

Problems of Banking Regulation -

An EC Perspective

By

EP Davis

SPECIAL PAPER 59

December 1993

FINANCIAL MARKETS GROUP
AN ESRC RESEARCH CENTRE

LONDON SCHOOL OF ECONOMICS



Any opinions expressed are those of the author and not necessarily those of the Financial Markets Group.

ISSN 1359-9151-59

PROBLEMS OF BANKING REGULATION - AN EC PERSPECTIVE

E P Davis

**Economics Division
Bank of England**

and

**Financial Markets Group
LSE**

The author is currently seconded to the European Monetary Institute. A version of this paper was presented at a conference on "Economic Policy Issues in Financial Integration", Helsinki University, 20-21 September 1993. The views expressed are those of the author and not necessarily those of the Bank of England, the Financial Markets Group or the EMI. The author thanks I D Bond, D K Miles, L D D Price, D Rule, D Schoenmaker and S A Wilson for helpful comments. The errors remain his own responsibility.

PROBLEMS OF BANKING REGULATION - AN EC PERSPECTIVE

Introduction

This article seeks critically to assess the approach of the EC Single Market to banking regulation in the light of the key economic issues in this field, viewed both from a theoretical and a practical point of view. The paper is structured as follows; the first section discusses the key market failures in banking, and the second outlines the regulatory response in general terms. The third section describes the measures and proposals incorporated in the Single Market; and the fourth then seeks to assess the issues raised by the EC measures in the light both of the theory and the stated objectives of the Single Market programme. The section also looks briefly at the issues raised by the proposed move to EMU.

In the context of the key market failures to which banking is subject (externality, information asymmetry and monopoly), the principal theme of the paper is the potential conflict between the main objectives of the Single Market in financial services, i.e. to further economic efficiency via free competition (addressing the market failure of monopoly), while also aiming to ensure consumer protection and financial stability are maintained (thus addressing the market failures of information asymmetry and externalities). The second major theme is the appropriate degree of co-ordination of regulation necessitated by crossborder activity, how it varies with the nature of the market failure concerned, and how the appropriate level is best achieved (harmonisation as against competition among regulators, for example). In addressing these themes, the paper touches on many of the main issues in banking regulation, such as the dichotomy between prevention of systemic risk and depositor protection and the potential rôle that the private sector can play in regulation.

Readers should note that some of the Directives referred to are still being negotiated; comments refer to the latest proposals at the time of writing.

1. Reasons for Regulation

Abstracting from issues of redistribution, a case for public intervention arises when there is a market failure, i.e. when a set of market prices fails to reach a Pareto optimal outcome; when competitive markets achieve efficient outcomes, there is no case for regulation. There are three key types of market failure in banking, namely those relating to externalities, information asymmetry and monopoly, which arise in turn as consequences of banks' functions of providing payments services, liquidity, maturity transformation and minimisation of agency costs.

(a) Market failures in banking

Externalities arise when the actions of certain agents have non-priced consequences for others. The most obvious type of potential externality relates to the risk of contagious runs, when failure of one bank leads to a heightened risk of failure by others, whether due to direct financial

linkages (e.g. interbank claims) or shifts in perceptions on the part of depositors as to the creditworthiness of certain banks in the light of failure of others. The possibility of runs, even for sound and solvent banks, arises basically from their function of maturity transformation from fixed-value deposits that can be withdrawn on demand to illiquid loans, whose value is uncertain (Diamond and Dybvig (1983)). Contagious failures may cause severe damage to the macroeconomy, notably if there is failure of the payments mechanism, as well as via the withdrawal of credit facilities from borrowers which depend on the institutions affected. Note that this market failure arises for banks as institutions providing transactions services and lending the accumulated funds in illiquid form, regardless of the other types of function they may fulfil in the financial system (such as securities business). Types of 'run' may also occur for other types of institution such as investment banks.¹

As regards information asymmetry, if it is difficult or costly for the purchaser of a

may reduce the risk of runs, so long as it entails disclosure of information that is of economic relevance³.) Retail investors may be particularly vulnerable in this context, as it is likely to be uneconomic for them even to seek to gather such information; and they are likely to be too dispersed effectively to monitor or control bank management.

(b) Market failures and competition

Experience suggests that there may be trade-offs between the risk of market failures from information asymmetry and externality and the level of competition. In other words, a reduction in the level of monopoly may heighten the danger of information asymmetry and of externalities.

For example, in the presence of competition, information asymmetry can lead to market collapse, if its presence leads to a tendency for individual sellers to try to raise their profit margins and their market share by cutting production costs and lowering product quality. Buyers may then respond by withdrawing from the market altogether. Such opportunistic behaviour may be encouraged by the decline in the value of reputation and relationships that intense competition may bring about.

As discussed by Davis (1992),⁴ intense competition can also lead to heightened risktaking by banks and, hence, in certain circumstances to a heightened tendency for contagious runs. For example, as competition intensifies, banks may seek deliberately to underprice loans in order to gain long-term advantages; underpriced loans may in turn leave banks with insufficient income and capital to cover losses from default in a recession, triggering failures that may become cumulative. A strategy of deliberate underpricing might be followed by a new entrant to a market, where advantages to an incumbent arising from information, relationships and reputation imply that the borrower will always choose the incumbent if loans are priced similarly. The entrant might also offer price-rationed credit to those borrowers who were previously quantity rationed due to asymmetric information. Depending on the strength of the advantages to incumbents, such behaviour would be likely to lead to a reduction in spreads across the board, as well as a reduction in the quality of information held by incumbents⁵, making errors in credit assessment by both groups more likely. Declining spreads might also ensue from price wars and predatory pricing in oligopolistic markets, where players seek to precipitate the withdrawal of others, in the hope of profiting from a monopoly in the market at a later stage. Furthermore, there might be attempts at growth maximisation by banks, either to serve managers' own interests or in the belief that developing a dominant position is in the interests of long-run profitability. Finally, it is important to note that errors in credit assessment may be particularly likely in competitive new markets, where all banks are in unfamiliar territories and the behaviour of risk during recessions is not yet established.

³ For example, if provisions need to be made soon after loans cease to perform, and hence book value of loans net of provisions approximates to the market value such loans would have.

⁴ The full argument, which draws on concepts of industrial economics combined with the special features of banking, is spelt out in Chapter 7 "Systemic risk and market structure". Readers should note that development of an agreed theoretical paradigm in this area remains incomplete, and that some would dispute the existence of a competition-risk link in banking.

⁵ Besanko and Thakor (1993) explore the effects of declining quality of information in banking relationships as a consequence of increased competition, for example.

Some would suggest that banking risk relating to deregulation tends to arise *solely* from such unfamiliarity and not from competition per se. However, the losses incurred in recent years by incumbents in familiar markets (property lending, syndicated loans) casts doubt on this hypothesis. As with exploitation of customers, important background features encouraging these tendencies are the decline in the value of the banking franchise that deregulation and increased competition brings about (Keeley (1990)), as well as the implicit backup for risktaking provided by mispricing of the "safety net" (see Section 2 (a)).

2. The Regulatory Response

Financial regulation is an appropriate solution to the above market failures when they are sufficiently severe and there is no superior market-based alternative. The severity issue is an important one; since regulation will typically itself lead to some distortion, the judgement has to be made whether the market failure is severe enough to warrant correction at all. Note also that market failures are not the only reason for regulation; the monetary policy motive for bank regulation, leading to reserve requirements in some countries, and in others to desire to screen central bank counterparties for open market operations, should not be entirely disregarded. This section first sets out the forms of public regulation typical of most advanced countries, before outlining the alternative of a club system, possibly backed by structural regulation, and noting the advantages of avoiding regulation altogether.

(a) Public Regulation

The form of regulation that has evolved in most countries is the combination of forms of public insurance of bank liabilities, namely the lender of last resort and deposit insurance ("the safety net"), with forms of protection against bank failure which regulators can apply, implicitly providing protection for the insurer, namely capital requirements, direct controls on assets, checks on bank management, and on liquidity. (For a further discussion see, inter alia, Baltensperger and Dermine (1987).)

We first assess the safety net. Public insurance is necessary because the possibility of systemic failure is effectively uninsurable by private insurance companies with finite reserves; however, forms of investor protection that do not entail externalities, e.g. against fraudulent investment managers, can be run by the private sector; deposit insurance schemes can also be privately financed, so long as their liabilities are limited and/or they are not expected to cover against general crisis⁶.

The lender of last resort can be defined in various ways; our preferred definition is of an institution, usually the Central Bank, which has the ability to produce at its discretion currency or "high powered money" to support institutions facing liquidity (but not solvency) difficulties; to create enough base money to offset public desire to switch into money during a crisis (which may include a stock market crash as well as a banking crisis); to ensure continued functioning of payments systems; and to delay legal insolvency of an institution, preventing "fire sales" and calling of loans. The function

⁶ The German scheme is an example of this, see Deutsche Bundesbank (1992).

may thus operate either via maintenance of liquidity in the system as a whole, or via help to individual banks.

An essential feature of the lender of last resort as it has developed in most countries is that its operation should be uncertain for any particular institution in difficulties -- the lender must decide whether systemic risk threatens on a case-by-case basis, as well as whether in principle an institution is merely illiquid or insolvent. Also penalties must be imposed on the shareholders and management of the bank in difficulty, otherwise the lender is effectively a backup for any forms of risk-taking in the financial sector, generating severe agency costs. Banks would then operate with less liquidity and capital than they would otherwise, and depositors would have no reason to monitor banks' riskiness. A counter-argument to discretion is that given the residual risk that banks will not be granted assistance, the possibility of contagious runs remains.⁷ And markets are in any case likely to assume that large banks are likely to be granted assistance, thus reducing incentives to monitor (the "too big to fail" problem⁸).

Deposit insurance, as its name implies, provides a guarantee that certain types of bank liability are convertible into cash even if banks are insolvent, thus offering consumer protection, and, depending on coverage, removing the incentive for "runs" on solvent banks by uninformed depositors. As corollaries, it also removes the need either for insured depositors to distinguish risk of banks, or if risk differentials are perceived, for the bank to pay a risk premium. Such guarantee schemes are often co-ordinated by central banks, and although they are financed in normal times by levies on banks themselves, the public sector has often tended to provide a backup in extreme circumstances. To avoid insuring all of the system (including wholesale depositors who should not suffer from severe information asymmetries), there are usually limits to coverage.

But difficulties may arise; for example, in the case of large banks judged "too big to fail", all depositors may be paid off; unlike the lender of last resort, deposit insurance cannot be used at the regulator's discretion, which thus aggravates agency problems; and workable means of relating premia to risk, and thus preventing an implicit subsidy to shareholders, have proved difficult to devise -- instead there are usually flat fees related to the size of balance sheets. All of these may lead to severe moral hazard problems; in particular, when a bank does not bear the consequences, either via cost of funds or deposit insurance premia, of increasing portfolio risk or reducing capital, it has incentives to pursue such policies beyond the point it would otherwise, financed by higher interest rates on deposits than can safely be sustained. A response in some countries is to restrict deposit insurance coverage severely, so it effectively only becomes a partial protection for small retail depositors. This induces a degree of monitoring and market discipline by wholesale depositors. However, the effectiveness of such monitoring will be limited if there is imperfect information - thus implying a need for adequate disclosure standards as a complement to limited deposit insurance.

⁷ However, the possibility of runs should be less than it would be with no "safety net" at all.

⁸ One possible remedy is to provide liquidity to the *creditors* of the failing bank and not to the bank itself, thus in principle ensuring market discipline but preventing systemic risk.

A system in which the lender of last resort and/or flat-rate deposit insurance operate as the sole forms of protection against systemic risk would be vulnerable to excessive risk-taking by banks, imposing heavy burdens on the provider of the safety net. Such tendencies may be particularly marked in the absence of "structural regulation" limiting competition (see Section (b) below). Capital requirements and other types of prudential supervision seek to avoid these difficulties, by providing a prior defence against failure, albeit in no way guaranteeing the safety of institutions. Note, moreover, that supervisors do not seek detailed control over institutions' behaviour and strategies -- as this would itself generate liability for failures, and also because the authorities consider that they lack the information to price risk accurately themselves.

Prudential supervision requires provision of 'inside' information to the supervisors. Thanks to economies of scope in collecting and interpreting⁹ data, such tasks are typically centralised, and there are clear justifications for a rôle to be played by the deposit insurer/lender of last resort. However, in theory a number could be carried out by market institutions, such as rating agencies (Davis (1993a)).

Capital regulations, which require a minimum ratio of shareholders' funds to liabilities or assets, can be seen as means of shifting the risks insured by the "safety net" back to shareholders, who are the first to bear losses incurred by the bank. A low capital ratio, in other words high leverage, increases the probability of bankruptcy and raises agency costs for debt holders (in this case proxied by the lender of last resort/deposit insurer). A higher proportion of equity can reduce these risks. Note, however, that shareholders' capital is not the first line of defence for a bank against defaults by borrowers. Correct pricing of risk, backed by adequate diversification, screening, and monitoring, should ensure that capital resources are never called upon.

Capital requirements can be related to the riskiness of banks' asset portfolios. This can be seen as a means of offsetting the mispricing of the safety net, by implicitly raising the premium on risky portfolios, as well as giving incentives for banks to price risk correctly. However, for this to be accurate, the authorities must correctly assess risk on individual loans. This approach is the basis of the Basle capital adequacy agreement, which imposes internationally-agreed weights on different types of risk, including off-balance-sheet risks, and requires that banks in countries subscribing to the agreement should maintain a ratio of at least 8 per cent capital to risk-weighted assets. The motivation for the agreement is to ensure both financial stability and competitive equality. (However, as discussed in Section 4, the Basle approach is subject to various criticisms, notably for failing to penalise undiversified portfolios.)

Complementary aspects of prudential supervision are those of management, systems and liquidity. UK banks, for example, are supervised for large exposures to individual borrowers (but not sectors), thus correcting the weakness of the risk-asset approach for failing to penalise undiversified portfolios. UK supervisors also assess holdings of cash, future cash flows, and diversification of the deposit base; adequacy of provisions for bad and doubtful debts (including provisioning policy, systems

⁹ Data on balance sheets at book value largely composed of non-marketable loans require analysis and interpretation in order to estimate implicit market values and hence risk.

for monitoring credit risk, arrears, and practices for taking and valuing security); systems for monitoring the bank's condition and risks; and that the management be fit and proper prior to licences being issued or renewed. All of these provide backup for capital adequacy in protecting the safety net from the moral hazard it may generate.

Prudential supervision may also help to protect vulnerable depositors from the consequences of informational asymmetry. Licensing and 'fit and proper' rules are of particular importance. However, the main instrument in minimising the potential for exploitation in cases of asymmetric information is conduct of business rules and rules for the prevention of fraud.

(b) A 'Club' System of Regulation

The alternative to such public systems of institution based "regulation" is often neglected, but it has historically been more important than overt public regulation, notably in less competitive financial markets (see Goodhart (1989)). Basically banks may form a club and hence police standards of business such as capital adequacy and other prudential standards themselves, limiting dangers arising from information asymmetry as well as systemic risk. In such circumstances, a public regulator may not require statutory backup, as banks in a club willingly provide information about themselves. Under a club system, even the public safety net may not always be necessary; because banks themselves can proxy the lender of last resort (usually under the leadership of the Central Bank) by taking over failing banks or providing loans to troubled institutions, as well as running mutual deposit insurance schemes. They will also cooperate in collective investments such as payments systems and in rescues of industrial companies in short-term trading difficulties.

Technically a club may be seen as a voluntary group deriving mutual benefit from exploiting economies of scale or from sharing an impure public good, i.e. where the good is characterised by partial mutuality or some excludable benefits. Rivalry or excludability implies consumption of the good by one agent reduces that of another, unlike pure public goods such as defence or lighthouses. Because of the excludability, there is an optimal size of the club depending on the characteristics of the costs associated with congestion.

The thrust of the discussion here is that due to information problems, confidence and reputation of the banking system are public goods, while the costs of maintaining reputation and the danger of free riders make it "impure". The club will accordingly act to police deviants, preventing them from taking excessive risks or exploiting information asymmetry by the threat of exclusion. Some aspects of monopoly problems may be dealt with similarly; increasing returns to some types of investment means provision requires formation of a club. On the other hand clubs themselves, by strengthening oligopolistic tendencies, may be inimical to combating the market failure of monopoly in a more general sense. This is partly a two way process. Clubs tend to arise in the first place where there is a degree of monopoly in the market, as excess profitability increases the incentive for banks to conform to rules, small numbers of institutions are easy to co-ordinate and oligopoly in any case encourages firms to collude. Segmentation is also important, as it leads to common interests in the future of the market concerned.

Clubs may become more difficult to organise as competition and new entry increase. Some firms may act as 'free riders' on others' actions, thereby undermining commitment of others to obey standards; potential liabilities due to systemic risk become greater; and, independent of the level of competition, community of interest may be harder to maintain as the banking community becomes more diverse, e.g. via cross-entry to previously segmented markets or the entry of foreign banks. Indeed, in the absence of market-based barriers to entry, such as strong relationships between borrower and bank, clubs are often complemented by forms of "structural regulation", which limit competition, enabling benefits of club membership to be maintained, as well as helping to ensure stability themselves. Structural regulations may include entry controls such as a 'public interest' criterion to allow additional banking facilities to be set up, and controls on interest rates paid on deposits. However, most countries have sought to reduce such structural regulations in recent years, given their adverse effects on efficiency (and thus potentially on long run stability) and generation of monopoly rents. This has in turn weakened clubs.

As noted by King (1990), even if they are no longer able to police systemic risk in banking, clubs may still be appropriate for conduct of business regulation, i.e. to offset information asymmetries. Where product quality is difficult for consumers to detect, there is an incentive for clubs to form to guarantee product quality to consumers. Public monitoring of such clubs may be required to ensure public confidence, with the UK Securities and Investment Board and associated Self Regulatory Organisations being cases in point.

(c) Disadvantages of Regulation

Some would suggest that any form of regulation, but particularly the forms of public regulation set out in Section (a), are harmful and should be avoided. This form of scepticism is most associated with the 'free banking' school (Dowd (1987)), who suggest that the safety net unavoidably leads to moral hazard and relaxes market discipline on risk taking, and is hence best avoided in favour of a free market approach where banks must prove their solvency to customers in order to obtain deposits. The school would also suggest that the danger of systemic risk is exaggerated, since "runs" tend to shift funds to larger banks and not into cash. Critics of this approach suggest they disregard the problems of asymmetric information to an excessive extent.

While not recommending the wholesale abolition of financial regulations, critics such as Kane (1990) would suggest that they are inherently suspect, since regulators are under a shorter time horizon than taxpayers (the analogy is drawn with a type of agency cost, arising from conflict between company managers (regulators) and providers of external finance (taxpayers)). Regulators are seen as seeking to extend or defend their share of the market for regulatory services in the face of disturbances in the economic environment, subject to bureaucratic, market, and technological constraints. Kane's critique may be seen in the US tradition of suspicion of regulation, which is seen as a wealth transfer brought about by a political process driven by well defined interest groups (See Stigler (1971); Pelzman (1976)). Although this approach seems best suited to US political processes than elsewhere, in all cases it seems likely that there is a degree of "regulatory capture", entailing such transfers, given the need for

co-operation between the regulator and regulated. This may imply regulators serving the interests of the suppliers and not the users of financial services.

Other inherent disadvantages of public regulation, as pointed out by Doyle and Mortimer-Lee (1992), include pressures to extend regulation, if, for example, a rule has undesirable side effects or agents innovate around the rules; preventing such excess regulation may be complicated by the different needs of retail and wholesale customers, where rules designed to help the former may be inappropriately applied to the latter; there may be rent-seeking welfare losses if regulated firms expend resources to achieve regimes that serve their special interests; regulations may encourage monopoly in an unintended way, even if they are not explicit 'structural regulations', if, for example, strict licensing rules or high capital adequacy requirements curtail the threat of new entry; liquidity regulations may distort portfolio allocations; and restrictions on activities of banks limit benefits derivable from economies of scope between activities.

Whereas these arguments may not be strong enough to convince one that the safety net, prudential supervision and conduct of business rules are unnecessary, they do imply a need for scepticism against calls for regulation in general, and a careful sifting out of forms of special pleading, as well as more generally a need to assess when market failures are limited or have limited adverse consequences.

3. Banking and the Single Market

(a) Background

For several decades after the signing of the Treaty of Rome, the creation of the Common Market in financial services remained a remote objective, notably due to differences in regulation, entry restrictions and capital controls. Although some progress was made in a Directive of 1973, which ensured equal treatment of EC firms in respect of entry and conditions of operation in domestic markets, international competition in financial services remained constrained by capital controls, notably in countries such as France, Italy, Denmark and Ireland.

Harmonisation began in earnest with the First Banking Co-ordination Directive, which established a definition of credit institutions (as institutions taking deposits and making loans on their own account), as well as laying down the principles of home country supervision. The Directive set out general guidelines for deregulation, but also prompted several specific Directives, on Consolidated Supervision (1983), which required credit institutions to be supervised on a consolidated basis where one holds more than 25% of the other's capital; Accounts (1986), which harmonised accounting rules for financial institutions; and Consumer Protection (1986). Also aiding competition and, to some extent, integration of EC financial markets were a number of key autonomous changes in financial markets, namely a decline in use of structural regulations such as interest rate ceilings; development of money, bond and equity markets; and deregulation of fees and commissions in financial services (effects of these are summarised in Gual and Neven (1992)). But there remained a number of barriers to full integration, notably that banks still needed to seek authorisation from host supervisors; supervision remained largely host based, and could include restrictions on the permitted range of

activities; branches had to be provided with own-capital as if they were subsidiaries; and supply of cross border services remained constrained by capital controls.

(b) The Single Market in Banking

The EC sought further economic integration across the whole range of markets for goods and services in the Single European Act of 1986 (see Fraser and Mortimer-Lee (1993)). As applied to banking, the Act called for a single banking licence across the EC, home country control and mutual recognition of standards of regulation. Hence, under the Second Banking Co-ordination Directive, institutions authorised in one country are able to branch or provide services freely in others, with the bulk of supervision being by the home country. They are also free to engage in a wide range of activities, if the home country supervisor does not forbid them. These activities include most of those engaged in by 'universal banks', including portfolio management, securities issue and trading as well as traditional deposit banking. Some aspects of host country supervision continue, for example of position risk (till the CAD/ISD are introduced), conduct of business, particularly in securities activities, of liquidity and for monetary policy purposes more generally. A 'reciprocity' clause requires other countries to provide 'effective market access' to EC banks before they are allowed to enter EC markets. To ensure competition on an equal footing, and to prevent excessive 'competition in laxity' among regulators to gain footloose business, minimum standards are laid down in certain areas. These include minimum equity standards (5m ECU), controls on equity investments in non financial firms¹⁰); and supervisory control of shareholders (with notification required of stakes in banks of over 10%).

Additional supervisory Directives and proposals have followed on from the Second Banking Co-ordination Directive, namely on Large Risk Exposures (exposure to one customer not to exceed 25% of capital, and all exposures of over 10% of capital are not to exceed 800% of capital); Own Funds and Solvency Ratios (enforcing the Basle capital adequacy standards on all EC banks); a further directive on Consolidated Supervision (bringing non-bank financial holding companies into the regulatory net, and, in the wake of BCCI, ensuring host country control where most activity occurs outside the home country); the currently stalled Directive on Winding-Up (mutual recognition by host authorities of actions taken by home countries); and Deposit Insurance (to involve the setting up of guarantee schemes up to a minimum level of coverage and coinsurance in all countries, with home country coverage¹¹ thus providing incentives for adequate supervision). In this context, note that liquidity policy and monetary policy functions remain host country responsibilities. Some have assumed that these imply lender of last resort responsibilities also devolve to the host country; but this does not appear in EC legislation or proposals.

(c) Complementary Directives

¹⁰ These will deduct equity holdings in non-financial firms from banks' capital to the extent the sum of such stakes in excess of 10% of firms' value exceed 60% of banks' capital.

¹¹ This proposal contrasts with the original suggestion of host country coverage, the dangers of which, in terms of weakened incentives for adequate home country supervision, were obvious from the BCCI failure, see Dale (1993).

Similar sets of directives, incorporating the same regulatory policy approach, have been introduced or proposed for other types of financial institutions, notably the Investment Services Directive to provide a passport to non-bank securities firms and ensure access to stock markets; the Nonlife and Life Insurance Directives; and the proposed Pension Funds Directive. To ensure competitive equality between banks performing securities business and non-bank securities firms operating under the ISD, a further Capital Adequacy Directive has been agreed, applying a "trading book" approach to all institutions' securities business, focusing on market risks and large exposures in securities trading. This is distinct from the risk weights for banks' banking exposures present in the Basle/Solvency Ratio approach; banks and securities firms will have to distinguish their trading and banking books and apply different regimes to each.

Complementing the 1992 process for financial services is the full liberalisation of capital controls, required under the Capital Movements Directive by 1990. Following on have been the Delors Proposals for the evolution towards a Single Currency, as set out in the Maastricht Treaty.

The stated objectives of the Single Market is to further economic efficiency via free competition (i.e. addressing the market failure of monopoly). It will, for example, make it cheaper for firms to set up in foreign countries, probably leading in turn to lower prices for financial services and increased variety. This may have the side effect of increasing the international competitiveness of EC firms. It also aims to ensure consumer protection and financial stability are maintained (thus addressing the market failures of information asymmetry and externalities). The next section seeks to assess the issues raised by the Single Market regulatory regime in the light of these objectives and of the theory of regulation set out in Sections 1 and 2.

4. Economic Issues Raised

This section seeks to draw together the analysis by discussing the Directives and proposals in Section 3 in the light of the market failures and paradigms for regulation presented in Sections 1 and 2. The section begins with an overview of the issues relating to setting of regulatory standards in a Single Market; it then follows the schema of Sections 1 and 2 in outlining likely effects of competition on market failures, and policy relating to deposit insurance, the lender of last resort, capital adequacy and prudential supervision; it continues with a number of practical and longer term issues in bringing together such differing financial systems, and concludes with a brief discussion of the likely impact of monetary union on supervision.

(a) Setting Regulatory Standards in a Single Market

The Single Market proposals bring a further dimension to the key issues in 'regulation in one country' that were outlined in Section 2, namely those relating to setting of standards in the EC. Forms of regulatory co-ordination are only appropriate where financial systems interact, because financial firms, investors or transactions are actually or potentially mobile between them. This then gives rise for the potential for the externalities set out in Section 1 to spread across borders, whether via the existence of foreign customers of domestic banks; failure of a foreign bank causing contagious runs among domestic banks; failures generalising across borders more generally via interbank and other exposures crossborder; and under EMU, via an integrated payments system.

The EC proposals are not of course unique in addressing the issues of financial integration. The Basle agreement on capital standards, the preceding Concordat setting out regulatory responsibilities for international banks¹² and the Communiqué dealing with issues of bank failure¹³, may similarly be seen as responses of regulators to a pre-existing interpenetration of markets by international banks. But the EC proposals go further and seek to provide a framework wherein interpenetration may occur, in many cases before it has occurred.

Interpenetration, either actual or prospective, differs widely between retail and wholesale financial markets. This is due to the greater importance of sunk cost barriers to entry (relationships, reputation and expertise) in the former than the latter, regardless on any regulatory barriers to entry. The necessity for common standards in the latter is accordingly less, and the EC rules hence run the risk of unnecessarily imposing harmonisation where interpenetration is unlikely to occur. Moreover, there is an argument that as information asymmetries have no implications for other firms, there is no case for harmonisation of conduct of business rules (CEPR (1991)). The CEPR argue that even at a national level, only prevention of fraud requires public intervention; other types of product quality problems (such as negligence and incompetence) can be policed by clubs. Competition between clubs should in their view be sufficient to prevent monopoly abuse.

¹² Under the Concordats, supervision of liquidity is the responsibility of the host regulator, and solvency of home supervisors. The need for consolidated supervision was also emphasised.

¹³ The statement read "while it is not practical to lay down in advance detailed rules and procedures for the provision of temporary support to banks facing liquidity difficulties, the means are available for that purpose, and will be used if and when necessary".

A further issue in this context is whether it is better to allow competition between regulators to determine common standards, or whether forms of harmonisation are more appropriate. Competition between regulators under a passport principle may be stimulated either by desire of regulators to retain business in their own markets (banks always have the option of setting up subsidiaries under rules of other countries), or from pressure by market participants to remove obstacles to level playing fields. Competition between regulators has a more general advantage over negotiation of not leading to protection being given to entrenched interests. Nevertheless, harmonisation may be seen as better in cases where there are externalities across borders (e.g. systemic risk), given the risk that competition will lead to an outturn with excessively low standards¹⁴. The EC approach of setting minimum harmonised standards may be seen as a compromise between these approaches, in that competition between regulators will determine the precise level at which standards will be set in relation to the minimum. Even in an integrated market, the case for harmonisation is again less clear cut for conduct of business rules, which concern information asymmetries more than externalities, and where competition between regulators may still leave regulation at acceptable levels. At least, it may be appropriate to distinguish sharply between needs for consumer protection in retail and wholesale markets.

Carosio (1990) suggests that competition between regulators in the EC will have the side effect of increased "privatisation" of regulation, in that institutions such as rating agencies, auditing firms and associations for accounting standards will have an increased rôle vis-à-vis government agencies. As discussed below, 'clubs' of market participants may have an increasing function in policing conduct of business rules. The effectiveness of such private sector functions will be particularly marked when reputation is important to firms' ability to sell financial products, as is the case for many of the problems arising from asymmetric information (apart from fraud).

The degree of mobility of institutions and transactions may itself have an effect on the desirability of regulatory competition; where these are very footloose the danger that regulatory competition will lead to excessively low standards may be correspondingly large, and harmonisation appropriate. However, since there remain financial centres outside the EC to which business may move, there will remain an upper limit to the scope of such harmonised regulation, given the risk of driving business outside the EC altogether.

Finally, where harmonisation is seen as appropriate, there is the issue of whether regulation should be centralised or merely co-ordinated. This issue may arise strongly when there is Monetary Union and a European Central Bank (see below). Suffice at this point to note that centralisation may be appropriate where it is difficult to devise precise rules even on a national basis to deal with forms of market failure, such as international banking crises or asset price bubbles. Similar difficulties in use of rules may arise with other discretionary aspects of supervision such as criteria for authorisation and closure, where varying levels of laxity, confusion regarding responsibilities and lack

¹⁴ As noted by Arrowsmith (1992), this will not necessarily be the case - some markets may benefit from setting a tougher regime than the minimum, given the desire of participants to operate in markets of established integrity.

of adequate powers (e.g. BCCI) may in turn provoke market failures, and domestic regulators may pay insufficient attention to international repercussions of their decisions. In contrast, where market behaviour is relatively predictable and stable, and formal rules are appropriate at national level, mobility may imply rules should be harmonised, such as capital adequacy standards. There may arise a danger in this context within the EC, namely that the ongoing desire for 'subsidiarity' on the part of member states may lead to decentralisation where centralisation may be economically more appropriate. Resistance to a centralised lender of last resort may prove to be a case in point.

(b) Competition and the Single Market

The success of the EC Single Market, in terms of increased competition and interpenetration of financial markets, following the removal of barriers to such competition, may itself generate increased risk taking in the way described in Section 1. For example, in positioning themselves for the Single Market, firms could invest in expansion or diversification based on a desire not to lose competitive advantage rather than realistic assessment of potential profits; or at least they might fail to take into account the strategies of other banks in making their investment decisions. Alternatively, inefficient firms in newly liberalised national markets might face difficulties when facing competition from efficient new entrants, particularly if incumbents are accustomed to credit rationing among creditworthy borrowers rather than assessing the risk of marginal projects; or new entrants, being inexperienced in their new markets, might themselves take excessive risks.

As well as entailing increased risk taking, interpenetration of national markets may lead to increased problems of asymmetric information, as consumers are likely to have even less information about foreign than domestic firms. Heightened competition, by reducing the value of reputation, as well as by weakening the rôle of clubs, may reduce the protection against exploitation that reputation gives in more stable markets.

As noted by Davis (1992), the appropriate response to financial liberalisation is generally a tightening of prudential regulation, which to some extent the minimum standards in the Single Market programme will help to bring about. But it also implies a severe test of the procedures, judgement and skill of supervisors, independent of the rules they are seeking to enforce. Experience in Scandinavia, for example, suggests that the test will be a severe one, and failure could have extremely costly consequences (vide the quasi nationalisation of Norwegian banks).

(c) Issues in Regulation and the Single Market

(i) Deposit Insurance and Compensation Schemes

One may begin with two points already outlined in Section 2. Although the EC proposals are silent on forms of financing (they state that in principle the industry should pay, schemes should have sources of funding proportionate to liabilities and no presumption of state support), continuation of current national policies of flat rate premia raises the difficulties of moral hazard, at the same time as the US is making progress in relating premia to risk (premiums will relate both to capital

adequacy and broader supervisory valuations¹⁵). Secondly, the minimum harmonised level is set low and coinsurance is permitted, but schemes can also be totally comprehensive, implying the system is designed as a potentially awkward compromise between the objectives of protecting uninformed depositors and preventing systemic risk.

The home country deposit insurance proposal seems superior to the (existing) host country basis, given the incentives it gives to avoid irresponsible authorisation and supervision of banks mainly operating abroad. But it still faces some difficulties (Schoenmaker (1992a and b)). In particular, a lender of last resort will face incentives to declare closure in cases of doubt regarding a troubled bank's illiquidity or insolvency, while the deposit insurer will prefer to rescue banks, thus promoting 'too big to fail' problems. Depending on the location of the lender of last resort, this could lead to conflict between regulators cross border.

Foreign exchange exposures of foreign branches may cause difficulties to a home country deposit insurance system, as the value of liabilities will depend on the exchange rate as well as the nominal value of deposits. A partial limit on this has been set by specifying payment in ECU or EMS currencies; but August 1993 showed the stability of the latter could not be guaranteed.

The Deposit Insurance Directive seems unlikely to reduce the differences in compensation between member states. There is, for example, coinsurance in some countries and not in others, as well as vastly different levels of compensation on offer. For example, the UK scheme only covers 75% of deposits up to 20,000 pounds, while the German scheme is effectively comprehensive (100% for each depositor up to a third of the bank's capital per depositor). This could lead to competitive distortions, as well as vastly different potential burdens on the lender of last resort. There are underlying philosophical differences, in that deposit insurance is seen in countries such as the UK as a form of investor protection, while in countries such as Germany it is seen as a bulwark against systemic risk.

Totally comprehensive schemes are in theory a likely source of moral hazard, as US experience has shown, although Deutsche Bundesbank (1992) suggest that firm supervision, accounting standards and 'club' oversight can keep such risks under control. But will such clubs' remain sustainable with interpenetration and intense competition - or will greater public direction be needed?

Differences in coverage may cause problems for the home country approach. On a pure home-country basis they could give competitive advantages to banks from countries with generous schemes. A proposed compromise is to allow topping up to host country level - but this then entails increased complexity for depositors, as well as requiring host supervisors to provide a safety net without ability to withdraw a licence or supervise, although presumably host insurers will have the right to audit, and obtain information. Such an approach also entails the possibility of conflicts between deposit insurers' policies in relation to a bank.

¹⁵ These will of course remain subjective, given the difficulty of correctly valuing non marketable assets such as loans, and the degree of differentiation in fees between risky and safe banks remains low, suggesting some cross-subsidisation remains.

Given failure of EC countries to agree on a Winding-Up Directive, deposit insurance is to be triggered when either the supervisors decide the bank is unable to repay depositors for reasons directly related to its financial circumstances or a judicial ruling suspends depositors ability to claim against the bank. These alternative triggers leave open the possibility of conflict between supervisors and judiciary.

(ii) The lender of last resort

Although some analysts assume that under the EC proposals the lender of last resort function will be a host country responsibility, as part of its monetary policy function, this is nowhere made explicit. In effect, the regime set out in the Basle Communique noted above (which leaves responsibility for central banks to allocate on each occasion), remains in force. Some have suggested that in a market with much more interpenetration than has occurred in the past, a more explicit allocation of responsibility is needed to deal with crossborder liquidity crises in the EC. Second, differing levels of deposit insurance may put asymmetric burdens on lenders of last resort. But more crucially, given increased interpenetration of financial markets, one may doubt whether domestic banks will remain willing to provide 'lifeboat' facilities for failing banks organised on a 'club' basis as they have in the past. If this were the case, the burden on the central bank would be much increased, leading to pressure for assistance from the government to a greater extent than has been typical. Governments may in turn press for tighter regulation to protect the taxpayer.

(iii) Capital Adequacy

Since the EC capital adequacy regime is based on the Basle approach as outlined above, it is vulnerable to similar criticisms. These have focused on features such as the following:

First, the risk weights are crude, being e.g. the same for all non-financial companies, regardless of size and leverage. Given this broad brush approach to risk¹⁶, the rules may give incentives to maximise risk within each category (e.g. private sector loans, mortgage loans) so as to maximise return subject to the constraint, especially given lack of risk related deposit insurance premia. Such tendencies would in turn make the rules self defeating, to the extent they overturn the underlying assumption of Basle, that banks hold a well-diversified portfolio of loans.

Second, the rules cannot vary over time in response to known events such as oil shocks, or between countries to reflect the structure (e.g. risk-sharing) and behaviour (e.g. interest-rate volatility) of financial systems (see below). Yet all of these may affect the variability and correlation of rates of return on assets. Equally, 8% capital may be too little for small and poorly diversified banks. However, to meet these points, home supervisors are free to set more stringent rules, at a risk in terms of their banks' international competitiveness.

No account is taken of covariances between risks, indeed abstracting from 'large exposures', the requirement is the same for a single loan to a risky borrower, as for a globally diversified

¹⁶ The broad brush nature of the rules are understandable given the difficulty of assessing risks on non-marketable assets such as bank loans, which have no market value.

portfolio to borrowers in the same risk class. Hence the distinction between systematic and unsystematic risk is ignored (Schaefer (1987)). A more accurate approach might, for example, take account of the differing cyclical vulnerability of losses to different industrial sectors, see Davis (1993b).

Capital is measured at book value when market value may be more relevant to costs of issuing or rolling over uninsured deposits. Also capital is defined to include items other than shareholders' equity (undisclosed reserves, discounted revaluation reserves, general loan provisions, hybrid debt capital, and subordinated debt), some of which critics suggest would be of little assistance at a time of heightened financial risk (for example, because failure to service subordinated debt is itself an event of default).

The initial focus is on credit risk and not other types of risk, e.g. market risk arising from security positions; although this is now being rectified, it raises problems of its own in an EC context, given the need for a level playing field in securities markets between universal banks and securities houses (see below). Equally, funding risk, (e.g. the proportion of volatile wholesale deposits) and market risk in the banking book (as afflicted the US S&Ls) are not covered by the agreement.

Following the critique outlined in Section 2, Kane (1990) would suggest that such international agreements are inherently suspect, since regulators are under a shorter time horizon than taxpayers, and are seen as seeking to extend or defend their share of the market for regulatory services in the face of disturbances in the economic environment, subject to bureaucratic, market, and technological constraints. As such, the Basle agreement is seen as a form of cartel imposing costs on financial firms which they cannot escape by switching to other regimes. A similar critique could be made of EC proposals more generally, to the extent they entail harmonisation and not competition between regulators.

In a non-bank context, it should be noted that the EC rules apply capital requirements to non-banks, not only for investment banks where there is potential for systemic failure, but also when client monies, e.g. in investment management, are segregated. As argued by Franks and Mayer (1989), because risks arising from asymmetric information are not directly linked to financial performance, capital requirements pose a barrier to entry, reducing competition, and are inappropriate; conduct of business rules and fit and proper tests, combined with penalties for fraud and incompetent dealing are more appropriate. These may be combined with a private-sector compensation scheme (given risks are not systemic).

(iv) Conduct of business rules and the public good

The regime for conduct of business rules may also be criticised. The Directives grant a great deal of freedom for banks to operate in other national markets, but conduct of business rules, and in particular "mutual recognition of techniques" are not laid down in the Second Banking Directive. It instead allows the host authority to enforce compliance with legal provisions which are "justified on the grounds of the public good". This could allow, for example, Belgians to maintain a ban on variable rate housing credit, and the French on interest bearing current accounts, given the list of activities set out in the Banking Directive as "passportable" do not reach this level of detail (it specifies mortgage lending and not variable rate mortgage lending). Moreover, even if techniques are permitted, member states can

use taxation provisions to discriminate against undesired innovations. In other words, the EC rules still allow some of the key disadvantages of regulation identified in Section 2(c), such as excess regulation and rent seeking welfare losses, to come through. European Court decisions will probably be needed to resolve these issues.

(v) Clubs and the Single Market

As already noted in the discussion of the safety net, the advent of the Single Market, with increased competition and interpenetration, is likely to reduce the effectiveness of club arrangements in domestic banking, particularly in areas where externalities are important. Declines in segmentation would imply less of a common interest between players. Instead of acting collectively, banks would rely on their own reputation, and/or ability to discipline others directly, for example in the interbank market.

This move would parallel the decline of the club in the UK that has been observed over the 1970s and 80s. UK experience suggests that banks would be less willing to respond to calls to provide lifeboat assistance or to support 'systemic' deposit insurance schemes. Backup by the taxpayer or central bank would in turn imply a greater degree of moral hazard than when bank-financed rescues are the mainstay of systemic support. Banks would also be less willing to provide information to regulators without a statutory basis.

(d) Practical and Longer-Term Issues

(i) Co-ordination between Supervisors

The Single Market proposals split responsibility for supervision between the home and host country, whereby the latter remains responsible for conduct of business rules (as well as having the right to enforce monetary policy regulations). Although an improvement on the existing situation, this could increase considerably the regulatory burden on banks compared with the pure "passport" idea (Chrystal and Coughlin (1992)). The provision of services from abroad could be particularly complex, since banks would not be obliged to register with domestic authorities, but would have in principle to comply with conduct of business rules.

More crucially, in the context of the historically-unprecedented levels of interpenetration that it is expected to provoke, the Single Market regulatory framework could lead to considerable problems of co-ordination when banking difficulties arise, because both the home supervisor and hosts in up to 11 countries would need to be involved. Also host supervisors have no right to withdraw the licence from a bank that transgresses business rules (they can only stop it trading temporarily). Some commentators suggest that such difficulties require establishment of an EC-wide co-ordination agency, or even centralisation of supervision (see below).

(ii) Different types of institutions in the same market

The issue of ensuring a level playing field in capital adequacy treatment of securities business by banks (which dominate securities business in some EC countries) and securities houses (which are important in certain others) illustrates a considerable difficulty in integrating markets where

differing financial structures prevail. The traditional approaches to capital adequacy of these types of institution differ; for banks, which have largely non-marketable assets, which are not priced and could only be marketed at a loss, if at all (the 'fire sale'), a going concern basis for capital adequacy is seen as appropriate; for securities firms, which have marketable, liquid and easily-priced securities as assets, a windup basis is seen as the best way to protect creditors.

Ignoring such differences would imply tilting the playing field and probably leading to undesirable structural changes, which *inter alia* may reduce diversity and leave firms in the EC more vulnerable to common shocks. And yet differences may remain which mean an identical treatment is also inappropriate, despite the fact that in securities markets the different institutions serve identical functions. Most crucial is that banks provide payments services and lend funds in illiquid form, thus exposing them to contagious runs that may affect the wider economy.¹⁷ Others include the presumed superior access of banks to the lender of last resort, as well as deposit insurance; the differing nature of liabilities; the degree to which banks may be able to diversify sources of income between credit business and securities business in a way securities firms cannot. By adding the risks together, the regulations that have emerged ignore this last benefit and may thus be criticised for overcaution.

(iii) The differing nature of national financial markets

The differences between financial systems may go well beyond those of market participants outlined above. Obvious examples include the differing ability of banks to liquidate loans, the scope of banks' equity holdings and the central bank's rôle in providing liquidity. Questions about formation of a Single Market and its regulation arise more generally from what Bisignano (1991) terms the philosophy of finance. These centre, for example, on the degree to which market valuations are regarded as appropriate measures of value; the related treatment of unrealised gains on assets; the degree to which information about financial institutions is made public; the extent to which lenders and borrowers share information that is unavailable to other lenders, and form long term 'informal contracts', thus reducing moral hazard; and rights of creditors vis-à-vis shareholders in the case of failure.

Such underlying differences are arguably difficult to accommodate within a common set of regulations, which may lead to pressure for convergence of approach and behaviour, and give scope for increased risktaking in the process. Alternatively, such differences in approach could be accommodated by differing interpretations of the rules, leading to more sensitive treatment of relative risk, e.g. via capital ratios taking into account correlation of risks. Interpenetration of markets by banks supervised largely by home supervisors, and thus able to carry on business based on a "home country philosophy" in a market where it is alien may cause further difficulties. In the author's view, this may lead to convergence on a system typified by universal banks but behaving in an "Anglo-Saxon" manner, i.e. with higher levels of disclosure, but also lesser willingness to cooperate with each other and the authorities. Such issues may, of course, arise yet more strongly in the case of a Monetary Union.

¹⁷ Given the participation of universal banks, a purely functional approach to securities market regulation may thus be inappropriate; see CEPR (1991) and Bodie and Merton (1992).

(iv) Effects on free trade in financial services

Early versions of the EC financial services directives, whose tough reciprocity clauses threatened to exclude US and Japanese firms solely due to the separation of commercial from investment banking traditional in those countries, illustrate the fact that regulation can easily have consequences for international trade beyond the area concerned. Fortunately, the eventual wording chosen, of 'national treatment', reflects more sensitively the realities of the situation.

(e) **EMU, Regulation and the European Central Bank**

As noted above, centralisation of regulation is an alternative to harmonisation, notably in cases where discretion comes to the fore (i.e. there is a degree of uncertainty regarding reactions to market failure, and quick responses may be needed). In the absence of 'systemic' deposit insurance, the lender of last resort is a clear example.

A number of authors have discussed the desirability of the European Central Bank acting as regulator as opposed to, or in conjunction with, a central supervisory body. This would entail a shift from the current statutes of the ECB which envisage that the primary objectives of the system are to maintain price stability (although it should also ensure smooth operation of the payments system). Following the discussion in Section (a) above, CEPR (1991) suggest that there are a number of areas of bank regulation where 'discretion' is particularly important, and that should be centralised even before a Monetary Union, once there is sufficient integration of financial markets to imply a significant degree of risk of cross-border contagion. (Monetary Union will in itself strengthen such arguments, given risks likely to arise via integrated payments systems.) These discretionary functions are authorisation, illiquidity, insolvency, closure and administration of deposit insurance.

After an initial phase when a regulatory co-ordination committee could handle these issues, they suggest that at a certain level of integration, a central agency, able to act with speed and relatively immune to sectional pressures, will be needed. They suggest that an ECB should have responsibility for authorisation and dealing with problems of illiquidity (i.e. a lender of last resort function) but not closure and deposit insurance, on the grounds that there would be improved incentives if separate agencies have to administer closure of banks (the authorising agency would not have the incentive to 'hide its mistakes' by delaying closure); there would be less danger of regulatory capture; and the distinction of the lender of last resort from deposit insurer in terms of concern with illiquidity and not insolvency could be better maintained.

Giovannini (1992) argues that the monetary policy function of an ECB could be compromised if it has no rôle in supervision. This is because politically motivated national authorities could induce it to provide lender of last resort assistance to their own institutions, taking advantage of their own private information. It would, he argues, be obliged to do this because of the provision that it contribute to the smooth conduct of policies pursued by national authorities for stability of the financial system.

Angelini and Passacantando (1993) suggest that the function of the ECB in the payments system will almost certainly entail a supervisory function. If it provides a settlement medium

for interbank transactions, it will need power to restrict membership to the system, place limits on exposures, expel members, impose collateral requirements, etc. It will also need information on total exposure of individual banks in all such systems. Such information can only be gained via supervision, in particular of liquidity.

On the more general underlying question of whether central banks such as the ECB should be supervisors, Goodhart and Schoenmaker (1993) remain agnostic, after an exhaustive empirical investigation. They note that Central Banks' rôle as a guarantor of the payments system is a strong argument for maintaining some regulatory oversight. But equally they note that Central Banks are tending to draw back from their historical rôle of preventing contagious systemic crises, because of the decline of the banking club (Section 2 (b)), and hence their ability to organise rescues. With limited own-resources, there is a greater need to call on the government for assistance, which accordingly demands greater control over regulation itself. A degree of credence is also given to the danger that Central Banks concerned about financial stability will put less emphasis on inflation control. However, the suggestion that lender of last resort assistance is a direct danger for inflation is dismissed, on the grounds that any liquidity created can be sterilised.

Conclusions

The EC Single Market Directives and proposals give an interesting illustration of the problems of banking regulation, with the additional complications offered by a free market in financial services across 12 nation-states, which itself has a primary motive of increasing competition. Such aims are of particular interest given the suggested potential for conflict between the objectives of reducing the market failure of monopoly and of asymmetric information/externality.

In the view of the author, the main weaknesses of the proposals relate to the safety net function, which will be increasingly pressing should a Single Currency be adopted. Deposit insurance premia remain flat rate, despite the moral hazard it creates, and seems likely to involve vastly different levels of coverage. Meanwhile the lenders of last resort may find it difficult to react together to systemic problems across borders. The backup of the bankers' "club" seems likely to be weakened by intense competition and interpenetration.

Other key problems are the fact that capital adequacy regulations reproduce the shortcomings of the Basle approach; that some non-banks are likely to be subject to unnecessary capital adequacy requirements; the public good criterion may be used to protect domestic firms; conduct of business rules may be unnecessarily harmonised (since there is no externality); and that different approaches of the national financial systems may generate difficulties when interpenetration increases. Underlying the various problems is often a trade-off between efficiency and safety, as for example universal banks benefit from economies of scope, but also give rise to issues in supervision given their simultaneous participation in traditional banking (i.e. subject to runs) as well as securities and holdings of equity participations.

The success or failure of the EC measures may be of broader interest in terms of the examples they may give to the way global liberalisation of trade in financial services under the GATT

should be handled. They are also of obvious relevance to any potential entrants to the EC such as the Nordic countries.

References

- Angelini P and Passacantando F (1993), "Central banks' rôle in the payments system and its relationship with monetary policy and supervision", paper presented at a conference at Bocconi University, Milan, 1993.
- Arrowsmith J A A (1992), "Economic policy perspectives on financial market regulation and supervision: a UK view", mimeo, Bank of England, London.
- Baltensperger, E., and Dermine, J. (1987), "The Role of Public Policy in Ensuring Financial Stability: a Cross-Country, Comparative Perspective", in R. Portes and A. Swoboda, eds., *Threats to International Financial Stability*, Cambridge Univ. Press, Cambridge.
- Besanko D and Thakor A V (1993), "Relationship banking, deposit insurance and bank portfolio choice", in eds. Mayer C and Vives X, "Capital markets and financial intermediation", Cambridge University Press.
- Bisignano, J. (1991), "European Financial Deregulation; the Pressures for Change and the Cost of Achievement", in *The Deregulation of Financial Intermediaries, Proceedings of a Conference*, Research Dept., Reserve Bank of Australia.
- Carosio G (1990), "Financial regulation in Europe", Special Paper No. 43, Financial Markets Group, LSE.
- CEPR (1991), "The making of monetary union", Centre for Economic Policy Research, London.
- Chrystal K A and Coughlin C C (1992), "How the 1992 legislation will affect European financial services", *Federal Reserve Bank of St Louis Review*, March/April 1992, 62-77.
- Dale R (1993), "BCCI and deposit insurance", mimeo, Southampton University.
- Davis E P (1992), "Debt, financial fragility and systemic risk", Oxford University Press.
- Davis E P (1993a), "Theories of intermediation, financial innovation and regulation", *National Westminster Bank Review*, May.
- Davis E P (1993b), "Bank credit risk", Bank of England Working Paper No. 9.
- Deutsche Bundesbank (1992), "Deposit protection schemes in the Federal Republic of Germany", *Deutsche Bundesbank Monthly Review*, July, 28-36.
- Diamond D and Dybvig P (1983), "Bank Runs, Deposit Insurance and Liquidity", *Journal of Political Economy*, 91, 401-19.
- Dowd K (1987), "Automatic stabilising mechanisms under free banking", University of Sheffield Working Paper.
- Doyle P and Mortimer-Lee P D (1992), "Harmonisation of EC securities market regulation", paper presented at the 1992 SUEF conference, Berlin.
- Franks J and Mayer C P (1989), "Risk, regulation and investor protection; the case of investment management", Oxford University Press.

Fraser I and Mortimer-Lee P D (1993), "The EC single market in financial services", Bank of England Quarterly Bulletin, 92-97.

Giovannini A (1992), "Central banking in a Monetary Union; reflections on the proposed statute of the European Central Bank", CEPR Occasional Paper No. 9.

Goodhart C A E (1989), "Money, information and uncertainty, second edition", MacMillan, London.

Goodhart C A E and Schoenmaker D (1993), "Institutional separation between supervisory and monetary agencies", mimeo, Financial Markets Group, LSE.

Gual J and Neven D (1992), "Deregulation of the European banking industry 1980-91", CEPR Discussion Paper No. 703.

Kane E J (1990), "Incentive conflict in the international regulatory agreement on risk-based capital", Working Paper No. 3308, National Bureau of Economic Research.

Keeley M C (1990), "Deposit insurance, risk and market power in banking", American Economic Review, 80, 1138-99.

King M A (1990), "International harmonisation of the regulation of securities markets", European Economic Review, 34, 569-77.

Merton R C and Bodie Z (1992), "A framework for the economic analysis of deposit insurance and other guarantees", Harvard Graduate School of Business Working Paper No. 92-063.

Pelzman S (1976), "Towards a more general theory of regulation", Journal of Law and Economics, 19, 211-40.

Schaefer S (1987), "The design of banking regulation and supervision, some lessons from the theory of finance", in R Portes and A Swoboda, eds., "Threats to international financial stability", Cambridge University Press.

Schoenmaker D (1992a), "Home country deposit insurance?", Special Paper No. 43, Financial Markets Group, LSE.

Schoenmaker D (1992b), "A note on the proposal for a council directive on deposit guarantee schemes", Special Paper No. 48, Financial Markets Group, LSE.

Stigler G (1971), "The theory of economic regulation", Bell Journal of Economics, 2/1.