, which contain no fewer than 55 articles.

possession of the monopoly right to issue such notes – also could not exist. In an astute piece of brand-building, Hayek said that free banking would amount to 'the denationalisation of money'.[6]

There is no room here to present all the facts – largely, the historical facts – that are at issue between the two schools. Nevertheless, some key points are straightforward and arguably go some way to settling the matters in contention. Not only does the central bank provide services to commercial banks, but also the terms and conditions relating to these services have been determined by voluntary negotiations over many decades between the central bank and privately owned banks.[7] It follows that the spontaneous-order school is substantially correct. In any case, a fair comment is that contemporary policymakers and business leaders have shown little interest in free banking. To that extent the debates between the imposed-order and spontaneous-order schools are remote from today's institutional realities, and lack plausibility.[8]

Moreover, the sharpness of the distinction between the imposed and spontaneous models is harder to sustain in practice than it is in theory. The history of the Bank of England, founded in 1694 and often said to be the oldest central bank, illustrates the

6 Hayek, *The Denationalisation of Money*, Hobart Paper 70, Institute of Economic Affairs, London, 1976.

7 Sometimes commercial banks are forced to accept rules and regulations, and their role in negotiations with the central bank is therefore involuntary. But that was not the historical norm in the UK in peacetime. This is part of the reason why certain recent events, such as the recapitalisation exercise in October 2008 which was imposed on the banks against their will, were so disturbing.

8 'The failure to recognize that we are in unexplored terrain gives an air of unreality and paradox to the discussion of private money and free banking.' Quotation from p. 311 of Milton Friedman and Anna Schwartz, 'Has government any role in money?', in Anna Schwartz, *Money in Historical Perspective*, University of Chicago Press, Chicago and London, 1987, pp. 289–314.

fuzziness of the concepts at play.[9] In her influential book on *The Rationale of Central Banking*, Smith noted that 'The early history of the Bank was a series of exchanges of favours between a needy Government and an accommodating corporation', including the running of the government's own balances and the privilege of limited liability. In her view limited liability was an advantage 'denied to all other banking associations for another one and a half centuries'.[10] This overlooked two points. First, the very concept of a central bank was not fully clarified in the 161 years between the Bank's founding and the first limited liability legislation, which on its passage in 1855 extended the right to limited liability to most new companies. Second, the Bank of England obtained its monopoly of note issuance only after 1826, no less than 132 years from its establishment. Further, it was in the decades following its monopolisation of the note issue that the Bank lost its leadership, in terms of size and profitability, in the British banking system.

Smith was right that, since the privileges given to the Bank of England in 1694 benefited several generations of shareholders, the government of the day and the Bank's shareholders could be construed as imposing their institution 'from above'. But she ought also to have acknowledged that it was only with the granting of the note-issue monopoly that the Bank of England became more definitely a modern central bank. Further, in the third quarter of the nineteenth century both the banking industry and those concerned with public policymaking in this

9 For notes on the histories of the leading central banks, see pp. 123–231 of Forrest Capie et al. (eds), *The Future of Central Banking*, Cambridge University Press, Cambridge, 1994. The Swedish Riksbank, today the central bank of Sweden, is sometimes said to be an older 'central bank' than the Bank of England. But neither of them was a central bank when they were established.

10 Smith, op. cit., p. 12.

field understood that the rapid expansion of the Bank's note issue could lead to overissue and inflation, and so endanger monetary stability. So the Bank ceased to be a profit-maximising institution and increasingly resembled a modern central bank. For the public good it *restricted* its lending to non-bank private agents and *reduced* returns to its own shareholders.[11] This acceptance of a public policy role was at least partly because of pressures from bankers and merchants in the City of London, pressures which were surely 'from below'.

Importance of banks' profit-maximisation objective

Whatever the rights and wrongs of the debate, one theme does emerge clearly from the last section. This is that the evolution of the banking industry's structure is influenced by the objective of profit maximisation in privately owned financial institutions. Discussions about the choice of monetary and banking regimes often pivot on wider political commitments to individual liberty, social justice and so on. These have their place and will be recalled in the final chapter. But it must not be forgotten that different structures of the banking industry affect banks' profits. Of course, bankers are likely to favour arrangements that boost their profits and oppose those which cut them. The analysis in the rest of this chapter and in Chapter 3 will turn on a simple formula for the determination of banks' 'loan margins', and it will assume

11 Bagehot's insistence in the 1870s that the Bank of England could not act as a simple profit-maximiser led to a famous dispute with Thomas Hankey, a director of the Bank of England. For Hankey's point of view, see a reprint of his essay 'Banking in connection with the currency and the Bank of England', in Michael Collins (ed.), *Central Banking in History*, Edward Elgar, Aldershot, UK, and Brookfield, USA, 1993, vol. 1, pp. 194–235. See, particularly, pp. 222–5.

that banks' executives set loan margins in order to target certain rates of return on capital. Rather than relying on a vague appeal to 'freedom' or some other abstract ideal, the analysis will be set in a framework of profit maximisation. Nevertheless, a key desideratum will be the identification of the social costs and benefits of central banking.

Bank loans are risky and costly to organise, and they are financed by deposits on at least part of which interest is payable. It is clear that revenues (i.e. net interest margin, fees and other income) must be sufficient at least to cover the following list of items:

- an allowance for likely loan losses;
- the costs of organising the loans and maintaining the money transmission infrastructure which enables banks to collect deposits; and
- the marginal cost of funds to the lending bank, in terms of the interest rate paid on deposits or other finance.

Loan losses in most banking industries are typically under 1 per cent of assets in any one year, and for many banks over extended periods of years have been under 0.25 per cent.[12] For simplicity, the rate of loan loss is ignored in the rest of this chapter. In the real world the costs of organising loans are substantial, but they are largely met or exceeded by arrangement fees. For banks with extensive branch networks and a major role in the payments

12 The write-off rate on the loan assets of the much-maligned Northern Rock in the first half of 2007 was 0.01 per cent, although a larger charge (of almost 0.12 per cent of mean advances to customers) was made. See section on 'Loan loss impairment' in Northern Rock's *Interim Results*, published on 25 July 2007.

mechanism, the costs of collecting and managing deposits are also substantial, but they are assumed here to be zero to ease the exposition. With the assumptions of nil loan losses and zero running costs, the average return on banks' assets would still not be identical to the loan margin if assets consisted of bonds and securities as well as loans. Nevertheless, the concepts must be closely related in a world – such as that of today – in which banks' assets are dominated by their loan portfolios. In the rest of this paper the phrases 'return on bank assets' and 'loan margin' are used interchangeably in order to facilitate the discussion, even though they are not the same in practice. (Obviously, loan margins need to be adjusted upwards to deliver a particular 'return on assets' if allowance has to be made for loan losses and bank running costs.)

The list of costs set out in the last paragraph applies to all types of credit institution. But many such institutions – including, for example, hire purchase companies and specialist leasing businesses – are not banks. Without entering too deeply into the vexed question 'what is a bank?', the distinctive characteristics of banks may be understood to include the ability to take and repay cash deposits over the counter, and an obligation to maintain a cushion of capital against possible loans losses which further protects depositors' interests. Historically cash reserves, both in the form of 'vault cash' and in a balance at the central bank, have not paid interest, but they are essential for retail deposit-taking.[13] It follows that, for any given loan margin (which may be measured as a percentage of loan assets), the rate of return on assets is a

13 The current fashion is for central banks to introduce the payment of interest on balances held with it, subject to various restrictions which are intended to facilitate their control over short-term interest rates. While this change is of great importance to banks' cash-holding behaviour, a proper discussion would take up too much space.

positive function of the ratio of non cash-earning assets to total assets. Plainly the rate of return on capital depends on both the rate of return on assets and the ratio of capital to assets.

The argument is easily stated in algebraic terms. Let a bank's assets be split between cash, C, with c representing the ratio of cash to assets, and earning assets or loans, L. Then total assets A = C + L or A = c.A +L. So L = (1 – c).A. Profits (P) are equal to the loan margin or profit 'spread' on assets, s, multiplied by the earning assets, L, or

$$P = s.L = s.(1 - c).A,$$

while the rate of return on capital (K) is P/K, which is

$$P/K = s.(1 - c).A/K.$$

So

$$s = P/K.\ (1/[1 - c]).\ K/A.$$

It is clear that, if the loan margin is given, the rate of return on capital is inversely related to the cash/assets ratio (or indeed in practice the cash/deposits ratio) and the capital/assets ratio. As Phillips remarked in his 1921 classic on *Bank Credit*, 'the essence' of banking 'consists in the practice of extending loans far in excess of either the capital or the cash holding of the bank in question'.[14] By implication, bankers are likely to support any developments, in technology or institutions, including the institutional

14 A. W. Phillips, *Bank Credit*, Macmillan, New York, 1921, p. 13.

relationships within their own industry, which enable them to lower their cash/deposits ratio (i.e. their 'liquidity') and their capital/assets ratio (i.e. their 'solvency'). The next chapter discusses the long-run trends in banks' liquidity and solvency, with particular emphasis on the UK, although with some discussion of the role of clearing-house associations in the USA before the establishment of the Federal Reserve.