

THE BAGEHOT PROBLEM

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The Bagehot Problem*

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I

In the early summer of 1974, the ambitious plans for a comprehensive reform of the international monetary system on which governments had been negotiating for almost three years went on ice. Almost concurrently leading central banks found themselves faced with an urgent problem, but one that found no place in the extensive academic literature and official documentation of the previous fifteen years: it is absent from the literature comprehensively surveyed by Williamson.¹ This was the problem of protecting the international credit structure from the repercussive effects of the illiquidity or insolvency of banks with important connections in the international system. The problem was indeed an old one -- it was what the nineteenth century knew as a financial crisis; but many analysts, the present author included, had assumed this class of problem to have been left behind with the Credit-Anstalt in 1931.

Underlying this assumption was the belief that banking stability had been ensured by the greater responsibilities and improved regulations adopted by central banks in the wake of the Great Depression. The

1. John Williamson, "International Liquidity: A Survey", Economic Journal, September 1973. I refer here to official documentation in the context of international monetary reform, as distinct from particular operational or policy issues.

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doctrine expounded by Walter Bagehot in 1873, that the bankers' bank had a duty to lend freely when no other lenders would,² had become the orthodoxy, even among those who resisted active counter cyclical policy of the Keynesian type. But the form in which this Bagehot function of lender of last resort is to be performed, and reconciled with operation of the economy according to anonymous market forces, has remained curiously vague and ambiguous. The join between macro-stability and micro-efficiency here is an awkward corner, to use the terminology of Joan Robinson. When central banks lend, they need to take a specific view about the quality of the assets they are acquiring. Moreover, at a time of banking panic, the need is to prevent the failure of specific banks. How can these things be done consistently with maintaining the normal market incentives for prudence and good management?

This article touches on some of the issues involved, and suggests that they can be seen as a facet of a more general problem. This is the dependence of well functioning markets on certain individual behavioural characteristics, such as telling the truth and keeping one's word, which because of limitations and asymmetries of information, can be regarded as collective intermediate goods. That is to say, these goods and the final output dependent upon them, will not be "produced" in socially optimal quantity by maximisation of individual welfare without implicit or explicit co-operation.³ But such co-operation is technically easier to organise in a small group of like-minded individuals and institutions

2. Walter Bagehot, Lombard Street, John Murray (14th edition) 1915.

3. K.J. Arrow, "Gifts and Exchanges," Philosophy and Public Affairs, 1973; A. Sen, "Behaviour and the Concept of Preference," Economica, November 1973.

than in an open group.

In industries or markets where these factors are significant, the contributions that competition and free entry make to internal or X-efficiency⁴ may be in conflict with allocative efficiency. Competition tends to impede the supply of intermediate collective goods, so that output is likely to be sub-optimal, depressing allocative efficiency. This will admittedly be so only to the extent that (a) an alternative to competition does not overshoot in the other direction, of excess output, and/or (b) involve allocative distortions in the mix of output, e.g. providing bank buildings rather than bank services. But no prima facie judgment can be made whether greater openness and increased competition will increase or decrease efficiency on balance. This article suggests that banking can fruitfully be regarded as an industry subject to such ambivalence. This view suggests a positive explanation for the worldwide phenomenon of cartelisation and/or oligopoly in commercial banking, and for the exercise of central banking functions by public agencies making use of administrative discretion and informal influence.

The characteristics of banking that modern monetary theorists have regarded as justifying official regulation have been (1) the position of currency issue and supply of aggregate money as a technical monopoly if infinite inflationary escalation is to be avoided, (2) the need to prevent fraud and the renegeing of promises to pay, i.e. to enforce

4. H. Leibenstein, "Allocative Efficiency Versus X-Efficiency," American Economic Review, June 1966.

contracts, and (3) the externalities endemic in destruction and creation of money, as emphasised by Friedman⁵; (4) general banking economies of scale and (5) the problem of avoiding an artificial incentive to the use of bank deposits rather than currency, as additionally emphasised by Johnson.⁶ This article focuses on a general factor that in part underlies these characteristics. This approach casts some doubt over the Friedman-Johnson normative prescription of maximum competition subject to the minimum official regulation exercised with the minimum administrative discretion and the minimum social control.

II

Central banking was pioneered in the British banking system, and in that system it embodied an informal control mechanism. The Bank of England grew into its responsibility for the stability of the London money market as a natural outcome of its position as the dominant bank, and as the bank endowed with privileges of note issue and banker to the government. Acceptance by the Bank of England of the function of lender of last resort gave it leverage over the institutions that enjoyed direct or indirect access to this facility, and enabled it to influence their normal operation and management. Exertion of this leverage was helped by the closely knit social connections between the leading City

5. Milton Friedman, A Program for Monetary Stability, Fordham, 1960, pages 4-8.

6. Harry G. Johnson, "Problems of Efficiency in Monetary Management", Journal of Political Economy, September/October 1968, reprinted in Johnson (ed), Readings in British Monetary Economics, Oxford 1972, pages 287-297.

institutions.⁷ But the influence also ran the other way, with the Bank's paternalism reinforcing the existing club and keeping newcomers out. The closely knit social pattern of the British financial system was traditionally seen as a factor of stability and strength, e.g. in the 1931 crisis.⁸

In the 1950's and 1960's the growth ethos turned attention to the nether side of institutional stability, now seen as a potential impediment to efficiency and innovation. The social connections permeating the British financial system were exposed to prominent public view in the evidence of the Parker Tribunal and the Radcliffe Committee,⁹ and became a target of criticism.¹⁰ A growing chorus called for British

7. Leading City families such as the Barings and the Normans participated in the management of the Bank of England as directors and as governors; professional management was introduced only in the 1930's and became dominant only in the 1960's.

8. See for example R.J. Truptil, British Banks and the London Money Market, London, 1936. Truptil emphasised the importance of Oxbridge connections as well as family ties in the development of trust and the exchange of information, and the collective concern felt for safeguarding the reputation of the City. He cites with approval an encomium in the Financial News that "A city which for six months on end can obey a sanctionless ordinance to refrain from issuing foreign loans...is no mere agglomeration of banks and brokers, but an organism knit together by bonds of a finer fibre than the common desire to make money." *Op.cit.*, page 197.

9. Tribunal to Inquire Into Allegations of Improper Disclosure of Information Relating to the Raising of Bank Rate, Report and Proceedings, 1957; and Committee on the Working of the Monetary System, Report Cmnd 827, 1959, and Minutes of Evidence, 1960.

10. See in particular T. Layton and C.S. Wilson, "The Social Background and Connections of 'Top Decision Makers'", Manchester School, January 1959; E. Devons, "An Economists's View of the Bank Rate Tribunal Evidence," Manchester School, January 1959; and Michael J. Artis, Foundations of British Monetary Policy, Oxford, 1965.

banking to be opened to competition by downgrading informal and administrative controls, which were seen as protecting existing institutions. Academic analysts in Britain, less concerned than their predecessors with institutional arrangements, increasingly argued that the basis of official regulation should be switched to a general and in principle anonymous control over the supply of money and/or credit. They were backed part of the way by official agencies concerned with competition rather than financial regulation.¹¹ It was partially accepted by the British authorities in 1971,¹² when the political pendulum as well as economic fashion had swung in favour. A major credit boom ensued, which clearly played an important part in the inflation of stock exchange and property values. The subsequent collapse of this boom in turn brought illiquidity, and in a number of cases ensuing insolvency, to the new banks that had played a big part in fuelling it.

To check the contagion, the Bank of England reverted to traditional habits. The established 'primary' banks were organised to mount a

11. Brian Griffiths, Competition in Banking, Institute of Economic Affairs, 1970; National Board for Prices and Incomes, No. 34, Bankcharges, Cmdd 3292 London 1967; Harry G. Johnson, "The Report on Bank Charges", reprinted in Johnson (ed) Readings in British Monetary Economy; Monopolies Commission Report on Proposed Bank Merger, 1968; M.J. Artis, The Monopolies Commission Report, reprinted in Johnson, op.cit., pages 330-338.

12. As enunciated in "Competition and Credit Control", Bank of England Quarterly Bulletin, 1971, pages 189-93, and address by Governor of the Bank of England, ibid, pages 195-98. Continued concern with protection of the existing institutional structure, and notably of the discount houses, was evident in the selection of bank assets eligible for the reserve base; by including commercial bills and call loans to the London money market which could be backed by government securities, the authorities weakened their control over the money supply. See the critique by D.F. Lomax, "The New Credit Controls", The Banker, October 1971, pages 1160-65.

collective rescue operation, ensuring that no depositors in British banks lost money. Foreign parent companies of subsidiaries and consortium banks in London were obliged to take responsibility for any losses incurred by their British offshoots. The significant characteristic of a bank again became its standing with the Bank of England. Banking stability was preserved at its core, but only by effectively abandoning competition. The Bagehot function was again associated with paternalism and informal control within a close knit group.

III

The question arises: are there any general factors, unconnected with the historical legacy of particular institutional arrangements and habits, that impede the efficient exercise of a comprehensive backstop function for commercial banking on the basis of arms' length operations, such as would leave the banks to pursue their own direct profit oriented interests, as constrained only by formalised statutory regulations? One important such general factor can be derived from the economics of imperfect information. The insurance element in central banking -- i.e. the insurance provided to both commercial banks and the economy as a whole against illiquidity -- can be seen as part of a more general class of problems that has been associated by economic theorists in recent years with imperfect information: and more specifically with unequal information in the possession of the two parties to a market transaction.

A pioneering exposition of the effect of asymmetrical information on commercial transactions was provided by Akerlof in his analysis of the

used car market as "The Market for Lemons".¹³ Because I know more about the true condition of the car I have been using than you as a potential buyer can expect to know about it, the price you will be prudently willing to pay will be what it seems to be worth to your eye less some discount estimated to represent the deficiencies in quality you may have missed. Obviously, therefore, if my car really is as good as it looks, I will gain by not selling it but continuing to use it myself. Because the market must assume used cars to be lemons, they mostly are: the market for used cars is sub-optimal, and the market for good used cars may be non-existent.

The insurance literature has long recognised the phenomena of adverse selection based on unequal information between buyer and seller (disproportionately many sick people try to get insurance and disproportionately many healthy people self-insure) and of moral hazard (when the insurance pays the bill, you let it run up more than if you paid outright).¹⁴ Arrow has shown that the health insurance market is sub-optimal in total size, and non-existent for those most in need of it.¹⁵

13. G.A. Akerlof, "The Market for 'Lemons': Qualitative Uncertainty and the Market Mechanism," Quarterly Journal of Economics, 1970, pages 488-500.

14. H.G. Grubel, Journal of Risk Insurance, March 1971.

15. K.J. Arrow, "Uncertainty and the Welfare Economics of Medical Care", American Economic Review, 1963, pages 941-973. Pauly has contested the appellation 'moral hazard' in this context, on the grounds that an increase in consumption stimulated by a zero price implies individual economic rationality, with no moral connotations. Arrow points out that moral standards of behaviour to reinforce trust (in this case, trust that individuals who seek to insure risks associated with a particular pattern of behaviour will not change that behaviour when they get the insurance), is one means to an efficient solution that may otherwise be unattainable. M.V. Pauly, "The Economics of Moral Hazard: Comment", American Economic Review, 1968, pages 531-7, and K.J. Arrow, "Further Comment", ibid, pages 537-8. In the same vein, Sen has argued that

This produces a case for public health insurance on allocational as well as on equity grounds. Yet institutions of public insurance established as a corrective must be expected, as long as moral hazard is present, to overshoot in the other direction, by the standard criterion of equating consumers' marginal rates of substitution with producers' marginal rates of transformation; as well as needing to find a substitute for the stimulus given by competition to internal or X-efficiency.

This is the economic dilemma in the health industry. But in the case of health, the problem is somewhat mitigated by the existence of time costs and other consumption deterrents (having operations is not pleasant in itself, for most of us); in addition, availability of health services at normal or zero cost to those in greatest physical need (i.e. the unhealthy) can be counted as a distributional benefit in itself,¹⁶ as can substitution of time costs for money costs which encourages consumption by the worse off.¹⁷ These considerations probably explain why in practice we have a state health service, but not a state used car exchange. But we do have a state central bank.

Imperfections in capital and credit markets have long been noted,

15. (continued from above)
individualistic preferences, in "prisoners' dilemma" situations, can be most efficiently met only by non-individualistic behaviour. Sen, Economica, 1973, op.cit.

16. This is strongly argued by A. Sen: "The national health service has a built-in system of attempting to match payments to needs...", On Economic Inequality, Oxford 1973, page 79.

17. Nichols, E. Smolensky and T.N. Tideman, "Discrimination in Waiting Time by Merit Goods," American Economic Review, 1971, pages 312-323.

being most apparent in the phenomenon of credit rationing, but they have usually been attributed to institutional imperfections. A different interpretation has recently been put forward by Arrow.¹⁸ He suggests that imperfections are inherent in the characteristics of loan transactions, because they necessitate enforcement of a contract in the uncertain future, which weakens the self-enforcing element. This element of uncertainty makes it especially desirable for the lender to have as much information about the borrower as possible, which can be obtained only by a "very individualised information-seeking relation which is quite far removed from the arm's length impersonal model of a market." People who are known and trusted can buy all the banking services they are prepared to pay for; others can not. Banking and other forms of financial intermediation, we may infer, are less extensively developed than they would be if the information and unenforceability problems did not exist. This leads to familiar gaps and discontinuities in the capital market, some of which are countered by public intervention (small loan agencies, etc.).¹⁹

The absence of banking services involves associated welfare losses, but no obvious external diseconomies. But the same is not true at the

18. K.J. Arrow, "Limited Knowledge and Economic Analysis," American Economic Review, March 1974.

19. The non-existence of markets in future contingencies, including markets in forward exchange for more than six or twelve months, is a more familiar example of the influence discussed in this paragraph. For Friedman and his school, the failure of such markets to develop is explained by the intrusion of arbitrary intervention of governments and central banks, and anticipation of such intervention. The Arrow approach suggests rather that only government can be expected to create or underwrite such markets, either because the social risks involved are less than the sum of individual risks, or because government decides to shoulder uncertainty that market institutions shun.

higher level of banking for bankers, as embodied in the lender of last resort function of central banks. A deficiency of "output" here, in the form of denial of facilities to the risky borrower, may threaten the output as a whole, if it leads to panic and general collapse.

The commercial market institutions that performed some of the functions of a bankers' bank before the emergence of the fully fledged central banking function were inclined to essentially the same dysfunctional selectiveness that has been diagnosed for the purely commercial health insurance agency. That is to say, they preferred to avoid the risks that most needed to be covered and to withdraw altogether in the face of a threatened crisis in the system, involving uncertainty of a kind that commercial insurance cannot allow for.²⁰ Hence Bagehot's behest to the Bank of England to reverse the banker's normal instinct in a crisis and to lend more freely rather than less. But provision of banking reinsurance beyond the scope forthcoming on a commercial basis would itself tend to induce distortions of the kind noted in the case of public health insurance -- viz. encouraging extravagance or carelessness (moral hazard) and consequential excess 'output' of banking services for the public.

20. This inclination towards a saue qui pent strategy -- i.e. action that is individually optimal but collectively second best and perhaps disastrous -- admittedly tends to be checked in an oligopolistic structure, in which the small-numbers characteristic allows the collective good of mutual credit support to be produced on a voluntary basis. However, this basis is inherently uncertain, and thereby lacking in assurance. Moreover, oligopolies may choose to renounce possible short term gains from stabilising action in the expectation of strengthening or protecting their market dominance over a longer term, i.e. they may let outside or otherwise disfavoured competition go to the wall and reckon on riding out the consequences themselves. The collapse of the Bank of the United States in 1930 may be interpreted in this light (see footnote 25).

A familiar example of this phenomenon on the international plane is the granting of commercial credits and other short term loans to governments and other borrowers beyond their prospective capacity to repay, in the expectation that the commercial lenders will be bailed out by their own authorities, whether through specific credit insurance cover or in the context of a negotiated debt rescheduling. Moral hazard virtually rules out insurance of loans on a commercial basis.

The extra-market facility accordingly demands an extra-market control mechanism. In England this developed in a natural way, and completely consistently with Bagehot's pragmatic and eclectic approach, as informal control exercised through paternalistic and moral leadership within a small-numbers group.

21

A striking recent manifestation of this tendency has been seen in

21. Bagehot, as one of his few hostile critics has indelicately pointed out, was through his family bank of Stuckey's a not uninterested party: "He was recommending other people to lend freely, in time of panic, as a way of saving Bagehot." -- C.H. Sisson, The Case of Walter Bagehot, Faber & Faber 1972, page 97.

Bagehot made clear that he would have preferred the responsibility for maintaining the "ultimate banking reserve" to have been spread among a number of comparably sized leading banks, and was merely recognising the accomplished fact of the Bank of England's dominance. (Lombard Street, Op.cit., pages 65-70). This passage has sometimes been regarded as an aberration in which Bagehot failed to understand Bagehot, since the concept of a spontaneous joint effort to fulfil the reserve function misses the potential conflict between private and collective interest in reserve banking for a bank other than one dominant in size. But the anomaly appears rather less if the banks are assumed to be not pure individual profit maximisers but institutions imbued with a felt responsibility for doing their part to preserve order in the system. Bagehot, like John Stuart Mill, took it for granted that private behaviour was substantially permeated by collective norms, so it is not surprising that the collective good "problem" seen by modern economists was less obtrusive.

Britain with the virtual collapse of the "fringe banks"(i.e. banking newcomers: the appellation exactly captures the implicit presumptions of an established banking fraternity). This new sector of British banking was laid low by a panic of pre-Bagehotian severity. When the first such banks ran into difficulties in December 1973, and it became clear that the fire break was to be drawn around the newcomer banks rather than among them, new deposits were immediately switched to established banks; and all banks outside the protected circle experienced large attempted withdrawals of deposits, so that their fate was sealed.

A banking Name in Britain has always had a special cash value deriving from rules of access to facilities at the Bank of England, notably the requirement that commercial bills eligible for re-discount at the Bank must bear two approved British names, normally of members of the Accepting Houses Association. In the past this made the most practicable means of breaking into British banking the acquisition of an existing but tired merchant bank as a "shell". This route has never been available for injection of competition into deposit banking, which has now become largely divided between a three member oligopoly. The established banks were effectively required, through the informal network, to commit their resources through the "lifeboat committee" to avoiding losses to depositors on the fringe banks. Some banks indicated their displeasure at the imposition. The complaint detracted attention from the main significance of the episode for the British banking structure. For individual banks, the tying up of funds in a joint support operation is an irritant. For the established banks collectively, the rescue operation marks the removal of a source of competition, at least compared with the status quo ante and a situation in which central bank support

was available to all banks.

The informal controls and established patterns of behaviour which underpin official regulation of the banking structure in Britain constitute a mechanism closer to the understanding of the sociologist than of the modern neo-classical economist thinking in terms of optimisation subject to a budget, but not social, constraint. It is significant that while Friedman cites Bagehot with approval, he strongly favours the downgrading of re-discounting and its substitution by the more impersonal mechanism of open market operations. In this approach, controls against abuse of central bank facilities would be limited to explicit statutory regulations, such as reserve requirements -- possibly at 100 per cent -- which might eliminate the need for compulsory deposit insurance.²²

But appropriate general regulations are notoriously difficult to lay down. Balance sheet ratios have well known weaknesses as a control device. In Revell's recent assessment: "What the supervisory authorities must aim at is being able to put themselves in the position of the management of each bank...no set rule-of-thumb ratios can substitute for this vicarious participation in the management process."²³ The various

22. Milton Friedman, A Program for Monetary Stability, Fordham University Press, 1959; and Milton Friedman and Anna Jacobson Schwartz, A Monetary History of the United States, 1867-1960, Princeton University Press 1963, especially chapter 7. See also the review of the former work by A.P.Lerner, reprinted in S. Mittra (ed) Money and Banking, Random House, New York, 1970, pages 180-183.

23. Jack Revell, "The Solvency of Banks", The Banker, January 1974, pages 29-31.

overlapping banking authorities in the United States attempt in principle a comprehensive and detached review which fits the category of Revell's vicarious management.²⁴

IV

Resistance to this degree of intervention by public authorities requires a readiness to endure the failure of particular banks, relying on the support given to the aggregate money supply through open market operations to maintain stability. The adequacy of this approach has never been tested, and Friedman himself does not push it to its limits.²⁵ The Federal Reserve in 1969 gave serious consideration to supporting the paper of Penn Central.²⁶ In 1974 the New York Federal Reserve Bank gave massive support to the Franklin National Bank, on the view that failure of the bank would have serious adverse consequences for its depositors and creditors and would have "jeopardized the stability of the United States banking system, with further serious repercussions for domestic and international financial markets in general."²⁷ To be sure, the Federal Reserve like other central banks attempts to draw lines between depositors, other creditors and equity shareholders. Maximum protection

24. Boris P. Pesek and Thomas R. Saving, The Foundations of Money and Banking, Macmillan Company, New York 1968, Chapter 11, and George F. Kaufman, Money, the Financial System and the Economy, Rand McNally, 1973, pages 86-88.

25. Witness Friedman's emphasis on the especial importance of the failure of the Bank of the United States in December 1930. The refusal by the leading New York banks to respond to appeals from the New York Federal Reserve to rescue this bank with predominantly Jewish connections, a refusal which Friedman has associated with anti-Semitism, illustrates how dependent any private substitute for the Bagehot function is on social affinity and eventual solidarity. Friedman and Schwartz, op.cit., pages 308-311, and Newsweek, 1974.

26. Sherman J. Maisel, Managing the Dollar, Norton 1973, pages 41-45 and 122.

27. Federal Reserve Bank of New York, Annual Report, 1974.

for depositors²⁸ combined with full exposure for the equity would serve the insurance function while retaining some restraints against moral hazard in the form of excessive risk taking by bank managements. But a distinction of this kind, even if successfully applied, is not sufficient to prevent contingent support for depositors from encouraging banking concentration. To maintain the balance between banks of different size, it would be necessary in addition for the public to be persuaded that the central bank is prepared to allow the largest banks to go under as readily as smaller banks.

In the nervous atmosphere caused by a small crop of bank failures in the third quarter of 1974, placements of large money market deposits both nationally and internationally immediately became more selective; and the dominating principle of selection was a bank that was sure of having its central bank behind it. Marked differentials developed in rates on certificates of deposits of different banks, with size and pre-eminence being taken as the main general criterion. The largest international banks such as the Chase Manhattan and the First National City were widely believed to be overwhelmed with offers of very large deposits in this period, and consequently shading down their offered rates on such deposits -- a reversal of the normal premium on deposit size.²⁹

28. Deposit insurance in the United States by the Federal Deposit Insurance Corporation is limited to small deposits up to a limit recently raised from \$20,000 to \$40,000; this still leaves one third of deposit volume uncovered.

29. In the London market for dollar certificates of deposits, the list of issuer names acceptable to the majority of institutional buyers was described by a market participant as having become very narrow indeed -- "perhaps as few as seven names being universally acceptable." J.B. Clark, Euro money, February 1975, page 43. Between end-April and July 1974, banks with total deposits of \$500 million or more accounted for nearly 90 per cent of the increase in large time deposits issued to individuals,

This tendency exposed a continuing dilemma faced by central banks anxious to prevent their support of banking stability from weakening banking competition and long term banking efficiency. The central bank has to find a means of checking moral hazard. It can take the 'English' route of informal controls and inculcation of a club spirit among the commercial banks to play the game according to the established conventions which are seen to be in the interests of all participants.³⁰ In return for the insurance premium of responsible behaviour, insurance cover is comprehensive and assured. Participation in such an arrangement must obviously be limited to those who can be trusted to be responsible -- call them gentlemen. This will mean excluding those not known to be gentlemen; and they will be those not known to existing gentlemen. So entry will be socially controlled, and competition discouraged.³¹

The alternative strategy is for the central bank to attempt to exert its counterforce to moral hazard through a continued market discipline which makes no demands on commercial banks to depart from their individual

29. (continued from above)
partnerships and corporations, increasing their share of the total from 74.2 to 75.9 per cent. The Federal Reserve Board had earlier referred to "an increased preference by some investors for the liabilities of a small number of the largest commercial banks" in an atmosphere of "heightened public concern about the stability of financial institutions" in the third quarter of 1974. Federal Reserve Bulletin, January 1975, page 13, and November 1974, page 748.

30. Informal controls play an important role also in a number of continental European countries, notably Switzerland.

31. Entry of new participants will tend to be further restricted by the general tendency for informal agreements to become more difficult to enforce as the size of the group increases. This is well established in the literature on collective goods. See for example Mancur Olson, The Logic of Collective Action, Schocken, 1965.

profit orientation but confronts them with a contingent risk of failure. Insurance here is less than comprehensive and available only along with significant self insurance (e.g. of the equity, which is in effect a "deductible" from the insured risk).³² This may be categorised as the German and to the lesser extent the American approach to the lender of last resort function. The difficulty with this approach is that it appears unlikely in practice to be applied evenly to banks of different size, because failure of big banks is generally, and surely correctly, regarded as more disruptive to the financial system than failure of small ones. Consequently, the greater the perceived risk of particular banks being allowed to go under, the greater will be the tendency for bank depositors to seek shelter in the banks considered too large for the authorities to subject to such therapy, and the greater the tendency towards banking concentration. It is significant in this context that the country in which the Bagehot function is perhaps least entrenched, Germany, is also the country in which the large banks are especially dominant, not only within banking, but in ownership and control of industry.

Thus informal controls lead to cartelization; 'market' controls to oligopoly. Whichever strategy the central banking authorities choose, their ultimate support for banking stability tends to discourage banking competition. Neither strategy, therefore, is dominant as a means of promoting internal efficiency. In addition, non-market controls are needed to attain the allocation that a market with perfect information

32. Henry C. Wallich, a governor of the Federal Reserve Board, has referred to bank capital as self-insurance and deposit insurance as pooled insurance. Speech, February, 1975.

would reach, and to give individuals the benefit of the transactions they will relinquish if they take advantage of their opportunity to 'cheat' (i.e. alter their behaviour) in response to market opportunity (see also footnote (15) above). As Arrow has emphasised, truth and trust are preconditions of well functioning markets; yet the habits of truth and trust cannot be expected to result from individual optimisation, except perhaps in small and immobile communities where any benefit from transgressions is relinquished by the future costs imposed by the damage to reputation. Therefore: "Non-market controls, whether internalised as moral principles or externally imposed, are to some extent essential for efficiency."³³ The non-market controls that permeate banking systems underpin efficient banking, as well as often undermining it.

V

An unresolved question hovering over the international financial system is how the huge continuing surpluses of most of the oil exporting countries will be channelled through that system: and specifically, whether it will continue to be sound and feasible for the bulk of the funds to be channelled, as they were in 1974, through the private sector and predominantly through the banks through unmanaged market processes. In a continuing refrain, what is so special about this problem that the market, left to itself, cannot handle it? The answer to this refrain should probably be: that it is a banking problem, which the market left to itself has never been able to handle, for solid but neglected reasons of economic theory.

33. Arrow, American Economic Review, 1968, op.cit.

The difficulty is that the means of public intervention that can themselves make good the market deficiency involve unwanted side effects that can bring new distortions. Domestically, in the development of the stabilising and insurance functions of central banking and bank supervision, these objectives have conflicted in some part with the objective of maximum competition and arm's length controls free of paternalism and of subjective official judgments about banking business. It remains uncertain whether the full Bagehot function can be fulfilled in a system in which the key banks extend further than the length of a Lombard Street, in social space as distinct from geographical space. This poses an obvious obstacle to the international extension of the Bagehot function. But the pressure for such extension has undoubtedly been increased by the large additions to the funds seeking placement through the international banking system as disposition of the oil surpluses. This suggests that some of the same side effects of central banking that have encouraged banking concentration at the national level may now be extended internationally.

Nor is it fanciful to envisage as a concomitant the international extension of informal controls and elite groups. The arena for such socialisation has existed for some time in the growing contact between top commercial bankers and financial officials of other countries, contacts that are formalised at annual gatherings such as those of the American Bankers' Association, and at the inner core of the annual meetings of the International Monetary Fund. Yet the degree of cohesion and informal controls is minimal by the standards prevailing in the parish of the Bank of England. To this extent the potentiality for international extension of the Bagehot function remains ambiguous, reflecting the same ambiguity as exists in the scope for a lender of last resort in a domestic banking system regulated only at arm's length.