
THE FUTURE OF EUROPEAN BANKING

Monitoring European Integration 9

Centre for Economic Policy Research

The Centre for Economic Policy Research is a network of over 400 Research Fellows, based primarily in European universities. The Centre coordinates its Fellows' research activities and communicates their results to the public and private sectors. CEPR is an entrepreneur, developing research initiatives with the producers, consumers and sponsors of research. Established in 1983, CEPR is a European economics research organization with uniquely wide-ranging scope and activities.

CEPR is a registered educational charity. Institutional (core) finance for the Centre is provided by major grants from the Economic and Social Research Council, under which an ESRC Resource Centre operates within CEPR; the Esmée Fairbairn Charitable Trust and the Bank of England. The Centre is also supported by the European Central Bank; the Bank for International Settlements; 22 national central banks and 45 companies. None of these organizations gives prior review to the Centre's publications, nor do they necessarily endorse the views expressed therein.

The Centre is pluralist and non-partisan, bringing economic research to bear on the analysis of medium- and long-run policy questions. CEPR research may include views on policy, but the Executive Committee of the Centre does not give prior review to its publications, and the Centre takes no institutional policy positions. The opinions expressed in this report are those of the authors and not those of the Centre for Economic Policy Research.

Executive Committee

Chairman: Anthony Loehnis

Vice-Chairman: Guillermo de la Dehesa

Jan Krysztof Bielecki

Sheila Drew Smith

Bridget Rosewell

Ronald Cohen

Christine Downton

Mario Sarcinelli

Diane Coyle

Denis Gromb

Kermit Schoenholtz

Jean-Pierre Danthine

Philippe Lagayette

Quentin Davies

Peter Middleton

Officers

President: Richard Portes

Chief Executive Officer: Stephen Yeo

Research Director: Mathias Dewatripont

January 1999

THE FUTURE OF EUROPEAN BANKING

Monitoring European Integration 9

Jean-Pierre Danthine

Université de Lausanne

Francesco Giavazzi

Università Bocconi, Milan

Xavier Vives

Institut d'Anàlisi Econòmica (CSIC), Barcelona

Ernst-Ludwig von Thadden

Université de Lausanne



Centre for Economic Policy Research

90–98 Goswell Road
London
EC1V 7RR
UK

Tel: +44 (0) 171 878 2900
Fax: +44 (0) 171 878 2999
Email: cepr@cepr.org

© Centre for Economic Policy Research

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN 1 898128 38 3

Printed and bound in the UK

Contents

<i>MEI Steering Committee</i>	<i>page vii</i>
<i>List of Tables</i>	<i>viii</i>
<i>List of Figures</i>	<i>x</i>
<i>List of Boxes</i>	<i>x</i>
<i>Preface</i>	<i>xi</i>
<i>Executive Summary</i>	<i>xiii</i>
1 What is a Bank Today?	1
1.1 Two turbulent years	1
1.2 An outline of this report	3
1.3 The United States and Europe: two very different financial systems	4
1.4 What is a bank?	10
1.5 Do banks have a future?	13
1.6 Regulation and supervision: old and new challenges	20
2 The Transformation of the US Banking Industry	25
2.1 The facts	25
2.2 (De) regulation	27
2.3 (New) economies of scale in banking?	28
2.3.1 Technology	29
2.3.2 Diversification	30
2.4 Lessons from the United States	31
3 The European Banking Market(s)	33
3.1 One Market?	33
3.2 Banking regulation in Europe: overview and an assessment	43
3.3 How competitive is the European banking industry?	46
3.4 Summing up	50
4 Should we Expect a Merger Among ABN-Amro, Deutsche Bank and Crédit Agricole?	51
4.1 An intriguing question	51
4.2 Banking consolidation: Europe and the United States	55
4.3 Mergers and diversification: why is Europe different?	59

5	Asset Management and Investment Banking in EMU: Whose Turf will it be? The Contest Between European Universal Banks and US Investment Houses	62
5.1	Asset management, corporate finance and the euro	62
5.2	Asset management in EMU	64
5.3	Banks and the new challenge of asset management	68
5.4	The new euro corporate bond market	71
5.5	Who will serve the new European corporate clients?	72
5.6	How many universal banks?	75
6	Competition Policy: European Peers or National Champions?	80
6.1	On the source of shareholder value	80
6.2	European banks and the monetary policy transmission mechanism in EMU	83
6.3	Discouraging national chauvinism	85
7	Should Supervision and Regulation be Centralized?	89
7.1	One money, one central bank, 11 independent supervisors	89
7.2	EMU: the challenge of supervision	90
7.3	Who should the supervisor be, and who should it supervise?	93
7.4	National regulators, multinational actors	94
7.5	The risk of giving in to petty national jealousies	97
8	European Banking in the Twenty-First Century	100
8.1	Banks have a future	100
8.2	Banking in Europe: will EMU be the watershed?	101
8.3	History matters	104
8.4	Is all this good for banks?	105
8.5	Is it good for Europeans?	106
9	An Agenda for Policy	108
	<i>References</i>	111

MEI Steering Committee

Richard E Baldwin

Graduate Institute of International Affairs, Geneva

David Begg

Birkbeck College, University of London

Jean-Pierre Danthine

Université de Lausanne

Francesco Giavazzi

Università Bocconi, Milan

Paul Seabright

Churchill College, University of Cambridge

Jürgen von Hagen

Zentrum für Europäische Integrationsforschung, Universität Bonn

Charles Wyplosz

Graduate Institute of International Affairs, Geneva

List of Tables

Table 1.1	Top ten world banks by market capitalization and total assets	<i>page</i> 2
Table 1.2	Bank mergers	2
Table 1.3	EU, Japan, United States: selected indicators on the size of the capital markets, 1995	7
Table 1.4	Funds raised in the capital markets by non-financial enterprises, 1990–5	8
Table 1.5	Liabilities of non-financial enterprises	8
Table 1.6	Commercial paper	9
Table 1.7	The specialization of US and European banks	9
Table 2.1	Measures of concentration in the US banking markets	26
Table 3.1	Cross-border banking penetration	34
Table 3.2	EU: cross-border interbank assets, 1992–6	36
Table 3.3	Mutual funds, June 1996	37
Table 3.4	International bonds: stocks outstanding as % of domestic bonds	38
Table 3.5	International and domestic bonds by currency of issuance: stocks outstanding	39
Table 3.6	The choice of bond bookrunners, 1996	41
Table 3.7	The choice of syndicated-loan arrangers, 1996	42
Table 3.8	Net interest revenue	47
Table 3.9	Operating expenses as % of gross income	48
Table 3.10	Staff costs as % of gross income	49
Table 4.1	Market share (based on deposits) of five largest banks	51
Table 4.2	Mergers and acquisitions in the financial services industry in the EU and in the United States	55
Table 4.3	Bank acquisitions in Europe (US \$ billion)	56
Table 4.4	Correlations of regional employment growth rates with the country average and with the EU-12 average	60
Table 5.1	Assets of institutional investors	64
Table 5.2	Foreign assets in the portfolios of pension funds	66
Table 5.3	Households' assets managed by institutional investors	68
Table 5.4	The largest global asset managers (assets under management as of 31 Dec. 1997, US \$ billion)	70

Table 5.5	Number of national banks, state banks and affiliates of national and state banks engaged in the securities business, 1922–33	75
Table 8.1	Stock market performance of bank stocks relative to local stock market indices	106

List of Figures

Figure 1.1 Share in US financial intermediation: raw data, 1957–93	<i>page</i> 13
Figure 1.2 US bank assets (% of assets of all financial intermediaries): raw data and data adjusted for off-balance sheet activity and lending by foreign banks	14
Figure 1.3 US bank assets (% of GDP): raw data and data for off- balance sheet activity and lending by foreign banks	15
Figure 1.4 Changing asset structure of Deutsche Bank	16
Figure 1.5 Changing composition of Deutsche Bank's revenues	17
Figure 1.6 United States: bad loans (% of all loans) by bank size	19
Figure 5.1 International bonds and lending	63
Figure 5.2 Italy: interbank rate, average lending rate and lending rate to the best borrowers	71
Figure 6.1 European banking industry: profitability and degree of concentration, 1996	82

List of Boxes

Box 1.1 Four big banks	11
Box 1.2 Competition in banking: can we have too much of it?	21
Box 4.1 A little background: sunk costs and concentration	52
Box 4.2 Full mergers versus networking	57
Box 5.1 Investing close to home	67
Box 5.2 Outlawing universal banks?	77
Box 6.1 Bank consolidation and small business lending	86

Acknowledgements

We wish to thank Vittoria Cerasi, Mathias Dewatripont, Mario Draghi, Marcello De Cecco, Roni Hamaui, Richard Portes, Paul Seabright and Luigi Spaventa for very helpful comments on an earlier draft; Luca Flabbi, Davide Di Laurea and Boris Jovanovic for research assistance. E. von Thadden gratefully acknowledges the hospitality of the Center for Advanced Study in the Behavioral Sciences at Stanford University during the writing of the final versions of the manuscript.

Preface

European financial markets are in a state of turmoil. Formerly protected domestic markets are being opened to competition, in banking as well as in security trading and underwriting. As a result banks throughout Europe are undergoing the most far reaching process of consolidation and restructuring of the post war period. This state of flux and transition – due partly to technological innovation, but also to the EU's attempt to create a level playing field in European banking and financial markets – will persist for some years to come. If this were not enough, European financial markets are now being hit by two additional shocks: first, the transition to a common currency; and second, the transition from pay-as-you-go to funded social security systems. Either shock on its own would cause an upheaval in European portfolios, as European households shift from holding bank deposits towards securities, especially equities, and towards far more internationally diversified portfolios. Their combined force is likely to transform the financial landscape of Europe and place pension funds and securities markets at the centre of the European financial system. This will induce profound changes in the funding of companies, in their relationship with banks and their internal systems of corporate governance. In ten years European financial markets will have changed beyond all recognition.

Research in this field is therefore not only a highly exciting endeavour but also an extremely practical tool, capable of guiding the strategies of market participants and alerting them – and policy-makers – to the opportunities and the dangers posed by this profound and rapid transformation of the European financial system. These discussions should, but too seldom are, based on economic analysis which is rigorous, yet presented in a manner accessible to public- and private-sector policy-makers, their advisers and the wider economic policy community.

Monitoring European Integration aims to meet this objective, by providing an annual assessment of the progress of, and obstacles encountered by, economic integration in Europe. A rotating panel of CEPR Research Fellows meets periodically to select key issues, analyse them in detail, and highlight the policy implications of the analysis. The output of the panel's work is a short annual Report, for which they take joint responsibility.

This Report (the ninth in the series) provides a detailed analysis of the profound changes taking now place in Europe's banking industry. The Report examines whether these changes will lead European banks to resemble their US competitors, and concludes that the European banking industry is unlikely to become a clone of the United States. Competitive pressures, even augmented by the introduction of the euro, will not be enough to create a single financial market in Europe: some degree of market segmentation is likely to persist in the eurozone. The Report identifies a number of factors which are likely to sustain this market segmentation. These include the current lack of regulatory harmonization, as well as continuing differences in taxation and corporate law. The Report also draws attention to an important but neglected reason for the persistence of nationally segmented markets in the United States. There, banks have tried to diversify through mergers and acquisitions: these have necessarily taken place across state borders, since each state tends to have a relatively homogeneous economic structure. In Europe there is much more heterogeneity within countries, and banks can diversify without moving outside their national borders. The result, according to the Report, is likely to be consolidation within national boundaries, with a consequent increase in market power in national markets. This has important policy implications, since an increase in market power at the national level may have undesirable and unwelcome consequences for the customers of banks, in particular small businesses who do not have direct access to euro financial markets. Such consolidation thus presents an important challenge for national competition authorities, and the Report presents a convincing case that banks should be subject to the disciplines of competition policy as are other industries.

The Report also outlines clearly the challenges facing Europe's banking supervisors in their tasks of preserving systemic stability and fostering the development of financial markets. The Report highlights, for example, the important developmental role that the European Central Bank could potentially play in stimulating the growth of European markets, in particular by providing liquidity when needed to sustain the smooth operation of the corporate bond market. Finally, the Report assesses whether the present decentralized structure of banking supervision with Europe can cope with systemic risk. The present system of coordination among national authorities may not be enough: supervision should be centralized, the Report concludes. According to the Maastricht Treaty, centralized supervision would have to be carried out by the ECB, but this will only add to the tasks of an institution which already faces daunting challenges. The Report concludes that there is an overwhelming case for a different model of supervision, namely a European agency responsible for the oversight of both banks and financial markets.

The prescience, analytical clarity and relevance of previous *Monitoring European Integration Reports* promise a fresh, illuminating approach, and I believe readers will find these expectations justified in this Report.

The preparation of this Report was made possible through the very generous support of the Fundación ICO in Madrid and its Director Isabel Sagüés, while at an earlier date the German Marshall Fund of the United States provided financial assistance which was instrumental in establishing the *Monitoring European Integration Series*. This Report includes new research, but since it is written and published quickly so as to be relevant to ongoing policy processes, it must rest on a solid base of past fundamental and policy-oriented research. The authors and CEPR express their continuing thanks for the support of such research which has come from these bodies and all others that contribute to the Centre's funding.

The authors and CEPR are also grateful to Sue Chapman and Lorna Guthrie, as well as other staff at CEPR whose patience and professionalism have been most helpful in the production of this Report.

None of these institutions or individuals is in any way associated with the content of the Report. The opinions expressed are those of the authors alone, and not of the institutions to which they are affiliated nor of CEPR, which takes no institutional policy positions. The Centre is extremely pleased, however, to offer to an outstanding group of European economists this forum for economic policy analysis.

Stephen Yeo
25 January, 1999

Fundación ICO

The Instituto de Crédito Oficial (ICO) is the State Financial Agency and also acts as a Specialised Credit Institution. ICO's objectives are to support and promote those economic activities which will contribute to growth and to a more equitable distribution of the nation's wealth and, especially, those which, because of their social, cultural, innovative or ecological significance are particularly worth developing.

Within this context the objectives of the Fundación ICO are the promotion and development of research and studies related to economic, scientific, technological, environmental, sociological, cultural and humanitarian fields. The Fundación ICO is particularly interested in the promotion, either directly or indirectly, of studies, research and projects related to the economic field.

The Fundación ICO also runs and manages the Museo Colecciones ICO, which holds three different modern art collections: Spanish Sculpture and Drawings, Contemporary Spanish Painting, and an edition of Pablo Picasso's Suite Vollard.

Executive Summary

Banking is in turmoil. The bank as an institution is changing; the industry is changing. Advances in information and financial technologies are transforming banking practices at the same time as regulatory changes have transformed banking markets. This is true in the United States, with the Riegle-Neal Act of 1994 and the gradual repeal of the 1933 Glass-Steagall Act. It is even more so in Europe, where the ultimate regulatory change has been EMU – the adoption of a single currency.

These changes have been accompanied by an unprecedented wave of mergers and acquisitions. A handful of huge global institutions seem prepared to dominate the scene. At the same time, the Asian crisis and its aftermath have left deep wounds. Banks, European banks in particular, appear to be vulnerable to economic accidents like Asia and Russia, and in some respects, banks are more fragile than ever before as the consequences of the near-collapse of Long Term Capital Management illustrate.

Will EMU be the ‘last straw’ that breaks the back of the traditional European banking industry? There seems little doubt that inside EMU, the practice of banking and the process of financial intermediation will become more uniform, but at what speed and on which model will they converge? What are the implications for competition within the European market and for the competitiveness of European banks? And how should governments manage regulation and bank supervision? These are some of the key questions addressed in this Report.

Will the European banking industry end up just like its US counterpart?

On purely objective grounds, the post Riegle-Neal Act United States and post-EMU Europe will be very similar, suggesting that the banking industry in the US and Europe may converge on a single model. But the transformation of the US and European banking industries are different in two important respects:

- First, the United States is more advanced in the deregulation process – not only because the currency segmentation of European markets has only now been removed (and only among 11 countries), but also because the EU’s Single Market Directives, while substantial on paper, have not to date been as effective in practice.
- Second, despite the massive consolidation of the financial industry, in the United States, concentration at the level of local banking markets has, if anything, decreased. In Europe, on the contrary, mergers among commercial banks have so far been mostly within national markets.

While the European banking industry will certainly undergo major changes, it is likely to remain quite different from its US counterpart because of three fundamental factors:

- First, EMU countries are not US states: the diversification of macroeconomic risk requires less cross-border consolidation.
- Second, the weight of different European cultures and languages will not disappear, at least at the retail, consumer-market level.
- Third, the European financial framework is far from harmonized, including law, taxation and, more importantly, regulatory and supervisory institutions.

Finally, history matters: in the restructuring process, European banks will benefit from the advantage of incumbency in European markets. Conversely, in the United States, the incumbency advantage of US investment banks and asset managers is likely to compensate more than enough for their inability to exploit existing economies of scope with commercial banking activities. The convergence of banking models in Europe and the United States will thus be conditioned by their history of universal and specialized banking respectively.

What prospects for competition and consolidation among European banks?

The limited evidence available suggests that although the European banking industry appears to have gone through a significant increase in competition, there is certainly room for a further intensification of competitive pressures. In part because of the current lack of regulatory harmonization, but also due to past heritage, competitive conditions have not yet provided a powerful impetus for change.

Non-regulatory barriers, taxation and corporate law in particular, are also likely to remain important for the foreseeable future as a source of continuing market segmentation.

The existence of different currencies has been an important factor in European segmentation, playing in some sense the role of interstate banking restrictions in the United States. Alone, however, the euro will not be enough to create a true single European financial market.

One key observation for understanding this is that, maybe counter-intuitively, diversification possibilities in Europe are almost as good within countries as they are across countries. This is in contrast with the United States where states are more homogeneous, and diversification benefits must be sought across state borders. In Europe, the benefits from consolidation that have driven the US merger wave can be obtained by merging within a country.

It is clear why a European bank's first bids for growth by acquisitions would naturally be made nationally, where mergers are easier in terms of culture and regulation, and where they may also bring local market power – a welcome relief from increasing competitive pressures. But there will be losers from such increases in market power, notably small businesses, which will not be big enough to access the new euro financial markets directly, and consumers, at least until direct banking becomes more widespread.

Competition is not the only argument why this tendency for national consolidation is unhealthy. Because national banking market structures and lending practices differ across Europe, the same change in ECB-set interest rates will affect EU economies differently. This could be a serious hindrance to the operation of a single monetary policy. One reason why transmission mechanisms differ across EMU states is the heterogeneous structure of the European financial industry. The creation of new cross-border suppliers of financial services, at a time when Europeans consumers and firms are likely to become more similar, would plausibly result in a homogenization of financial practices across EMU.

Asset management and investment banking: whose turf?

Asset management and investment banking are the areas of European banking most affected by the euro. Both activities involve economies of scale that are likely to become more important with the introduction of the single currency. These scale economies will induce two types of mergers:

- First, acquisitions with the simple purpose of enlarging the stock of assets under management.
- Second, acquisitions with the purpose of buying human capital (teams) and technology.

The first kind of merger need not be cross-border: domestic acquisitions are good enough to build up volume. But acquisitions designed to build expertise in the technology and process of asset management will be cross-border, though mostly directed towards US- and UK-based investment banks.

Economies of scope between investment and commercial banking provide an organizational advantage to universal banks. So, despite the fact that early attempts at integrating commercial and investment banking cultures have not been successful, the incentives of commercial banks will change. Relying on the experience of past failures at building universal banks may not be a good way to think about future developments.

Few European banks will make it to the status of universal banks. But those that make it will try to exploit the economies of scale across EMU fighting the battle with US universal banks and specialized investment banks. The outcome is uncertain. European universal banks will be boosted by the advantage of incumbency in most of the areas in which they are active. The difficulty of integrating investment and commercial banking cultures is the strongest point in favour of US specialized institutions – and the biggest challenge for the new European universal banks. But regulation provoked by the desire to stop commercial banks taking on too much off-balance sheet risks could slow down the emergence of European universal banks.

No more national champions?

Consolidation of the banking industries within individual European countries is undesirable for reasons of competition. But it may prove popular: chauvinistic support for ‘national champions’ often hides behind the fear that local consumers and firms may be neglected by large institutions with headquarters located far away. Only domestic banks, it is argued, preferably small and with a strong local presence, can understand and service local clients appropriately.

Analysis of the effects of consolidation in the United States, however, – where local competitive conditions have been preserved by authorities – on the availability of bank credit to small US firms, reveals no evidence that local consumers and firms are neglected.

The bottom line is that cross-border consolidation should be encouraged by removing the barriers (legal, fiscal, regulatory and political) to cross-border mergers. Cross-border mergers permit the emergence of efficient producers without prejudice for competitive conditions. They also help homogenize banking practices, promoting the desirable convergence of the mechanisms by which a single monetary policy will be transmitted to the real side of European economies. It is time to favour the emergence of European competitors rather than national champions.

In this endeavour, the main players will be the national competition authorities. If domestic consolidation of the banking industry beyond a certain degree of concentration is made impossible by local competition authorities or by the European Commission, national banks will learn to go against their natural tendencies and start consolidating internationally. At the same time, the role of European competition policy will remain important, particularly in checking that state aids do not derail the necessary restructuring of inefficient banks that are regarded as national champions.

What impact on European citizens?

The transformation of the European banking industry is of no trivial consequences for the welfare of European citizens. An efficient system of intermediation should encourage savings by offering consumers a large choice of high performance savings instruments, and promote investment by providing adequate and low-cost financing to all projects likely to feed economic growth.

The fulfilment of this objective is predicated on the increased efficiency of the European banking industry and on the success of euro-wide securities markets – including markets for closed-end funds, venture capital and lower-grade commercial paper – where firms will be able to satisfy their capital and borrowing needs at low intermediation costs. Two factors could prevent this from happening:

- First, attempts by the banks to defend their turf by obstructing the rapid growth of such a market.
- Second, actions by governments, inspired by national chauvinism, to foster and protect 'national champions'.

In either case, the cost for Europeans would be high.

What agenda for policy?

With the recent financial crises in Asia and Latin America, the popularity of restrictions on the activity of financial intermediaries is growing. At a time of uncertainty and turbulence, the word 'control' is used increasingly. A better approach, however, would be to minimize interference with the market and use market mechanisms to improve regulation. The right word is 'regulation', not 'control'. But it is vital to get regulation right.

Banking should be subject to two types of constraints only:

- First, those derived from a concern for the stability of the financial system.
- Second, those derived from the need to check market power.

On competition, the days in which banking was off-limits for competition policy are gone and should not return. The tendency towards national consolidation is a challenge for European competition authorities since it is likely to reinforce local monopoly power. This is particularly important for small firm lending, as large firms will access the euro capital markets directly, while consumers will have the option of turning to specialized asset managers and direct banking.

On supervision, this traditionally focused on the assessment of the quality of a bank's balance sheet at a specific point in time, and on whether it complies with capital requirements and restrictions on portfolio composition. This approach is no longer adequate in a world in which banks are active players in the capital market and can, because of trading losses, be driven into insolvency extremely rapidly.

Banking supervision is a particularly delicate and urgent issue in EMU. As banks take on more market risk, their ability to withstand sudden fluctuations in market prices also depends on the readiness of the central bank to provide liquidity to the financial system and to banks in particular. In this respect, the ECB is a very different institu-

tion from the Fed – more concerned with and more constrained by the risks it may take onto its own books, and thus likely to be less ready to provide liquidity to banks. The implication is that *ex ante* regulation and supervision are correspondingly more important in EMU than they are in the United States.

It should also be recognized that important as it may be for the growth of European firms, an efficient euro corporate bond market will not spring up in a vacuum. Banks could see in such a market a strong competitor, and use their incumbency advantage to hamper its development. Authorities cannot guarantee that Europe-wide securities markets thrive but, as in the case of cross-border consolidation, they can certainly ensure, through inappropriate regulation and taxation, that efforts to build them fail.

As importantly, a liquid corporate bond market will only blossom if the central bank is prepared to provide liquidity to the system whenever necessary. Although there is no direct mention of this task in the statutes of the ECB, the Board of the Bank should carefully consider the role that the Fed has played in fostering liquid markets in the United States.

Should bank supervision be centralized?

There are a number of risks associated with the current decentralized supervisory system for European banking. The advent of cross-border banking, the likely emergence of pan-European universal banks, and, more generally, the new competitive climate of European banking, confront national supervisors with delicate coordination issues. In the face of these challenges, it is unlikely that the simple coordination among independent national authorities – as provided for by the Second Banking Directive – will be a safe arrangement.

Past European experience with national supervision has not always been satisfactory, with domestic supervisors sometimes being too close to the institutions they regulate, thus risking being captured. The natural distance that a supra-national regulator keeps would thus appear to be particularly healthy. But it is ironic that while the international financial community is studying the possibility of setting up a ‘world financial regulator’, petty national jealousies appear to be preventing this from happening at the European level, putting the stability of European financial markets at risk.

Building a centralized supervisory body is a possibility already foreseen in the Maastricht Treaty, but it appears only to allow centralization of supervisory responsibilities inside the ECB. While a clear improvement on decentralized supervision, this may not be the optimal arrangement as the ECB is already being perceived as accumulating too much power, and issues of accountability have been raised. An independent European-wide regulatory agency, distinct from the ECB, may generate less concerns in this respect while at the same time facilitating accountability.

Thinking about a new European agency would also allow a fresh consideration of the desirability of combining the supervision of banks and markets. As universal banking makes it increasingly difficult to distinguish between market risk and the risk of individual banks, the argument for combining the two functions of bank and market supervision in a supra-national EU independent agency seems overwhelming.

1 What is a Bank Today?

1.1 Two turbulent years

The world of banking is changing under the conjunction of a multitude of forces. This is true in the United States. It is even more so in Europe where the single market programme of 1992, the banking directives of the early 1990s, and the monetary union of 1 January, 1999 combine with technological changes and globalization to transform the landscape of the industry. The signs of such worldwide transformation are plenty. One telling illustration is provided in Table 1.1: in 1990, the world's six largest banks (measured by their market capitalization) were all Japanese (IBJ, Fuji, Sumitomo, Dai-ichi, Tokyo-Mitsubishi and Sanwa). In 1998, only Tokyo-Mitsubishi has survived in the top-ten list, and it has fallen to number nine. Eight years ago there was only one US bank in that group, JP Morgan, in tenth position. Now there are six, among them the two largest banks of the world, BankAmerica and Citigroup. No EMU-based bank makes it to the top-ten group. Deutsche Bank, which was the highest non-Japanese bank in the top-ten list 1990, has disappeared from the list: the announced merger with Bankers Trust may not be enough to bring it back in.

These rankings, however, look quite different if one considers total assets instead of market capitalization (this is done in the last column of Table 1.1). Here Japanese and EMU-based banks come back into the picture, but only because, as opposed to US banks,¹ they carry on their balance sheets very large – and apparently not very profitable – loan books.

¹ The new UBS is an exception, doing well in both rankings.

Table 1.1 *Top ten world banks by market capitalization and total assets (US \$ billion)*

<i>Market capitalization</i>		<i>Total assets</i>		
<i>1990</i>	<i>1998 (November)</i>		<i>1998 (October)</i>	
IBJ	BankAmerica	113	The 'New' UBS	802
Fuji Bank	Citigroup	111	Bank of Tokyo-Mitsubishi	794
Sumitomo	Lloyds TSB	79	Citigroup	698
Dai-Ichi	UBS	67	Deutsche Bank	699
Tokyo-Mitsubishi	Wells Fargo	63	Société Generale	559
Sanwa	First Union	63	Sumitomo	555
Deutsche Bank	Bank One	63	Credit Suisse	553
Barclays	Chase Manhattan	56	ABN AMRO	538
NatWest	Bank of Tokyo-Mitsubishi	48	Hypo Vereinsbank	519
JP Morgan	HSBC	44	Dai Ichi Kangyo	497

Source: Company data

Table 1.2 *Volume of bank mergers (US \$ billion per year)*

	<i>1992-4</i>	<i>1995-6</i>	<i>May 1997-May 1998</i>
World-wide	67	153	553
North America		85	392
Europe		35	127
- of which United Kingdom		22	

Sources: Goldman Sachs (1998); Prati and Schinasi (1997)

The new landscape of the world banking industry has been shaped by a recent wave of mergers and acquisitions. Table 1.2 is revealing: the one year between May 1997 and May 1998 has seen the volume of bank mergers more than triple relative to the two-year period covering 1995 and 1996, rising from US \$153 billion to US \$553 billion. Among the ten largest mergers in US history, in any industry, ten occurred during 1998, and four out of these occurred in banking: Citicorp-Travelers, BankAmerica-Nationsbank, Banc One-First Chicago and Northwest-Wells Fargo.²

² See Moore and Siems (1998), quoted in Berger et al. (1998a).

The volume of European banking mergers almost quadrupled in the same period. In Switzerland, UBS and SBC merged to create the world's largest bank by total assets. In Bavaria, Bayerische Hypobank and Bayerische Vereinsbank merged to create the number four bank in Germany. In Austria, Bank Austria acquired Creditanstalt. In Spain, Banco Santander completed the acquisition of Banesto and announced the merger with Banco Central Hispanoamericano (BCH). In Italy, IMI and San Paolo, and Cariplo and Ambroveneto, merged to create the country's two largest banks. In the Nordic countries, the year was marked by a cross-border transaction: the merger between Merita in Finland and Nordbanken in Sweden. The pace of cross-border consolidation also came to the Benelux with the acquisition of BBL by ING and the merger between Crédit Local de France and the Belgian Crédit Communal which joined to form Dexia. Finally, one of the most noted transactions of the year occurred across the Atlantic, with the acquisition of Bankers Trust by Deutsche Bank.

In the 15 months leading to February 1998, in the seven largest EMU countries (Austria, Belgium, France, Germany, Italy, Netherlands and Spain), the value of merger and acquisition transactions which had a bank as the target amounted to US \$38.3 billion, twice the amount of the preceding 24 months. The change in the pace of mergers and acquisitions activity in banking was particularly striking in Germany: US \$19 billion, compared to US \$1 billion in the preceding 24 months. European mergers, however, have mostly been limited to the home market: with the exceptions of the Benelux and Scandinavia, so far there has been virtually no cross-border merger among European banks.

Consolidation is not limited to banking: it is occurring throughout the financial services industry, with a number of transactions involving a bank and an insurer: Travelers and Citibank in the United States, Crédit Suisse and Winterthur in Switzerland, Ina and Banco di Napoli in Italy, S-E-Banken and Trygg-Hansa in Sweden.

1.2 An outline of this report

This report deals with the impact of EMU on European banking. The transition to the euro, however, is not happening in a vacuum: technology, regulation and financial innovation are affecting European banks at the same time as they are moving from eleven currencies to a single currency. None of these factors can be overlooked, as the euro will combine with them to transform the European banking industry.

The natural starting point is to contrast the situations of the banking industries in the United States and in Europe. The data shown in the next section document how far apart the United States and Europe are with respect to their financial sector – thus raising the natural question: is the experience of the US banking industry foreshadowing what Europe will experience in the years to come? Before embarking on this discussion it is, however, important to review, at least briefly, what a bank is today. Do these institutions still have a future? How is the task of supervisors and regulators affected by the transformation of the banking industry? These questions occupy the remaining sections of this first chapter.

Chapter 2 then describes in more detail the recent transformation of the US banking industry, while Chapter 3 provides an assessment of the current situation of European banking markets. Chapter 4 compares Europe with the United States from the viewpoint of commercial banking. It explains why Europe is different and why this may be a source of concern. Asset management and investment banking are discussed in Chapter 5: we explain why the euro will transform these activities, and we ask whether they will be dominated by few pan-European universal banks.

Chapters 6 and 7 address the policy issues that are raised by the analysis of the previous chapters: the evolution of the industry means that competition and regulatory authorities, at the national and the European levels, have new work cut out for them. Chapter 8 summarizes our assessment of the future of the European banking industry. Finally, Chapter 9 lays out an agenda for policy.

1.3 The United States and Europe: two very different financial systems

North Americans have benefited from a single market for goods and (almost all) services for a long time. They have also enjoyed a single currency for an equally long period. Until recently however, under the rules of the 1927 Mc Fadden Act, the US banking market was fragmented because interstate banking was largely prohibited. Only since the early 1990s has regulation been eased and most of the obstacles towards a fully integrated and competitive US banking market been removed. The prohibition of universal banking (in

particular the regulations which prevent commercial banks from underwriting securities) and some other restrictions on banking activities along the lines of the 1933 Banking Act, however, have persisted until today.³

While regulatory changes in the United States have been important (we review them in the next chapter), change in continental Europe has been equally impressive. The creation of the single market for goods and services in 1992 and the Second Banking Directive of 1993 effectively removed all regulatory barriers to a single banking market and created a level playing field for universal banking in the EU. As we document in Chapter 3, however, these changes so far have failed to make a dent in the segmentation of the industry.

Monetary union will eliminate, at least among 11 of the 15 EU states, the last objective source of market fragmentation: currency fluctuations. On the face of it, the US and European banking industries will be, as of 1999, on similar grounds from the economic and regulatory viewpoints. Only language, culture and history could explain why the two industries, and the corresponding financial systems, remain as fundamentally different as they are today. In other words, if with 15 currencies it could be argued that Europe, notwithstanding the single market, remains structurally different from the United States, this is hardly tenable with a single money. Unless one attributes what may seem disproportionate importance to the remaining cultural and language barriers and to the lasting effects of a long history of segmentation.⁴ Major changes should thus be in store for Europe, of equal and may be larger magnitude than what the US banking industry has experienced since the deregulation of the mid-1990s.

Will EMU be the 'last straw', the one that breaks the back of the traditional European banking industry? There is little doubt that inside EMU the practice of banking and the process of financial intermediation will become much more uniform, but at what speed? And towards what model will they converge? Can we assume that the European financial industry will close in upon a structure that resembles that of the United States?

³ Until 1987 US Bank Holding Companies could not engage in underwriting beyond a limit of 5% of their total revenues. This limit was raised over time, and now stands at 25%. The new regulations have allowed deals such as, for instance, the acquisition of Alex Brown by Bankers Trust.

⁴ Remembering, however, that even the United States has a long history of fragmented banking markets.

A taste of the changes that may be in store is provided by Table 1.3. It highlights what appears to be a fascinating regularity. Whether one takes the EU-15, 11 or 8, the United States or Japan, one finds that the aggregate size of capital markets – comprising stock markets, debt markets and bank assets – is about three times as large as the respective GDP. Whether this is a golden rule or rather a reflection of statistical problems which would push the US figure closer to the larger number observed in the United Kingdom, is not crucially important. What is more significant is what one observes when the aggregate number is decomposed into its three components. This decomposition provides a vivid illustration of the difference between the US and European models of financial intermediation: the greater reliance on markets, be they stock or debt markets, in the United States, as contrasted with the greater importance of bank intermediation in Europe (and in Japan).

If banks have been, and still are, at the centre of European financial markets, it is because the financial structure of European firms is heavily tilted towards bank loans, which represent by far the largest portion of firms' liabilities – not only of small firms, but even of the very large ones (see Tables 1.4 and 1.5). Commercial paper, an important source of company finance in the United States, virtually does not exist in Europe, with the notable exception of Spain (see Table 1.6).

The relationship between firms and banks is symmetric. Not only do firms mostly borrow from banks: European banks also mostly lend to firms, i.e. they specialize in a segment of the market which – as we shall discuss in Chapter 5 – will be most affected by the single currency. Since lending to firms is their main activity, European banks derive most of their income from the spread between lending and borrowing rates. As Table 1.7 shows, fee income, that is the income from the services banks sell to their clients, is still a minor fraction of total revenues for most continental European banks, even the larger ones – with the important exception of French banks where fee income appears to be an important share of total income.⁵ In the United States, on the other hand, non-interest income is relatively important for large banks, while smaller banks are comparable to their European counterparts.

⁵ The other well-known exception is Switzerland, whose banks have historically been more oriented towards fee-based activities.

Table 1.3 EU, Japan, United States: selected indicators on the size of the capital markets, 1995

Stock market capitalization as % of GDP	Debt securities as % of GDP ¹		Bank assets as % of GDP ²	Equities, bonds and bank assets as % of GDP	Bank assets as % of total assets
	Public	Private			
	Total				
EU (15) ³	57.13	45.79	175.84	323.60	54.30
EU (11) ⁴	57.46	45.32	175.95	309.88	56.80
EU (8) ⁵	46.10	51.65	187.07	318.34	58.80
United States	92.54	59.21	68.93	315.22	21.90
Japan	67.47	36.67	144.35	320.20	45.10
United Kingdom	38.86	35.78	219.14	421.03	52.10

¹ Domestic and international debt securities issued by each country or group of countries.

² The 1994 data are shown for all banks except for the following: domestically licensed banks for Japan; commercial banks plus savings banks plus savings and loan associations for the United States.

³ Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and United Kingdom.

⁴ Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

⁵ Austria, Belgium, Finland, France, Germany, Ireland, Luxembourg and the Netherlands.

Sources: Bank for International Settlements; Bank of England, Quarterly Bulletin (November 1995);

Bank of Japan, Economic Statistics Monthly (May 1996);

International Finance Corporation, Emerging Stock Markets Factbook 1996;

OECD, Bank Profitability; Financial Statements of Banks; and

International Monetary Fund, International Financial Statistics and World Economic Outlook databases.

Table 1.4 *Funds raised in the capital markets by non-financial enterprises, 1990–5*

	<i>Bonds</i>	<i>Equity</i>	<i>Other(*)</i>
Netherlands	1.2	42.2	56.7
Spain	1.7	29.3	69.0
Sweden	-0.9	33.7	67.2
Italy	-0.7	25.6	75.1
United States	50.9	13.2	35.8

(*) including bank financing

Source: OECD, Financial statistics 1995.

Table 1.5 *Liabilities of non-financial enterprises*

	<i>Securities (loans + securities = 100)</i>		<i>Share of bank loans in total debt liabilities</i>	
	<i>1993</i>	<i>1983</i>	<i>all non- financial enterprises 1993</i>	<i>239 world largest mftg. co. 1996</i>
Germany	6	2	85.1	63.2
Netherlands	3	4	78.6	48.3 ¹
Austria	2	3	–	–
Belgium	7	12	89.9	–
France	15	8	80.2	44.3
Spain	9	10	77.3	–
Italy	5	7	94.6	73.9
Sweden	4	5	80.9	56.6 ²
United Kingdom	19	17	49.4	34.1
Switzerland				43.3
United States	20	17	32.4	9.4
Japan	–	–	–	56.4

Note: Private placements of long-term securities, whose status lies somewhere in between loans and market instruments, in some countries (United States) are counted among securities, in among other loans.

Note:

¹ Benelux

² Scandinavia

Sources: BIS (1995), Ri cerche e Studi (1998).

Table 1.6 *Commercial paper*

<i>Amount outstanding as % of bank credit to domestic non-financial enterprises, 1991</i>	
United States	17.0
United Kingdom	2.0
Germany	0.7
France	3.3
Italy	0.0
Spain	12.3

Source: Alworth, J.S. and C. Borio (1993) 'Commercial Paper Markets: A Survey', *BIS Economic Papers* 37

Table 1.7 *The specialization of US and European banks*

	<i>Net interest revenue / (net interest revenue + other operating income)</i>					
	<i>1990</i>			<i>1996</i>		
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Small</i>	<i>Medium</i>	<i>Large</i>
United States	0.65	0.65	0.46	0.76	0.66	0.49
Europe	0.80	1.05	0.86	0.63	0.73	0.60
United Kingdom	0.71	0.79	0.75	0.63	0.52	0.51
France	0.79	0.59	0.79	n.a.	0.58	0.42
Germany	0.86	1.64	0.97	0.81	0.85	0.85
Italy	0.76	0.78	0.71	0.78	0.70	0.69
Spain	0.86	0.87	0.88	0.81	0.79	0.74
Sweden	0.76	0.91	0.94	0.80	0.81	0.83

Note: 'Small' means below 75th percentile; 'Medium' between 75th percentile and 95th percentile; 'Large' above 95th percentile. Percentiles are computed on total assets held in 1996. Europe is defined as the average of the six countries: United Kingdom, France, Germany, Italy, Spain and Sweden.

Source: Authors' computations on data from the BankScope Data-set by Bureau Van Dijk and IBCA.

Having documented how different the US and European financial sectors still are, the natural question to ask is: whether the two systems will converge, towards which model, and whether EMU will push in that direction? Before addressing this question, however, a more basic one needs to be asked: what is a bank today, and do these institutions still have a future?

1.4 What is a bank?

Banks perform different functions in different institutional settings, and their activities keep shifting in response to changing economic conditions. It is, therefore, important to discuss, at least briefly, the nature of these activities, before entering into international or historical comparisons.⁶ A convenient starting point is the broadest concept of banking, that of the universal bank, wide-spread in Europe and, until the 1933 (Glass-Steagall) Banking Act, also in the United States. In fact, with the continuing erosion of banking restrictions in the last decade, universal banking has now almost made a full comeback in the United States, although the name itself is usually replaced by less provocative terms – financial service companies, for instance.

The typical universal bank is organized around several main areas, which can be grouped into retail banking, investment banking and asset management. The first of these three is the classical domain of commercial banking: lending to firms and consumers, collecting deposits and managing the accounts and transactions associated with them. It also typically comprises private banking: the management of portfolios of wealthy individuals. The second area is that of market-based corporate finance, including the underwriting of securities, market making and mergers and acquisitions. The third area comprises the management of institutional assets, pension funds and other large-scale savings instruments. Of course, these areas overlap, the lines between them are sometimes difficult to draw, and they are constantly changing with the evolution of new financial instruments. The specific divisional structure of a universal bank, therefore, usually differs from the above scheme, depending on the bank's strengths and strategy (see Box 1.1). Furthermore, other activities may complement the above: the credit card business and insurance are recent additions, for example.

⁶ For an excellent introduction to these issues see Freixas and Rochet (1997).

Traditionally, the term 'banking' has referred to the first of the three areas of universal banking, that of commercial banking.⁷ In the US it still mostly does, whereas in Europe, with its long tradition of private banking and of universal banking, the term is often used more broadly. Since this report is concerned with the European banking industry, we mostly use the term in its broader sense, although we will be sometimes more interested in the narrow, commercial banking, function. One cannot be dogmatic here: not only have many large European banks traditionally been universal, but since the 1980s smaller commercial banks have also made inroads into some of the other markets described above, in particular asset management, insurance and, sometimes, investment banking activities.

Box 1.1 *Four big banks*

To illustrate how the main activities of banking can be organized in practice, this box outlines the divisional structure of four large universal banks, or financial service companies as they tend to be called in the United States.

Citigroup, the US financial service company recently created through the merger of Citibank and Travelers Group, is organizing its activities in three main business groupings: corporate banking (which integrates the corporate sections of commercial and investment banking), asset management and consumer banking (consisting mostly of household-related commercial banking, credit cards, insurance and financial services).

Barclays PLC, one of the biggest banks in the United Kingdom, groups its commercial banking activities differently. Its investment banking and asset management divisions have a scope which corresponds to the description in the main text, although Barclays has decided to abandon parts of the equity and mergers and acquisitions markets. It has two more divisions, retail banking (servicing households, small firms and wealthy individuals, and including the

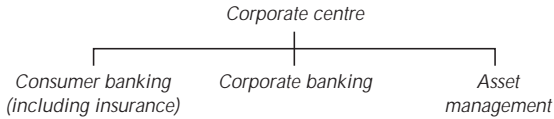
continued

⁷ As far as their economic function is concerned, commercial banks are almost indistinguishable from savings and loans associations and mutual savings banks: the difference is mostly historical and organizational. Most international statistics group them together under the heading 'banks' or, more correctly, 'depository institutions'. We do the same in this report, partly for statistical reasons, partly because the issues and challenges for these institutions are largely the same.

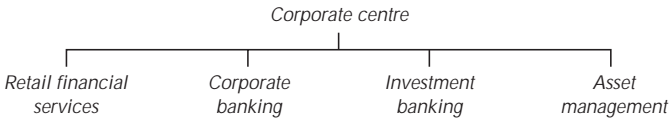
continued from page 11

credit card business) and corporate banking (specializing in lending and financial services for larger corporations).

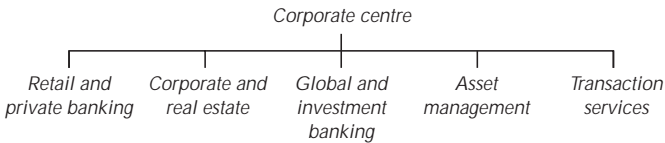
Citigroup



Barclays Group

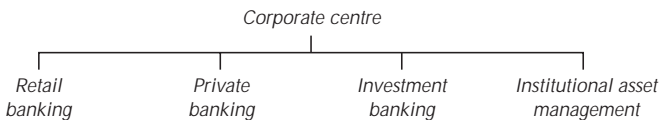


Deutsche Bank



Deutsche Bank, Germany's largest bank, has adopted a similar structure as Barclays, with the exceptions that its investment banking division provides the full range of market-based products, that the corporate banking division includes the bank's real estate business, and that all transactions services are grouped into a separate unit.

The New UBS

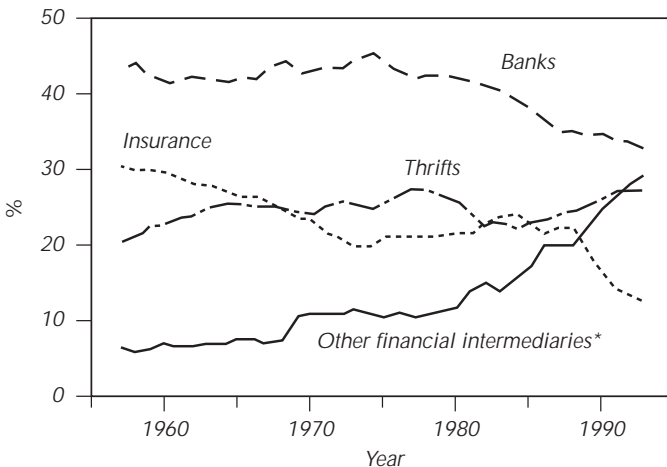


Finally the new UBS, Europe's largest bank, created by the recent merger of Union Bank of Switzerland and Swiss Bank Corporation, is organizing its activities in four divisions, which reflect the structure laid out in this chapter (investment banking, retail banking and institutional asset management), with the exception that private banking, which accounts for a large part of the bank's operations and profits, is run as an independent division.

1.5 Do banks have a future?

While they have expanded into new territory, commercial banks, over the last 20 years, have lost part of their traditional business to other financial intermediaries. This can be seen most clearly from US data, because of their narrow definition of banking. Figure 1.1 (taken from Boyd and Gertler, 1994), shows that, since the mid-1970s (when commercial banks accounted for more than 45% of all assets held by US financial intermediaries, with another 25% held by Thrifts, that is Savings and Loans Associations), the share of commercial banks in financial intermediation has fallen to just above 30% in the mid-1990s (and the total of commercial banks and thrifts to less than 45%). As Figure 1.1 shows, this loss of market share has mainly benefited 'other financial intermediaries' which include finance companies, mutual funds and money market mutual funds.

These data have led some observers to conclude that commercial banks are doomed. Yet, as Boyd and Gertler (1994) argue, Figure 1.1 seriously underestimates the continuing importance of commercial banks for two reasons. The first is a statistical illusion:⁸ the data in



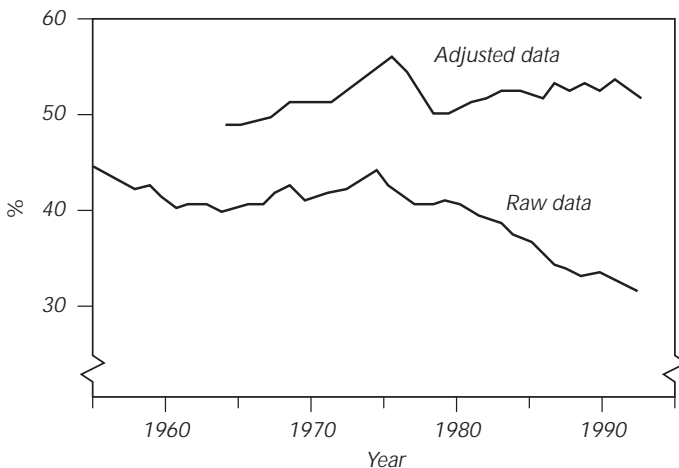
*Includes brokers, dealers, investment companies, finance companies, etc.

Source: Boyd and Gertler (1994).

Figure 1.1 Share in US financial intermediation: raw data, 1957–93

⁸ First noted by McCauley and Seth (1992).

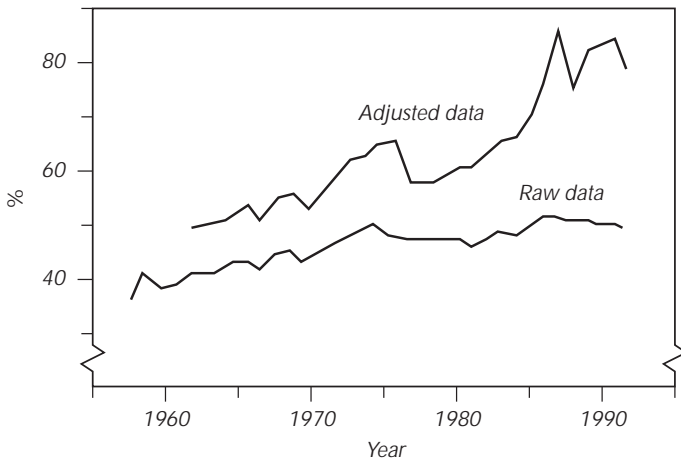
Figure 1.1 ignore the lending activity of foreign banks, which have played an increasingly active role in the United States since the early 1980s. Second, and more importantly, the data fail to reflect the shift away from traditional commercial banking operations to off-balance sheet activities *within* the banks. Since the 1980s, commercial banks have increasingly securitized their loans, i.e. bundled and sold them off to third parties instead of keeping them on their books. While this has preserved many of the traditional features of bank lending (such as issuing and, to some extent, monitoring loans), these assets do not appear on banks' balance sheets, which, therefore, understate the extent of banks' activities. Figures 1.2 and 1.3 show adjusted measures of the role of commercial banks in financial intermediation, correcting for the some of the problems in the raw data.⁹ The two figures suggests that the importance of banks has not diminished relative to that of other financial intermediaries – which means, given the rapid growth of the financial industry during the 1980s and 1990s, that banks have become relatively more important in relation to overall economic activity (see Figure 1.3).



Source: Boyd and Gertler (1994).

Figure 1.2 US bank assets (% of assets of all financial intermediaries): raw data and data adjusted for off-balance sheet activity and lending by foreign banks

⁹ As the authors themselves discuss, these adjustments, although relatively crude, are not widely off the mark. In particular, they provide a consistent time-series.

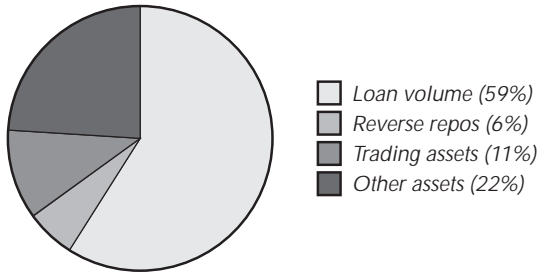


Source: Boyd and Gertler (1994).

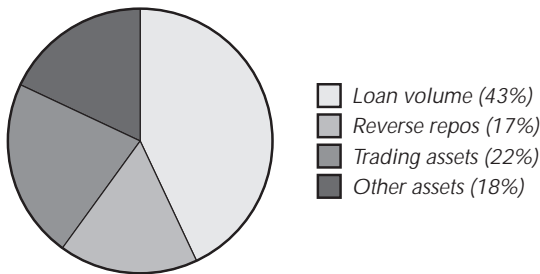
Figure 1.3 US bank assets (% of GDP): raw data and data adjusted for off-balance sheet activity and lending by foreign banks

We are not aware of similar studies for Europe, but we suspect, from anecdotal evidence and newspaper coverage, that similar results would be found there. At least on a case by case basis, the development documented by Boyd and Gertler (1994) is not rejected with European company data. Figures 1.4 and 1.5, for example, show that in the three-year period from 1994 to 1997 alone, loan volume at Deutsche Bank has shrunk from 59% to 43% of total assets, and that the importance of net interest income in total revenue has decreased from 61% to 46%. At the same time, however, reverse repos – which are really no different from bank loans, except that they are guaranteed by collateral – have increased from 8% to 17% of total assets. Thus the total lending activity of Deutsche Bank has fallen by a smaller amount than the raw data show: from 67% to 60% of total assets.

The bottom line is that during the 1980s and 1990s, commercial banks have been forced to broaden their scope from that of pure deposit-taking institutions to portfolio and market-making functions. As their asset base shrinks, however, the economic rationale of commercial banks has not disappeared. The three traditional functions of commercial banks – the organization of payments, maturity transformation, with the related role of banks in the origination and monitoring of loans, and liquidity provision – while affected in different ways by the ongoing transformation of the industry will not cease to exist.



(a) Data as at 31 December 1994



(b) Data set as at 31 December 1997

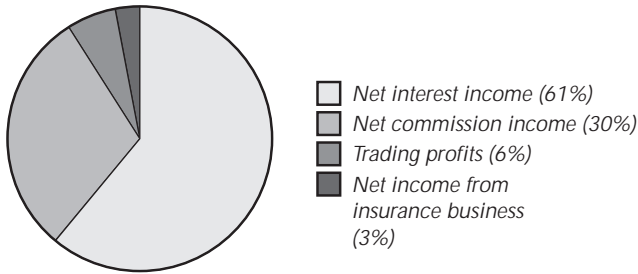
Source: Deutsche Bank

Figure 1.4 *The changing asset structure of Deutsche Bank*

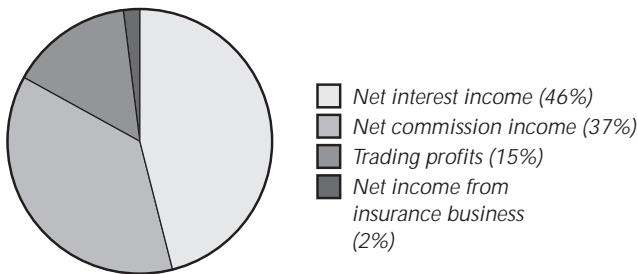
First, despite the emergence of competing institutions such as money-market funds, it is unlikely that banks will lose their central role in *transactions services and in the payment system*. As in the case of mortgage lending, which has mostly gone off the balance sheet, banks do have to adjust, however. There is little doubt that, in Europe as well, money market mutual funds will become ever more important for short-term savings and transactions services.¹⁰ There is, however, little conceptual and practical difference between an interest-bearing deposit account and a money-market checking account, which would make it difficult for banks to compete with the institutions that have emerged in the 1980s and 1990s.¹¹ And banks have a strong incumbency advantage in this domain.

¹⁰ In the United States, money market mutual funds have already outgrown demand deposits: by the end of 1997 the volume of the former was 150% that of demand and checkable deposits (Ongena and Smith, 1998).

¹¹ In particular, if the banks own the mutual funds which compete with their deposit accounts.



(a) Data as at 31 December 1994



(b) Data set as at 31 December 1997

Source: Deutsche Bank

Figure 1.5 Changing composition of Deutsche Bank's revenues

Maturity transformation, on the other hand – i.e. the provision of long-term corporate loans financed by short-term deposits – could be the least viable of the three main banking functions in a more market-oriented environment, where swaps and credit derivatives offer banks new opportunities to manage the mismatch of maturities. Indeed, if it is possible for a bank to trade, or even better, make a market for, its long-term assets, it will presumably want to take these assets off its book and become itself a player in the capital market to avoid being squeezed by liquidity crunches on its liability side. This means that banks may cease to provide maturity transformation as defined formally above.¹² It neither means that maturity transformation will no longer take place, nor that banks will play no role in the process, however. In fact, if banks continue to generate loans and participate in the (secondary) markets where these loans are traded, then they effectively continue to provide liquidity for depositors, while at the same time offering long-term financing opportunities.

¹² The issue is not quite obvious, though. For more thorough discussions, see Hellwig (1994, 1998a), Diamond (1997), and von Thadden (1999).

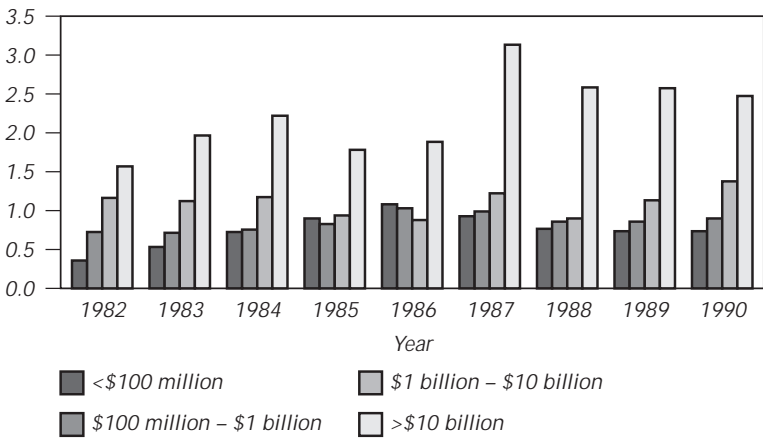
More generally, the lending function of commercial banks has changed, and will probably continue to change, in that some of this activity will either be lost to new competitors in the market or go off-balance sheet. This reflects a refinement of the lending process, however, which had technically not been possible 20 years ago, rather than an end to the process as such, and of the banks' involvement in it. In particular, the process of securitization allows a bank to diversify its risk, but does not eliminate its role in monitoring borrowers. In a securitization contract, a loan (or the credit risk associated with a loan) is split in small pieces and distributed among many banks, but the 'originator', i.e. the bank which had the original contract with the borrower, still performs the monitoring function on behalf of all parties involved. The big difference, however, is that since the originator keeps on its books only a fraction of the risk associated with each loan, the cost of lending – in terms of the capital required – is proportionately smaller. Thus the *origination and monitoring of loans* will largely remain with banks, although this function will no longer be tied to the existence of loans on banks' books. Only when a loan is packaged in a larger pool, and sold to final investors, does the bank lose its monitoring function: but in this case it is as if the borrower had financed itself directly in the market.

An important difference between small and large business lending has manifested itself during the 1980s and 1990s, especially in the United States. While large corporations have increasingly replaced traditional bank lending with commercial paper and other instruments sold directly on the market, small firms still typically rely on bank lending. Lending to smaller corporate customers remains a largely uncontested domain of commercial banks. Local presence is a key characteristic in this type of lending, and the existing empirical and theoretical evidence suggests that this feature tends to give banks competitive advantages, even in the presence of increased international competition or of more active financial markets. The reason for the 'uniqueness of bank loans' is the private information generated through bank monitoring, which is facilitated by a more long-term relationship between bank and borrower.¹³

¹³ For theoretical work see, among others, Fama (1985), Fischer (1990), Sharpe (1990), Diamond (1991), Rajan (1992a), Boot and Thakor (1994), and von Thadden (1995, 1998). For empirical work on US data see James (1987), Hannan (1991), Petersen and Rajan (1994, 1995), and Berger and Udell (1995). An excellent survey of bank relationships, with many more references, is given by Ongena and Smith (1998), who also review the recent empirical work with European data.

Figure 1.6 vividly illustrates these remarks. In the 1980s, the large US banks saw their bigger corporate clients increasingly either turn away from them, or put pressure on them to reduce interest rates. As their profits eroded these banks started making riskier loans, which often turned bad. Small banks, on the other hand, who usually lend locally and monitor their clients more directly, did much better on their loan portfolios. Figure 1.6 shows that during the 1980s the smallest US banks consistently had the lowest incidence of bad loans – an indication that the core function of monitoring was useful and rewarded. A word of caution is, however, necessary. One should be cautious in extrapolating these results into the future: technological improvements, such as credit scoring, may over time diminish the importance of relationship lending.

While lending, especially to large firms, will contribute less to bank profits than in the past, the *provision of liquidity*, which has traditionally been associated with lending, will remain an important function of large banks. As firms raise funds on the capital markets, they will still call on the banks for liquidity, through lines of credit or loan guarantees.



Source: Litan (1991)

Figure 1.6 United States: bad loans (% of all loans) by bank size

Banks are also likely to keep their role as fund providers for projects that are particularly difficult because of the asymmetric information problems they raise. The synergies between the liquidity provision function and this funding function are at the basis of the endurance of the banking institution.¹⁴

1.6 Regulation and supervision: old and new challenges

A bank is a fragile institution; the social cost of a bank failure can be large; and shareholders, depositors, and other stakeholders may not have the right incentives to do their best to prevent such failures. These features provide the classical rationale for bank regulation.

The costs inflicted by the failure of a bank include the loss of informational capital that a bank has accumulated, and the destruction of long-term relationships between borrowers and lenders. If the bank's deposits have not been insured, a bank failure can deprive households of their liquid assets and some of their savings. Other costs are systemic in nature: disruption in the payment system (interrupting the clearing process and risking failures in interbank settlements) and contagion effects (for example, the failure of one bank may carry bad news for another bank with a similar portfolio, and thus trigger its failure). Systemic failure may create a strong negative externality for the real sector of the economy as the experience of the Great Depression in the 1930s shows.¹⁵

Bank fragility results from the large weight of debt in their capital structure, from the liquidity of these claims and from the dispersion of this debt among small investors (depositors). The large amount of debt increases the risk of failure (or insolvency) while the dispersion among a large number of small investors limits their ability and willingness to monitor the bank's activities. Furthermore, even a fundamentally sound bank may be subject to a run in case of a panic – i.e. when depositors withdraw their funds for some unpredictable reason (a rumour, a sudden loss of confidence) leading the bank to collapse.¹⁶

¹⁴ See Diamond and Rajan (1998) and Myers and Rajan (1998).

¹⁵ According to a widely held view, a major cause of the recession in the 1930s in the United States was the massive bank failures in the early 1930s, aggravated by the passivity of the Federal Reserve (which contracted the money supply).

¹⁶ The standard deposit contract between banks and depositors, which involves a fixed payment for withdrawals at any time, leaves a bank vulnerable to runs, be it panic-based or information-based. See Diamond and Dybvig (1983) and Postlewaite and Vives (1987).

The classical response by regulators to this set of problems has been a mix of ex-ante regulation, supervision, and ex-post intervention. Ex-ante regulation comprises the setting of capital-adequacy standards, depositor safety nets, limits on banks' activities or on portfolio compositions, and many other restrictions. Ex-post intervention takes the form of forced closure, liquidity injection by a lender of last resort or similar measures.

Deregulation and the accompanying consolidation of the banking industry pose new challenges to bank supervisors and regulators. Long suppressed by regulation, competition in the financial services industry is increasing world-wide. As we discuss in Box 1.2, the more banks are free to venture into new activities, the greater the burden on regulation and supervision.

Box 1.2 *Competition in banking: can we have too much of it?*

Long suppressed, competition is now widely perceived as necessary to promote efficiency in the banking sector. The benefits of competition for allocative efficiency include the selection effect in favour of efficient firms and the reduction of slack, or X-inefficiency. Indeed the importance of X-inefficiencies in explaining deadweight losses in banking does not seem to be any smaller than in other industries. X-inefficiencies may even dominate inefficiencies stemming from an inadequate size, or product-mix.¹⁷

As discussed in the main text, banks are, however, fragile and rather special institutions, for which the effects of competition should be studied particularly carefully. Can competition increase the fragility of banking? The answer is ambiguous, but there is reason to believe that the dangers should not be underestimated. With respect to bank runs, for example, a monopoly bank is not immune from the risk of a bank run, but more competition can increase the probability of failure through runs (Matutes and Vives, 1996).

Competition also reduces market power. Yet, market power raises the opportunity cost of going bankrupt, and hence increases the bank's charter value, which in turn reduces a bank's incentives for excessive risk-taking. Indeed, the decline of charter values due to deregulation and liberalization has been blamed for the increase in

continued

¹⁷ Berger and Humphrey (1992). See also Vives (1998a) for an elaboration of the material in this section.

continued from page 22

bank failures starting in the 1980s (see Keeley, 1990). In the extreme, institutions which run into problems because they cannot cope with an increase in competition tend to 'go-for-broke' – as the case of the American S&L's illustrates.

In this context, it is important to note that the main tool to control risk – capital requirements – may not be sufficient. The argument for capital requirements is that a bank which has its own capital at stake bears some of the downside of a risky investment: the incentive to excessive risk-taking should thus be checked. The problem is that when competition is intense, the social cost of a bank failure is large, and if deposits are insured with risk insensitive premia, the incentive to take excessive risk is also large (Matutes and Vives, 1998). This is particularly true for institutions that have run into trouble and may be tempted to gamble for resurrection.¹⁸

Competition on the credit side also has ambiguous implications on welfare. More market power diminishes the moral hazard problem the bank faces. This is because a bank with more market power has a stronger incentive to monitor the projects of firms and to establish relationship banking (Besanko and Thakor, 1993; Petersen and Rajan, 1995; von Thadden 1995). Therefore, some degree of market power tends to be good (Caminal and Matutes, 1997a).

In summary, despite the fact that in banking too competition is the main force behind efficiency and innovation, one should not forget that banks are not like other firms in this respect.

Consolidation results in bigger banks, typically more diversified, both geographically and in terms of the mix of products they offer: banks should thus become less risky institutions. This effect, however, may be offset if bigger banks, looking for higher expected returns, choose to take on more risk elsewhere in their portfolio.¹⁹ Managers often 'sell' an acquisition to their shareholders by promising a rapid improvement in profitability. When such improvements turns out to be difficult to obtain – because the merger turns out to be more complicated than anticipated – the temptation is to raise expected returns by going for a higher-risk investment strategy.

¹⁸ The US 1991 regulatory reform clearly recognized the limitations of capital requirements, particularly for weak institutions. The new legislation (FDICIA) allowed only well-capitalized banks to engage in certain risky activities.

¹⁹ For an analysis see Demsetz and Strahan (1997).

As banks become active players in the capital markets, the roles of supervisors and regulators need to be adapted accordingly. When a bank moves from direct lending towards the provision of liquidity services it becomes exposed to unexpected emergency demands for liquidity – originating, for instance, from unexpected demands for settlement, due to large price variations (like in a stock market crash, when intermediaries suddenly must meet margin calls).²⁰ When a bank engages more and more in trading on its own account, either directly or through intermediaries, large losses from these operations may affect its traditional activities. Also, when a bank moves into markets which are dominated by a relatively small number of participants, the failure of a major player is more likely to trigger a systemic crisis.

The importance of these issues cannot be overestimated. As noted by Mishkin (1996), bank supervision traditionally focused on the assessment of the quality of a bank's balance sheet at a point in time, and on whether it complied with capital requirements and restrictions on portfolio composition. This approach, however, is no longer adequate in a world in which banks are active players in the capital market and can, because of trading losses, be driven into insolvency extremely rapidly. Thus the emphasis is now more on flexibility and market discipline: disclosure requirements to improve transparency,²¹ and reliance on internal risk models that are more flexible than capital requirements. New proposals have also emerged – related, for example, to subordinated debt – to provide enhanced incentives to monitoring by competitors.²²

²⁰ During the 1987 stock market crash in the United States, the extraordinary large price movements created a correspondingly large demand for liquidity due to the need to satisfy margin calls. For example, a trader who owned a long futures contract whose price was declining, had to meet margins calls even if he was fully hedged by corresponding puts in the options market. Since New York banks do not accept puts as collateral, the trader would have had to put up cash or sell the puts. In the latter case, his futures position would no longer be hedged against additional price movements. The alternative of using the margins collected on his winning contracts was not available because there is an overnight delay in crediting collected margins to winners. Thus the sudden crash created a correspondingly swift demand for bank credit. (For a discussion of the provision of liquidity in this context see Begg et al., 1998.)

²¹ Cordella and Yeyati (1998) argue that disclosure reduces the probability of banking crisis when the risk faced by the bank comes from its own decisions, but that it may be destabilizing otherwise.

²² See Calomiris (1997). See also Dewatripont and Tirole (1994) for a detailed exposition of prudential regulation and Rochet (1999) for an introduction to recent approaches to bank solvency regulation in particular.

In the end the question is whether the traditional deposit and lending side of banking should be institutionally separated from the off-balance sheet operations, i.e. whether universal banks should, as in the 1930s, be outlawed. We shall take up this question in Chapter 5.

Banking supervision is not unrelated to EMU and to the advent of the European central bank. As banks take on more market risk, their ability to withstand sudden fluctuations in market prices also depends on the readiness of the central bank to provide liquidity to the financial system and to banks in particular. As we shall discuss in Chapter 7, the ECB is, in this respect, a very different institution from the Fed – more concerned, and more constrained, about the risks it may take on its own books, and thus likely to be less ready to provide liquidity to the bank.²³ The implication being that ex-ante regulation and supervision are correspondingly more important in EMU than they are in the United States.

²³ On the role of the ECB in the provision of liquidity to European capital markets see De Cecco (1998).

2 The Transformation of the US Banking Industry

2.1 The facts

Consolidation in the US commercial banking industry has taken the form of a massive reduction in the number of banks.¹ Between 1979 and 1997 the number of commercial banking organizations in the United States has fallen from 12,463 to 7,234. The clean-up has been concentrated among the smallest institutions: in this period the number of banks with total assets in excess of US \$ 100 billion has actually increased from three to six; the number of medium-sized banks (with total assets in the range US \$100 million to \$100 billion) has remained relatively stable; the number of banks with total assets below US \$100 million has fallen from 10,014 to 5,636 (the last figure refers to 1994).² As a result, the market share (measured by assets size) of the top eight firms has increased from 22.3 in 1988 to 35.5 in 1997.

Bankruptcies (numbering 1,475 banks) have played only a relatively small role in this development, and have been concentrated among the smallest banks (1,148 out of 1,475) – most of the consolidation was due to mergers and acquisitions. From 1980 to 1994 there has been an average of 423 mergers per year. Throughout this period almost one in two US banks that existed in 1980 (43%) were part in a mergers and acquisitions transaction. Eighty of the 142 mergers involving large banks were interstate.³ Table 1.2 has underscored the

¹ For a thorough account and an analysis of the consolidation of the US banking industry, see Berger, et al. (1998b).

² The figure on the net reduction in the number of US banks understates the exit from the industry: during the same period, 3,111 new commercial banks entered the industry. These and the preceding data are from Berger, Kashyap and Scalise (1995) and Berger et al. (1998a).

³ See Rhoades (1996).

fact that the potential for change was not exhausted by 1994. Since 1994 the trend in mergers and acquisitions activity has, if anything, accelerated (there have been an average of 287 bank mergers per year between 1995 and 1997). As noted in Chapter 1, the pace of consolidation of the US banking industry accelerated in 1998. As a result, the market share (based on deposits) of the largest five US banks jumped from 12% in 1997 to 21.7% in 1998.

The transformation of the US banking industry has been characterized by two factors which will be relevant in contrasting US and European experiences. First, despite the massive consolidation, concentration at the local level has, if anything, decreased. Berger et al. (1998a), show the Herfindahl index of the concentration of local markets for bank deposits in the United States: consolidation has been accompanied by a slight decrease in concentration (see Table 2.1). Second, most of the consolidation resulted from mergers among banks (51.8% of the total value of mergers and acquisitions deals, Berger et al., 1998a); consolidation across sectors has been relatively unusual (13.4% of the total).

In their detailed studies of the transformation of the US banking industry Berger et al. (1995) and Berger et al. (1998a) suggest that the consolidation of the industry was (mainly) the response of value-maximizing firms to changes in the economic environment which altered the constraints faced by financial services companies. Among

Table 2.1 *Measures of concentration in the US banking markets*

	% of total assets of domestic banks held by the top eight banks	Herfindahl concentration index	
		Metropolitan Statistical Areas (MSA) counties	non-MSA counties
1988	22.3	2,020	4,316
1997	35.5	1,949	4,414

Note: The deposit Herfindahl index is 10,000 times the sum of squared market shares based on deposits of banks operating in MSA and non-MSA counties

Source: Table 1 in Berger et al. (1998a)

the main changes in the US economic environment in the 1980s and 1990s, two stand out: (de)regulation and technological progress.

2.2 (De)regulation

Until the early 1990s, regulation regarding the ability of banks to expand geographically effectively restrained competition in local deposit and loan markets, and inhibited the functioning of the market for corporate control in banking. These rules were placing considerable constraints on banking activities, leading either to direct efficiency losses, due to the lack of competition and diversification, or to indirect efficiency losses through the inefficient organizational attempts of the banking sector to circumvent them: 'many Bank Holding Companies ... appear to have been formed as a means of expanding geographically, both intrastate and interstate, into areas in which branch banking was restricted'⁴ and 'it was only with the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 that the web of federal statutes has begun to slot into line with the economic realities of bank geographic and product-line expansion'.⁵

Regulation also restricted the range of financial products and services commercial banks could offer. The restrictions imposed on commercial banks by the Banking Act of 1933 (the Glass-Steagall Act) only started being removed in 1987 when the Fed allowed commercial banks to underwrite some corporate securities. As mentioned in Chapter 1, these restrictions have not yet been fully removed.

Are regulatory changes enough to explain the observed pace of consolidation, however? An interesting experiment run by Berger et al. (1995) suggests that the spread of interstate banking in the early 1990s lagged substantially behind what could have been expected given the new regulatory environment. They compute the share of national bank assets accessible, on average, from any US state, given the legal situation, and compare it to the average share of that state's banking assets controlled by out-of-state bank holding companies. While the first percentage jumped from 29% in 1989 to 70% in 1994, the latter only rose from 19% to 28%. Although the experi-

⁴ Task Force on the International Competitiveness of US Financial Institutions (1991).

⁵ Kane (1996).

ment covers a relatively short interval – possibly too short for the market to have reached a new equilibrium – it suggests that regulation may not have been the only binding constraint on the spread on interstate banking. More fundamental forces than regulatory changes must have been at work that explain the observed quest for size. It is therefore natural to look in the direction of economies of scale and scope which the regulatory evolution made possible, i.e. legal, to attempt exploiting.⁶

2.3 (New) economies of scale in banking?

If deregulation is not enough to explain the quest for size by US banks, the next obvious explanation are economies of scale. Why then did it take so long for US banks to exploit economies of scale, however? Was there a structural break in the way the banks work, which enhanced economies of scale sometime in the 1980s?

Scale economies in banking may arise from a variety of sources. There are fixed costs associated with maintaining a branch network – administrative and back-office operations, information technology – or with running investment banking or asset management operations (two important segments of the industry that we analyse in detail in Chapter 5). Size may also offer better diversification opportunities – in the deposit base, investments and loans.⁷ Consolidation may deliver scale economies by reducing excess capacity in distribution networks ('over-banking'), if branch networks overlap; from diversification if they do not – as in the case of interstate mergers. Furthermore, an acquisition may provide the only way to access a mass retail market in another state: the value of a local bank to an out-of-state player may be larger than to local players. Finally, consolidation may provide ways to cut excess labour if this is difficult to achieve otherwise – by inducing deep reorganizations, head-office relocations, etc.

Consolidation may also deliver significant scope economies: combining different product lines (like banking and insurance products) may increase the relationship value of banking while decreasing aver-

⁶ Carow and Heron (1998) also appeal to 'increased scale economies'. See also Berger et al. (1998a).

⁷ See Diamond (1984). Cerasi and Daltung (1996) show how diversification in a debt-financed bank lessens the agency problem and improves the incentive of the banker to monitor the projects when internal agency problems put limits on the size of a bank.

age marketing costs. Combining different product lines may also help relax some regulatory constraints (by meeting the demand with a product subject to less stringent regulation, for example). As always, however, size also brings with it a list of disadvantages – agency problems associated with managing a spread-out branch network, control problems, risk control in particular, and all the difficulties and costs associated with managing large institutions – which may dampen the benefits of scale economies.

While these arguments would appear to provide a wealth of motives for the wave of mergers observed in the United States, a close look at the data blurs the picture considerably. Most econometric studies find that economies of scale are exhausted at relatively low asset levels, and the cost efficiencies of mergers are hard to detect.⁸ Furthermore, the market assessment of mergers is often inconclusive: typically one finds that acquirers suffer a loss of market value.

There are two ways out of this puzzle. The first appeals to a technological break that may have occurred in the 1980s or 1990s leading to new economies of scale in banking. The alternative points to the importance of diversification.

2.3.1 Technology

The 1980s and 1990s were decades of swift technological change, mostly driven by the advance of computing power, and of major progress in financial techniques, triggered by the work of Merton (1973) and Black and Scholes (1973). Information technology is considered to result in substantial scale economies: at normalized quality, the marginal cost of servicing a larger bank is small, possibly zero. An illustration of the drastic decline in marginal costs in banking caused by informational technology is given by Bauer and Hancock (1995), who find that the (real) cost of processing an electronic deposit for an average US bank decreased by 85% between 1979 and 1994. Furthermore, telecommunications abolish distance and permit exploiting such scale economies on a global basis – through ATMs and on-line banking for instance. Globalization, viewed as fostering a convergence of client needs and financial practices across the world economy, makes it desirable to do so.

⁸ See Rhoades (1998), Calomiris and Karceski (1998), Piloff and Santomero (1996) and Berger et al. (1998a) for overviews. Large horizontal mergers in the United States appear to cut total costs – basically staff costs and data processing systems and operations – but this does not mean that cost efficiency is improved when measures of output and of the quality of service are taken into account.

Financial engineering makes it possible to extend the range of banking services and, in many instances, to replace personal services with products. These often require substantial development investments but have close to zero marginal cost. They thus contribute to the transformation of banking, traditionally based on relationships – retail and corporate lending – into an activity mainly based on knowledge. The same is true for financial engineering tools, such as derivative contracts, off-balance sheet guarantees and risk management systems. Knowledge is free to disseminate and use across a given institution; it is a public good, at least locally (within a firm). Knowledge-based activities display inherent economies of scale.

Thus, during the 1980s and 1990s, technology may have offered the opportunity for exploiting new economies of scale: merging banks were trying to capture the benefits. Major technical and financial innovations, however, take time to produce measurable results in terms of a bank's production function, which is what industry studies attempt to estimate. It should thus come as no surprise that studies based on data from the 1980s and early 1990s fail to detect the 'new' scale economies.

2.3.2 Diversification

The other way out of the puzzle argues that most empirical studies of scale economies fail to appropriately take risk into account. As a result, the diversification benefits associated with scale are typically underplayed. (Note that this view is complementary to a strengthening of scale and scope economies in banking due to new technology.)

There are two steps in the risk-diversification argument. One holds that the proper objective function for a bank exhibits risk aversion. If a bank manager, or the bank's shareholders, bear a cost of failure or distress – as when bankruptcy eliminates the charter or option value of the bank and/or when the manager derives private benefits from control – their objective is to maximize expected profits *for a given level of risk*. The other argues that diversification improves the expected return/risk trade-off a bank faces. Controlling for risk-taking, Hughes, et al. (1996, 1998) detect economies of scale for US banks (improved profitability and production efficiency, and lower insolvency risk as size increases), but only when consolidation

widens the geographic spread of the bank. Geographic diversification appears to offset the tendency of bigger banks to take on more insolvency risk.⁹

A caveat should be added to these findings. While geographic diversification may have been important in the past, technology and financial engineering (credit derivatives in particular) reduce the need of banks to extend their physical base in order to diversify their loans and their deposit base. This strengthens the previous argument that technology may result in new economies of scale in banking.

2.4 Lessons from the United States

The US experience is revealing for Europe because the fundamental factors that can explain the wave of consolidation there could also apply here. Of course the regulatory situation in the United States is not comparable with the European situation, but the analogy between geographical business restrictions (in the United States) and the advent of a single European currency may be used once again. Moreover the other factors at work – be they excess capacities, or technical and financial innovations apply equally well on both sides of the Atlantic. The new US evidence on economies of scale in banking is particularly relevant as it suggests that more consolidation is to be expected in Europe.

Suggesting that more consolidation is to be expected and that the minimum bank size has probably increased is not akin to justifying any merger or all attempts at increasing the size of an institution. Fashion, herd behaviour and managers' private benefits may also be the underlying motivations for mergers and acquisitions. Nor are we ready to predict that all future mergers and acquisitions will be successful. The US evidence does suggest, nevertheless, that being small in banking is a handicap, and that being small and alone is especially so. In the European context, this probably means that the merger of small or medium-sized institutions should be viewed with a more favourable prior than usual.

⁹ Hughes et al. (1996, 1998) find that an expansion in asset size and branches within the same state reduces insolvency risk but does not improve market value. Instead, an expansion in asset size and in branches across states is associated with an improvement in value efficiency and a reduction of insolvency risk.

This is all the more true because the US evidence further teaches us that diversification across regions in which macroeconomic risk can be diversified is an important source of scale economies for banks. As a consequence, US banks today are larger, better diversified and thus less risky institutions from the point of view of their portfolios of loans and deposits. (Note, however, that this does not imply that the overall riskiness of US banks has declined, as banks may have taken on more risk elsewhere in their portfolios.) The important lesson for Europe is that the extension of the market and an increase in competition – two developments that may be associated with the advent of the euro – need not imply an increase in financial instability if it is accompanied with the adequate structural evolution of the banking sector.

Finally, the wave of consolidation which has swept the US banking industry in the past two decades has not resulted in higher concentration (and thus less banking competition) in local US markets. Local concentration has, if anything declined. Again this may be the result of one of the two main forces which have driven consolidation in the US – the search for diversification – as it has forced banks to consolidate across state borders. It is also the result of the role played by US competition authorities in stubbornly preserving competitive conditions in local markets.

3 The European Banking Market(s)

3.1 One market?

One market, one money claimed the well known European Commission document of 1991. As far as banking markets are concerned there is still a long way to go. This chapter documents the extent to which European financial markets remain segmented. It also discusses the reasons for doubting that the move to a single currency will be sufficient to promote the emergence of a truly unified market.

Tables 3.1(a) and (b) and Table 3.2 document the degree of cross-border banking penetration. We start by excluding interbank assets, i.e. the credit lines that banks make available to one another (we consider them in Table 3.2). Thus, Tables 3.1(a) and (b) report loans and deposits held with foreign banks by all entities, excluding banks. Table 3.1(a) shows the deposits of, for example, Austrian (non-bank) entities held by banks abroad as a fraction of total (Austrian) domestic credit. The numbers are small: in 1997, only 5.7% of the deposits of Austrian (non-bank) entities were held with non-resident banks, and in no country does this number exceed 15%. Note, however, that cross-border transactions have been rising almost everywhere throughout the 1990s. Table 3.1(b) makes the same observation for bank lending. Here too, with the exception of Germany and Switzerland, the figures have been rising. Note the case of the Netherlands, however: in 1997, 30.5% of the loans obtained by the Dutch non-financial sector had been issued by non-resident banks. On balance this evidence suggests that European commercial banking markets remain mostly national, with few direct inroads by foreign competitors. There is, however, some indication that this feature may be slowly eroding.

Table 3.1 Cross-border banking penetration

(a) Assets to non-banks

Countries	Cross-border as % of total										% change		% change		
	1992	1993	1994	1995	1996	1997	1998	97/92	98/92	% change	domestic credit	97/92	98/92	% change	cross-border
Austria	2.9	3.8	4.0	4.9	5.3	5.7	n.a.	92.8	n.a.	n.a.	9.8	n.a.	117.7	n.a.	n.a.
Belgium	8.2	9.7	8.5	9.0	10.4	12.3	n.a.	50.3	n.a.	n.a.	8.4	n.a.	70.6	n.a.	n.a.
Canada	11.3	12.0	12.5	12.2	10.4	10.4	n.a.	-8.0	n.a.	n.a.	50.5	52.3	37.2	43.5	n.a.
France	2.1	2.7	2.4	2.5	2.6	3.8	4.3	81.3	104.7	10.6	10.6	8.6	104.2	127.4	n.a.
Germany	5.3	6.2	5.5	6.1	6.3	6.8	6.6	28.9	24.4	30.5	30.5	29.2	70.9	62.9	n.a.
Italy	8.7	10.0	10.0	10.5	10.6	13.1	14.6	50.2	67.6	-3.9	-3.9	-7.0	51.7	66.6	n.a.
Netherlands	14.5	16.2	14.1	13.1	13.5	14.3	n.a.	-1.7	n.a.	n.a.	38.4	n.a.	35.5	n.a.	n.a.
Spain	3.3	5.7	4.7	5.6	6.0	6.6	6.9	99.4	109.0	7.5	7.5	5.5	121.9	129.1	n.a.
Switzerland	5.8	4.9	4.6	4.8	5.8	6.0	n.a.	4.7	n.a.	n.a.	20.5	n.a.	26.5	n.a.	n.a.
United Kingdom	5.9	10.6	8.8	9.9	10.3	10.9	10.8	82.9	82.6	46.6	46.6	53.3	183.1	195.3	n.a.
United States	6.4	6.8	6.4	8.0	9.1	9.6	9.5	49.3	47.7	30.7	30.7	32.4	101.9	102.2	n.a.

Table 3.1 continued

Countries	Cross-border as % of total										% change		% change		% change	
	1992	1993	1994	1995	1996	1997	1998	97/92	98/92	% change	97/92	98/92	97/92	98/92	97/92	98/92
Austria	3.2	3.1	3.0	2.9	3.6	3.8	4.2	16.6	30.7	6.2	2.0	24.5	34.7			
Belgium	16.9	18.0	19.3	19.4	18.4	16.7	16.7	-0.9	-1.3	12.0	10.1	10.8	8.4			
Canada	3.5	3.3	4.1	3.5	4.5	4.1	4.1	15.5	16.7	12.9	11.7	31.2	31.2			
France	4.7	4.6	4.7	4.7	5.5	5.6	5.8	19.0	24.9	-5.8	-8.0	13.1	16.4			
Germany	13.3	15.1	14.1	13.0	12.1	11.5	12.8	-13.8	-3.8	17.8	14.8	-0.6	9.8			
Italy	6.5	6.9	7.2	7.7	7.8	8.8	9.3	35.8	42.2	-4.0	-8.5	33.6	34.1			
Netherlands	20.6	22.1	24.6	27.0	28.5	30.5	31.8	48.4	54.7	13.5	12.2	92.5	102.3			
Spain	3.6	4.4	4.1	5.0	5.2	7.0	8.6	88.9	137.2	7.4	2.4	114.0	156.2			
Switzerland	18.0	16.4	13.3	12.3	13.9	15.3	16.2	-15.0	-10.0	24.0	20.3	2.1	5.9			
United Kingdom	7.8	8.4	8.8	9.0	8.4	9.6	9.7	22.1	23.6	60.8	67.0	100.0	110.6			
United States	5.8	5.4	6.1	6.1	6.7	6.9	6.5	20.7	13.6	28.1	31.7	56.4	50.9			

Note: This table represents the cross-border positions of reporting banks vis-à-vis individual countries and vis-à-vis the non-bank system.

Cross-border position covers both domestic and foreign positions with non-residents.

For the list of reporting countries refer to Historical Data and Methodology of the BIS.

Source: BIS

Table 3.2 *EU: cross-border interbank assets, 1992–6, % of GDP*

	1992	1993	1994	1995	1996
Austria	17.71	16.72	17.77	17.89	21.16
Belgium	56.01	60.33	59.20	58.29	58.03
France	17.81	18.22	20.12	18.80	18.51
Germany	8.60	10.21	12.64	13.08	12.67
Ireland	26.26	35.66	38.82	50.80	55.90
Italy	15.81	17.47	18.22	16.71	16.25
Luxembourg	914.54	921.38	937.81	908.43	840.15
Netherlands	26.45	26.54	27.04	27.04	31.24
Portugal	7.63	13.50	22.17	22.17	20.75
Spain	7.38	9.14	9.61	9.16	10.24
United Kingdom	58.14	74.71	81.59	81.59	79.99
United States	9.36	8.96	9.49	9.65	8.89
Japan	16.97	13.85	13.49	12.78	12.67

Note: The numbers in the table should be read as follows: for instance, the assets of EU banks deposited, say, in Ireland, amounted, in 1996, to 55.9 % of Irish GDP.

Sources: BIS; International Monetary Fund; and World Economic Outlook.

Table 3.2 complements these data with a description of the relationships among banks. The numbers should be read as follows: the deposits of European banks with, say, Irish banks amounted, in 1996, to 55.9% of Irish GDP. The numbers are quite a bit higher in this table, indicating that, at the production level, cross-border banking relationships are much more common – a finding that is not surprising considering the magnitude of trade flows among the various EU states.

With Table 3.3 we consider a different segment of the financial industry – mutual funds. What the numbers clearly show is the extent of fragmentation of the mutual funds industry in Europe. There are more than twice as many mutual funds in the EU as there are in the United States, but the average value of the assets under management at a typical European fund is less than one half of those at the corresponding US institution. In other words, the typical European mutual fund is four times smaller than its US counterpart. It is difficult not to see here both a sign of a segmentation and a platform for change. As we discuss in Chapter 5, this is an industry particularly sensitive to the advent of the single currency, and is characterized by significant returns to scale.

Table 3.3 *Mutual funds, June 1996*

	<i>Equity</i>	<i>Bond</i>	<i>Money Market</i>	<i>Total</i>
Net assets (in US \$ billion)				
EU ^{1, 2}	366.74	533.94	496.32	1,396.99
United States	1,532.46	741.78	817.75	3,091.99
Japan	119.12	189.39	102.22	410.73
Number of funds (in numbers) ³				
EU ^{1, 2}	7,136	4,436	1,192	13,484
United States	2,611	2,390	995	5,996
Japan	4,118	2,060	15	6,193

Notes:

- ¹ Does not include Ireland and the Netherlands for the equity and bond funds.
- ² Does not include Austria, Denmark, Ireland and the Netherlands for the money market funds.
- ³ The equity funds also include balanced funds and 'other' funds.

Source: Investment Company Institute.

Additional evidence of segmentation, but also of a continuing evolution towards a heavier reliance on international capital markets, is provided in Tables 3.4 and 3.5. The former shows that the fraction of international bonds¹ in the total stock of bonds outstanding across Europe is on average rather low, but also widely varying from one country to another, ranging from 3% in Germany to a high of 49% in Finland – leaving aside the special case of Luxembourg. The trend, however, is clearly up. Table 3.5 documents the extent to which European bonds are denominated in the national or in a foreign currency. The dominance of issues in national currency is quasi-universal, but is decreasing everywhere (except in France, again leaving Luxembourg aside). Bond issues in other EU currencies are on the rise everywhere, while the evolution of dollar issues is ambiguous. This seems to indicate a tendency for European institutions (including governments) to rely increasingly on international savings, although mainly on the savings of their fellow Europeans. The elimination of the currency risk factor should accelerate this trend.

- ¹ International bonds are defined as bonds issued by non-residents or bonds issued by residents and denominated in foreign currency.
- ² For overviews of regulation and deregulation of European banks, see Bingham (1985), Baltensperger and Dermine (1987), and Gual and Neven (1993), Economic Research Europe (1997).

Table 3.4 International bonds: stocks outstanding as % of domestic bonds

Countries	1989	1990	1991	1992	1993	1994	1995	1996	1997	Average 1989-97	% change 1989-97
Austria	28.8	28.9	29.3	29.3	29.8	29.5	29.3	29.9	30.6	29.5	6.2
Belgium	5.4	5.2	5.2	4.8	5.3	5.6	5.6	5.2	6.5	5.4	21.4
Finland	42.9	46.2	48.3	57.3	56.3	54.7	48.2	46.8	44.2	49.4	3.1
France	14.2	14.1	16.1	17.6	19.2	19.8	19.0	19.4	21.2	17.8	49.4
Germany	0.7	0.9	1.0	1.2	2.0	3.3	4.1	6.2	7.6	3.0	930.4
Ireland	32.0	32.3	33.7	37.8	41.6	39.3	43.3	44.4	54.5	39.9	70.3
Italy	3.5	3.8	3.9	4.1	5.1	5.4	5.6	5.0	5.3	4.6	53.2
Luxembourg	99.1	99.1	99.2	99.1	98.4	98.5	97.7	96.8	96.9	98.3	-2.2
Netherlands	35.2	34.4	34.3	34.4	38.8	42.4	43.8	48.2	53.6	40.6	52.0
Portugal	15.0	10.2	7.8	6.2	11.4	14.9	16.0	17.5	21.0	13.3	40.2
Spain	5.8	6.9	6.4	9.8	10.0	10.1	10.1	11.4	12.1	9.2	107.8
United Kingdom	28.7	32.9	35.9	35.8	32.8	33.0	32.4	33.8	37.7	33.7	31.1
Switzerland	0.5	0.5	0.4	0.5	0.5	1.1	2.0	3.1	5.0	1.5	971.2

Sources: BIS (International Securities Statistics); Datastream; and authors' calculations.

Table 3.5 International and domestic bonds by currency of issuance: stocks outstanding

Country	1989	1990	1991	1992	1993	1994	1995	1996	1997	Average 1989-97	% change 1989-97
Austria											
National currency	74.31	75.06	74.73	73.57	72.40	72.47	71.92	70.90	69.91	72.81	-5.92
Other EU currency	5.86	6.29	6.47	6.75	7.07	8.25	9.20	11.08	12.53	8.17	113.92
USD	5.56	4.19	4.00	5.42	6.03	5.43	4.66	4.38	4.78	4.94	-14.11
Belgium											
National currency	94.78	94.96	94.87	95.21	94.75	94.44	94.51	95.13	94.03	94.74	-0.79
Other EU currency	0.84	1.12	1.04	0.95	1.23	1.69	1.74	1.56	2.22	1.38	163.55
USD	2.53	2.20	1.85	1.62	1.77	1.71	1.70	1.78	2.37	1.95	-6.49
Finland											
National currency	57.22	56.02	53.78	44.47	44.81	46.65	52.89	54.45	56.82	51.90	-0.70
Other EU currency	8.30	9.84	11.44	16.96	18.46	19.71	19.42	18.29	17.21	15.51	107.41
USD	17.10	13.53	12.07	16.18	15.82	14.76	12.22	12.54	11.01	13.91	-35.63
France											
National currency	87.12	87.81	87.64	87.95	88.60	89.35	89.77	89.08	88.14	88.38	1.17
Other EU currency	1.93	2.13	2.29	2.26	2.19	2.44	2.85	3.31	3.36	2.53	74.77
USD	5.52	4.34	4.17	4.40	4.37	3.67	3.36	3.98	4.69	4.28	-14.99
Germany											
National currency	99.47	99.45	99.33	99.12	98.57	97.94	97.30	95.61	94.28	97.90	-5.22
Other EU currency	0.07	0.06	0.10	0.19	0.39	0.54	0.73	1.29	0.80	0.57	2638.96
USD	0.14	0.11	0.11	0.27	0.55	0.62	0.78	1.57	2.11	0.70	1456.85
Ireland											
National currency	68.02	67.74	66.28	62.21	58.38	60.68	58.08	57.33	47.16	60.65	-30.67
Other EU currency	12.06	11.18	11.17	11.74	14.50	13.98	17.61	21.80	23.97	15.33	98.86
USD	11.03	10.28	10.87	12.58	14.66	12.60	13.39	11.81	19.65	12.98	78.18
Italy											
National currency	96.73	96.66	96.59	96.54	95.52	95.23	94.89	95.53	95.41	95.90	-1.36
Other EU currency	0.28	0.29	0.21	0.21	0.53	0.53	0.49	0.41	0.64	0.40	124.23
USD	1.91	1.64	1.58	1.89	2.64	2.15	2.09	1.98	2.01	1.99	5.10

Table 3.5 continued

Country	1989	1990	1991	1992	1993	1994	1995	1996	1997	Average % change	
										1989-97	1989-97
Luxembourg											
National currency	20.14	26.66	30.62	35.65	38.16	43.63	49.76	49.86	47.00	37.94	133.34
Other EU currency	40.27	38.83	33.16	32.64	29.86	25.16	23.14	24.69	24.32	30.23	-39.61
USD	10.43	7.93	6.23	7.84	9.95	10.76	10.03	12.86	15.79	10.20	51.45
Netherlands											
National currency	68.19	68.71	69.15	69.99	67.07	65.65	64.34	61.41	56.86	65.71	-16.61
Other EU currency	12.29	13.29	14.20	14.04	16.21	17.94	19.53	21.69	22.58	16.86	83.80
USD	10.12	8.33	7.67	8.11	9.65	9.16	9.03	9.78	13.19	9.45	30.36
Portugal											
National currency	85.02	89.78	92.23	93.83	88.56	85.12	84.79	83.20	79.71	86.92	-6.24
Other EU currency	5.15	4.56	3.89	2.94	4.29	7.15	8.32	9.89	11.66	6.43	126.24
USD	4.18	0.91	0.00	0.00	2.61	2.17	1.76	2.63	4.00	2.03	-4.30
Spain											
National currency	94.17	93.11	93.65	90.24	90.00	89.88	89.93	88.70	88.04	90.86	-6.51
Other EU currency	1.57	1.98	2.71	3.74	5.20	5.25	5.98	6.66	6.69	4.42	327.19
USD	1.35	2.07	1.58	2.60	2.06	1.95	1.69	2.12	2.24	1.96	66.01
United Kingdom											
National currency	87.26	86.90	85.99	84.14	86.07	85.38	84.36	83.30	80.96	84.93	-7.22
Other EU currency	1.17	1.29	1.31	2.20	2.02	2.75	3.79	4.06	4.36	2.55	271.99
USD	8.29	8.05	7.80	9.31	8.84	8.63	8.41	9.22	11.03	8.84	32.96
Switzerland											
National currency	99.63	99.65	99.68	99.66	99.71	99.23	98.97	97.93	96.45	98.99	-3.19
EU currency	0.09	0.29	0.27	0.23	0.23	0.22	0.16	0.34	0.97	0.31	991.57
USD	0.22	0.06	0.04	0.11	0.06	0.05	0.46	1.09	1.47	0.40	561.36

Note: End of year figures (Third quarter for 1997).

Source: BIS (International Securities Statistics); Datastream; and authors' calculations.

Table 3.6 The choice of bond bookrunners, 1996 (market share, in %, won by book-runners of indicated nationality)

(a) German bookrunners			
Borrower	Currency		
	Deutsche Mark	Other	All
German	44	16	24
Other	37	2	5
All	39	4	8

(c) UK bookrunners			
Borrower	Currency		
	Pound	Other	All
United Kingdom	40	21	31
Other	48	3	5
All	44	4	7

(e) US bookrunners			
Borrower	Currency		
	Dollar	Other	All
United States	86	46	76
Other	54	13	28
All	64	16	37

(b) French bookrunners			
Borrower	Currency		
	French Franc	Other	All
French	86	10	25
Other	75	2	5
All	77	2	6

(d) Dutch bookrunners			
Borrower	Currency		
	Guilder	Other	All
Dutch	83	26	48
Other	85	2	3
All	84	2	5

(f) Japanese bookrunners			
Borrower	Currency		
	Yen	Other	All
Japanese	75	46	5
Other	87	6	14
All	84	8	17

Note: Each entry shows the market share of German, French, UK, Dutch, US or Japanese bookrunners for issuers of the indicated nationality, in the indicated currency. For example, the 44% figure in the upper left-hand corner of Table (a) (German bookrunners) means that German underwriters ran the books for 44% of the bonds of German issuers that were denominated in Deutsche Mark. Data include all bonds in the Euromoney database, including international bonds issued under medium-term note programs, that are not equity-related. Total amounts of bond issuance by currency: Deutsche Mark; US \$81 billion; French Franc: US \$37 billion; Pound: US \$54 billion; Dollar: US \$22 billion; Guilder: US \$19 billion; Yen: US \$91 billion. Grand total: US \$725 billion.

Sources: Euromoney Bondware; BIS; and McCauley and White (1997)

Table 3.7 The choice of syndicated-loan arrangers, 1996 (market share, in %, won by arrangers of indicated nationality)

(a) German arranger banks			
Borrower	Currency		
	Deutsche Mark	Other	All
German	82	71	80
Other	46	3	4
All	62	3	4

(c) UK arranger banks			
Borrower	Currency		
	Pound	Other	All
United Kingdom	56	39	53
Other	24	2	2
All	53	3	6

(b) French arranger banks			
Borrower	Currency		
	French Franc	Other	All
French	46	10	39
Other	56	2	2
All	47	2	3

(d) US arranger banks			
Borrower	Currency		
	Dollar	Other	All
United States	83	28	82
Other	27	13	20
All	71	13	61

Note: Each entry shows market share of German, French, UK or US banks as arrangers of loans for borrowers of the indicated nationality, in the indicated currency. For example, the 82% in the upper left-hand corner of Table (a) (German banks) means that German arranger banks arranged 82% of the loans for German borrowers that were denominated in Deutsche Marks. Data include all loans in the Euromoney database that were signed and for which amounts were given: they thus include a wider set of loans than those usually reported by the BIS, which exclude, *inter alia* refinancing. Total syndicated loan amounts by currency: Deutsche Mark: US \$25 billion; French Franc: US \$31 billion; Pound: US \$102 billion; Dollar: \$1,254 billion. Grand total: US \$1,514 billion.

Sources: Euromoney Bondware; BIS and McCauley and White (1997)

A final piece of evidence of segmentation, this time on the fixed-income segment of the investment banking industry, is shown in Tables 3.6 and 3.7. The tables document the dominance of domestic investment banks in the fixed-income business. For example, the figure in the upper left-hand corner of Table 3.6 (a) (German bookrunners) means that German underwriters ran the books for 44% shown of all bonds issued by German entities and denominated in Deutsche Mark. These data may be the results of a multitude of factors – expertise in investment banking and knowledge of the local market – but they also indicate a lack of competition and/or a national bias on the part of issuers – governments are often major clients in this line of trade. What is more interesting in these data, however, is that the dominance of local bookrunners and loan arrangers is strongest along the currency dimension. The euro will redistribute the cards in a not-unconsequential fashion, national authorities permitting.

3.2 Banking regulation in Europe: overview and an assessment

Post-World War II banking regulation in Europe can be roughly divided into three periods. Until the late 1970s, banking in most EU states was highly regulated, and regulation was mostly uncoordinated among countries. The 1980s brought a period of deregulation, at the national level as well as through EU-wide measures. Finally, starting in the late 1980s and going into the 1990s, the EU has started to harmonize bank regulation and, to some extent, to re-regulate the industry.²

The first steps towards harmonizing banking regulation in the EU date back to 1977, with the First Banking Directive. This Directive ruled that national bank supervisors should cooperate, and that foreign identity could not be a ground for refusing a banking licence. The 1977 Directive, however, left national barriers to competition and differences in regulation virtually untouched. A change in gear occurred only ten years later, with the Single European Act of 1986, which inspired a shift in regulatory activity, in particular with respect to financial markets.

² For overviews of regulation and deregulation of European banks, see Bingham (1985), Baltensperger and Dermine (1987), and Gual and Neven (1993), *Economic Research Europe* (1997).

Three Directives, or rather groups of Directives, have been of particular importance for the regulation of banks.³ The Second Banking Directive of 1989 (supposed to be implemented in 1993, and amended in 1992 and 1995) harmonized banking authorizations and prudential supervision systems. The Investment Services Directive of 1993 addressed the cross-border activities of all types of investment firms, including universal banks. The Solvency Ratio and the Capital Adequacy Directives of 1989 and 1993 (amended in 1992, 1995, 1996 and 1998) defined the prudential regulation of banks and investment houses in the EU.

The common philosophy of these Directives is an attempt to harmonize financial regulation by creating a 'single passport' for financial services across the EU. The Directives are based on two main principles: (1) the principle of mutual recognition, which binds member states to recognize any financial institution licensed in another member state; (2) the principle of home-country control, which subjects each financial institution to a single supervisor – the one based in the state where the institution has its head office, regardless of where it conducts its business.

Harmonization and deregulation are, however, conflicting objectives – except in the extreme case where harmonization is interpreted as the complete scrapping of all regulations in each member state.⁴ Since, as discussed in Chapter 1, this cannot be the case in banking, the policy problem faced by the European Commission was not a trivial one. The Directives represent a compromise between re-regulation, passivity and active liberalization. It is probably fair to summarize the Commission's policy towards financial services in the 1990s as one of minimum interference with national legislators and regulators, subject to the constraint of harmonizing key accounting, supervisory, and investor-protection standards.

On paper, the harmonization of banking regulation in the EU, in particular the capital adequacy and banking Directives, should have been accomplished by 1993. A couple of caveats on the current regu-

³ Other directives regulating banking and investment services are the Consolidated Accounts Directive (1986), the Branch Establishment Directive (1989), the Large Exposures Directive (1992), and the Deposit-Guarantee Schemes Directive (1994). For a full list of the relevant directives, and their subsequent amendments, see <http://europa.eu.int/comm/sg/scadplus/leg/en>.

⁴ See Dewatripont and Tirole (1994) for a careful discussion of principles and problems of banking regulation.

latory situation are in order, however. Indeed it can be argued that the harmonization of regulation, while substantial on paper, has not been as effective in practice.⁵

First, regulatory changes need time to feed through the system.⁶ The Second Banking Directive, for example, indicated 1 January 1993 as the deadline for national implementation, but in some states (the United Kingdom, Luxembourg, Belgium and Spain) the translation into national law occurred a year later. At the time of writing, the Investment Services Directive – a regulation that is particularly relevant for asset management and investment banking activities – has also not been implemented by all member states.

Second, despite the regulatory changes, a number of important impediments to cross-border activity remain in European financial markets. There are exceptions to the single market principle: the Investment Services Directive, for example, contains several articles which allow for, and even suggest, restrictive interpretations (such as Article 14.3 on domestically traded securities, or Article 15.5 on new markets). Similarly, the Second Banking Directive allows for host-country control (as opposed to the general rule of home-country control) in special circumstances related to consumer protection or the 'general good'. Also, institutional investors, notably pension funds, are, in most member states, subject to portfolio constraints which normally favour domestic equity and domestic government bonds (we return to this issue in Chapter 5).⁷

Non-regulatory barriers constitute another group of impediments to the cross-border activity of financial institutions. The predominant example is the taxation of investment income which often discriminates along national boundaries. Legal differences between EU states, in particular the lack of some form of 'European corporate law', also remain important and constitute an additional factor of market segmentation.

⁵ See International Monetary Fund (1997) for a similar view. Cerasi et al. (1998) conclude that 'it is hard to identify in the set of EU directives the origin of changes in the industry structure, even considering the actual implementation date in each country' (p. 2).

⁶ This interval is sometimes used by national authorities to preempt the consequences of the Directives. In Italy, for instance, the central bank liberalized banking authorizations just in time for domestic banks to expand their branches ahead of the entry of foreign competitors.

⁷ On the other hand, upon full implementation of the Investment Services Directive, mutual funds will face almost no regulatory obstacles with respect to cross-border activities.

3.3 How competitive is the European banking industry?

Until the early 1990s, commercial banks in Europe were relatively protected from competition, through formal or informal barriers to entry into the market, collusive arrangements and regulatory capture.⁸ Lack of competition generated rents for stakeholders and resulted in inefficiencies and low return on equity throughout the industry. Interestingly, at least until the early 1990s, this lack of competition was not associated with industry concentration at the national level. As shown in Table 4.1 on p. 53, in 1995 in Germany and Italy, the market share (based on deposits) of the top five institutions in each country was below 40% (which indicates a rather fragmented market). In Spain, Belgium, France, and in the United Kingdom this share was between 50% and 60% (which is far from being a tight oligopoly); only in Finland, the Netherlands and Sweden was it larger than 70%.⁹

Deregulation, the Single Market Programme (SMP) and, above all, the abolition of capital controls which occurred in the late 1980s, were all recipes for an increase in competitive pressures in the European banking industry.¹⁰ The SMP, in particular, was expected to make a big difference because it was a credible commitment to the liberalization of banking, thus focusing banks on the changeover from a regulation/influence/collusion game to competition.¹¹ As we have seen, however, regulatory harmonization is still incomplete and, of course, the home currency advantage has remained in place until 1 January 1999. Besides, other frictions specific to the sector (particularly in retail banking in the form of entry barriers and switching costs) concur in preventing a full extension of the competitive climate.

Assessing the extent to which competitive factors have overcome these obstacles is inherently difficult. Not surprisingly, industry data convey an ambiguous picture. On the one hand, there is some evi-

⁸ See Gual and Neven (1993) and Vives (1991a) for an assessment.

⁹ These measures are, however, at the national level, while the relevant measure of concentration is often local. Even for the less concentrated national markets, local concentration could have been higher in places.

¹⁰ See Allen, Gasiorek and Smith (1998) and the accompanying discussion by Flam (1998) for a systematic, but partly inconclusive, attempt at assessing the competitive impact of the SMP on a more general basis.

¹¹ See Vives (1991a).

dence (see Table 3.8) that net interest margins have decreased, during the 1990s. Further evidence of increased interest rate competition (accompanied by a reduction in the average size of branching networks) is provided by Cerasi et al. (1998). Similarly, standard measures of competitiveness, such as operating expenses or staff costs as a percentage of gross income, imperfect as they are, show some increase in efficiency between 1990 and 1995 for Denmark, France, Germany, the Netherlands, and the United Kingdom (see Tables 3.9 and 3.10), with inconclusive or negative results for the other EU states. Economic Research Europe (1997) also reports a decline in X-inefficiencies for banks of all size and in all EU states from 1992 to 1994.

Table 3.8 *Net interest revenue (% of total earning assets)*

	<i>Average 1989-94</i>	<i>Average 1995-7</i>	<i>Difference</i>
Austria	1.94	2.07	+0.13
Belgium	2.39	3.87	+1.48
Denmark	5.30	4.74	-0.56
Finland	3.58	1.80	-1.78
France	3.09	2.66	-0.43
Germany	2.47	2.90	+0.43
Greece	3.11	3.05	-0.06
Ireland	2.67	1.82	-0.85
Italy	4.74	4.44	-0.30
Portugal	4.52	2.29	-2.23
Spain	4.37	3.68	-0.69
Sweden	2.76	2.21	-0.55
United Kingdom	2.36	2.50	+0.14
United States	4.08	4.19	+0.11

Source: Authors' computations on data from the BankScope Data-set by Bureau Van Dijk and IBCA.

Table 3.9 Operating expenses as (% of gross income)

Countries ¹	1990	1991	1992	1993	1994	1995	Av.			% of Change	
							1979-83	1984-7	1988-91		
	1990-5	1992-5	1992-5	1992-5	1992-5	1992-5	1992-5	1992-5	1992-5	1990-5	
Austria	64.86	64.92	63.98	63.49	65.10	69.45	n.a.	70.08	65.94	65.51	7.08
Belgium	72.30	70.06	68.28	67.85	71.72	67.60	73.29	68.31	68.42	68.86	-6.50
Denmark	68.60	62.58	81.37	51.09	72.51	54.00	53.22	69.44	62.32	64.74	-21.28
Finland	81.49	123.20	190.44	136.45	139.89	112.20	83.22	81.34	90.77	144.75	37.69
France	72.38	69.52	66.82	64.75	71.28	65.64	n.a.	n.a.	71.11	67.12	-9.31
Germany	64.76	65.16	64.53	62.39	60.80	63.99	63.66	62.15	65.64	62.93	-1.19
Italy	62.10	64.94	65.90	61.15	68.83	68.33	n.a.	62.98	63.18	66.05	10.03
Japan	67.51	68.87	70.09	74.81	76.35	66.54	73.36	65.46	63.44	71.95	-1.44
Netherlands	68.89	67.51	67.23	66.56	67.06	67.29	65.07	64.93	67.33	67.04	-2.32
Portugal	41.64	44.91	53.47	56.19	61.77	64.94	57.19	64.98	46.09	59.09	55.96
Spain	61.06	58.51	60.36	59.65	59.70	63.22	68.13	64.46	61.19	60.73	3.54
Sweden	78.24	120.54	146.53	109.81	81.10	71.55	61.49	59.21	77.55	102.25	-8.55
Switzerland	59.62	52.30	52.13	48.64	55.63	56.44	58.16	54.46	56.26	53.21	-5.33
United Kingdom	65.85	65.68	66.12	63.16	64.09	63.82	n.a.	65.49	65.37	64.30	-3.08
United States	67.68	67.48	64.75	63.92	65.04	63.26	67.89	67.55	67.00	64.24	-6.53

Note:

¹ For each country, all banks; except for Canada, Japan, Greece, Luxembourg, Portugal, Sweden, United Kingdom and United States - commercial banks; and for Denmark - commercial and savings banks.

Sources: OECD Bank Profitability: Financial Statements of Banks (1997); authors' calculations.

Table 3.10 Staff costs as % of gross income

Countries ¹	% of										% of Change 1990-5
	1990	1991	1992	1993	1994	1995	Av. 1979-83	Av. 1984-7	Av. 1988-91	Av. 1992-5	
Austria	38.48	38.54	38.12	37.32	38.42	36.57	n.a.	41.27	38.84	37.61	-4.96
Belgium	36.69	35.49	34.49	41.39	43.64	41.15	40.61	35.28	34.55	40.17	12.16
Canada	36.39	35.17	34.95	35.34	29.68	28.78	39.50	35.04	34.50	32.19	-20.91
Denmark	42.69	37.79	49.68	31.17	44.85	33.18	35.26	43.99	38.62	39.72	-22.28
Finland	31.39	33.14	34.87	24.01	30.83	30.70	44.50	40.41	33.04	30.10	-2.20
France	39.00	37.07	35.49	35.58	38.57	35.58	n.a.	n.a.	38.60	36.31	-8.77
Germany	41.31	41.34	40.80	38.32	37.02	38.64	42.80	40.04	41.90	38.70	-6.46
Greece	49.00	39.00	44.00	44.00	42.00	45.00	n.a.	n.a.	48.33	43.75	-8.16
Italy	40.88	42.51	42.38	38.75	44.88	43.68	n.a.	42.02	41.70	42.42	6.85
Japan	35.91	36.17	36.61	39.36	40.02	34.88	44.25	36.45	34.20	37.72	-2.87
Luxembourg	19.52	21.19	20.49	19.51	23.71	23.92	18.05	16.86	20.60	21.91	22.54
Netherlands	39.83	38.90	39.06	36.92	37.07	37.15	42.31	40.77	39.08	37.55	-6.73
Portugal	25.62	26.41	30.40	31.48	34.33	36.15	42.02	45.79	29.04	33.09	41.10
Spain	38.10	35.50	36.67	36.96	36.33	38.81	46.24	43.29	39.42	37.19	1.86
Sweden	24.47	26.30	23.66	16.38	25.20	27.81	28.11	23.93	24.30	23.26	13.65
Switzerland	39.09	34.42	33.83	31.77	35.55	35.16	39.83	36.30	37.05	34.08	-10.05
United Kingdom	37.46	36.36	36.13	34.84	35.91	35.61	n.a.	38.91	37.38	35.62	-4.94
United States	30.24	28.69	27.05	26.61	27.34	26.80	35.27	32.51	29.85	26.95	-11.38

Note:

¹ For each country, all banks; except for Canada, Japan, Greece, Luxembourg, Portugal, Sweden, United Kingdom and United States - commercial banks; and for Denmark - commercial and savings banks.
n.a. = non available.

Sources: OECD Bank Profitability: Financial Statements of Banks (1997); and authors' calculations.

On the other hand, most of the observed reductions in interest margins and in X-inefficiencies could just be cyclical, rather than reflecting increased competition.¹² Moreover, Tables 3.9 and 3.10 document a very heterogeneous picture across Europe. The survey evidence provided in *Economic Research Europe* (1997) shows that the highest price in the EU is often two or more times greater than the lowest one for almost all banking products, and that in some instances – commercial loans, current accounts and personal equity transactions – the differences between the highest and lowest prices have actually increased between 1987 and 1996.¹³

3.4 Summing up

The limited evidence available thus suggests that although the European banking industry appears to have gone through a significant increase in competition, there is certainly room for a further intensification of competitive pressures. Will the advent of the euro signify, if not single-handedly cause, the final (r)evolution of the industry? This chapter suggests some caution. Regulatory harmonization, while advanced on paper, is not so in practice. In part because of the regulatory situation, but also due to past heritage, competitive conditions have not yet provided a powerful impetus for change. Non-regulatory barriers, taxation and corporate law in particular, are also likely to remain important for the foreseeable future and constitute additional factors of continuing market segmentation. The existence of different currencies has indeed been an important factor of segmentation, playing in some sense the role of interstate banking restrictions in the United States. Alone, however, the euro will not be enough to create a truly single European financial market.

¹² *Economic Research Europe* (1997), for instance, suggests that the observed price movements could reflect changes in the competitive environment of the lending business through the cycle, and shifts in the yield curve.

¹³ The latter observation may alternatively reflect the end of cross-product subsidization in a climate of increasing competition.

4 Should we Expect a Merger among Abn-Amro, Deutsche Bank and Crédit Agricole?

4.1 An intriguing question

The question in the title of this chapter is raised in a Goldman Sachs report;¹ it is also suggested by Table 4.1 which provides several insights. On the one hand, comparing the 1995 concentration data for EU countries with those for the United States in 1998, it appears that the individual European banking markets, with the exception of Germany, are much more concentrated than the US market. If instead the euro area (shown in Table 4.1 as 'Euroland, 1998') is considered, one notices that the concentration of the EMU-wide banking industry is much lower – in fact it is similar to what it was in the United States in 1997: the market share of the top five is 11% and 12%, respectively. During 1998, however, the picture has changed dramatically. The degree of concentration of the US banking industry is now twice that in the euro area. Indeed, to have

Table 4.1 *Market share (based on deposits) of five largest banks (%)*

<i>United States, 1998</i>	<i>EU, 1995</i>	<i>Japan, 1995</i>	<i>Euroland, 1998</i>
BankAmerica	8.1	United Kingdom 57	Tokyo-Mits. 6.0
BankOne	3.9	France 47	Sumitomo 5.0
First Union	3.8	Italy 29	Top 5 24.6
Chase Manhattan	3.3	Germany 17	Deutsche Bank 3.0
Washington Mutual	2.6	Belgium 59	Crédit Agricole 2.7
Top 5	21.7	Finland 74	BNP 2.0
(Top 5 in 1997)	12.0	Netherlands 81	ABN-AMRO 1.9
		Spain 49	Société Générale 1.8
		Sweden 86	Top 5 11.4

Sources: Goldman Sachs (1998); and Prati and Schinasi (1997)

¹ See Goldman Sachs (1998). The Goldman analysts have subsequently ('1999: Issues and Outlook', December 1, 1998) revised their list of candidates for an EMU mega-merger, replacing Crédit Agricole with Société Générale.

in Europe a bank with a market share similar to that of the largest US banks would require a merger of the sort envisaged in our title.

These data may suggest that major changes in the structure of the European banking industry are in store. Yet, one needs to be extremely careful in making predictions based on the comparison of institutional environments as different as the Europe and the United States. Could theory help us understand the forces that may drive the new concentration of the European banking industry? In Box 4.1 we outline the workhorse model of industrial concentration. The model suggests that in the new, enlarged, market-place there may be room for only a limited number of players, likely to be smaller than the sum of all players operating today in the separated markets. This, the model suggests, applies to commercial banking, and even more so to wholesale and investment banking.

Box 4.1 A little background: sunk costs and concentration

For all industries in Europe, the Single Market Programme and EMU imply a drastic increase in the size of their relevant markets. This is particularly true for commercial banking, given its nationally fragmented structure (documented in Chapter 3). The same could be said for US banks with respect to the erosion of banking restrictions and, most notably, the repeal of the prohibition of interstate branching: the market, both geographically and in product space, has increased drastically for US commercial banks in the 1980s and 1990s.

To understand the US merger wave, and what could be in store for Europe, it is helpful to examine conceptually what may happen to the equilibrium concentration level when the size of the market expands. The model which we use for this purpose is the basic workhorse used in industrial organization theory to study the relationship between the entry, or exit, decision in an industry (where mergers and bankruptcies alike are interpreted as exits), the sunk costs that a firm needs to pay in order to operate in that industry, and competition. This analysis of concentration and market size abstracts from many important features of the banking industry, but provides nonetheless a very useful benchmark (see Sutton (1991) for an introduction to the approach briefly outlined in this Box).

When a firm enters a new market it goes through a two-step process. First, it needs to pay an exogenous 'sunk cost': setting up new corporate headquarters, acquiring expertise, or expanding the branch network. Then it starts facing the competition. In this model, concentration (in equilibrium) decreases when the ratio of the market size to the sunk cost of entry increases. In other words, assume that we start from two separate markets (A and B), each with its own number of banks, n_A and n_B , respectively. When markets A and B are merged, the equilibrium number of banks changes from $n_A + n_B$ to $n_{(A+B)}$, which is in general smaller than $n_A + n_B$, but bigger than the original number of banks present in each market. That is, the concentration in the integrated market is lower than in any of the original markets, although the total number of banks is reduced.

The workhorse model therefore predicts that integration will reduce the overall number of banks operating in Euroland, but also that the concentration of the banking industry in Euroland will be lower than it was originally in the individual countries. Simple as the model is, this prediction would seem to conform quite well with the European figures shown in Table 4.1. Is this really the end of the story, however? If it were, it would mean that European banks have already reached the new equilibrium, i.e. that they have already fully adapted to EMU and to the single market. Hard to believe, given what we pointed out in Chapter 3.

Let us change, slightly, the assumptions of the workhorse model. Assume that the sunk costs a bank pays to enter a new market are not entirely exogenous: the firm has some control over the sunk cost it pays – i.e. sunk costs now become endogenous. For example, the cost of expanding the branch network or setting up a new one is not exogenous: the bank can decide how much to invest. The size of this investment will influence the bank's ability to compete, by affecting the marginal cost or the quality of its services for example. In this situation the model no longer predicts that an increase in market size necessarily results in a reduction in concentration.

Let us now move one step further. Consider a situation where entry into a new market consists of three steps: first the entry decision itself, which requires paying an exogenous fixed cost; then the

continued

continued from page 55

endogenous investment decision (for example, expenditure in cost-reducing technology, investment in acquiring information, including investment in human capital); finally competition in the new market. In this situation there are circumstances where increasing the size of the market fails to produce more entry in equilibrium. It may actually generate exit if competition at the investment stage is particularly fierce, and if the required investment expenditures are relatively large. In this case, a widening of the market can simply generate more investment expenditures by a few firms, while concentration increases. Furthermore, if market integration fosters a higher degree of rivalry – for instance as a result of the accompanying regulatory policies, which has been the case in Europe – then there is an additional reason for concentration to increase: with lower margins less firms are viable and can pay the additional investment expenditure.

While the argument clearly has its limits, it brings out two qualitative features which seem to be important to understand the evolution of banking in recent years. First, the fact that, in the presence of large fixed costs, concentration may actually increase when markets expand; and, second, the insight that the evolution of concentration depends on the nature of the fixed costs.

The situation banks face, both in Europe and in the United States, seems to correspond quite closely to the conditions outlined above. As commercial banking shifts away from traditional lending towards the provision of services to investors and firms, the type of investment expenditure changes: from bricks to communication networks, information technology and specialized human capital – and the new expenditures (Information Technology and human capital in particular) are increasing faster than the old-type expenditure (branches) are decreasing.

If this is so, then in Euroland there will room for only a limited number of players, likely to be smaller than the sum of all players in the separated markets. This applies to commercial banking, and even more so to wholesale and investment banking. For commercial banking, the argument can help explain the massive exit and the recent stark increase in concentration in the US banking industry. For investment banking it is particularly relevant with respect to the globalization of the industry, which is, of course, the ultimate increase in market size.

4.2 Banking consolidation: Europe and the United States

Table 4.2, reproduced from Berger et al. (1998a), documents the difference between the consolidation experience in Europe and in the United States. In the United States more than half of the consolidation (51.8%) in the past 12 years resulted from mergers among commercial banks, while consolidation across sectors (mergers between a bank and a securities' house, or an insurance company) has been limited (13.4% of all recorded deals). In Europe, on the contrary, consolidation across sectors has been more common: 37.7% of all mergers and acquisitions activity, as opposed to 36% for mergers among commercial banks. The large number of European cross-industry deals is not surprising. It can be directly attributed to the mutual recognition clause in the Second Banking Directive, which formally opened the door to universal banking in the EU. (We shall discuss this point in detail Chapter 5.)

Table 4.2 *Mergers and acquisitions in the financial services industry in the EU and in the United States*

(Value, US dollar bl., of mergers and acquisitions in Financial Services and (in parenthesis) % of all merger and acquisition deals in each 3 × 3 matrix: 1985–97).

(a) Domestic mergers and acquisition Deals

Acquiring Institution	Target institution					
	United States			Europe		
	Bank	Securities	Insurance	Bank	Securities	Insurance
Commercial bank	241 (51.8%)	15 (3.2%)	0.2 (0.1%)	89 (36.0%)	9 (3.6%)	20 (8.1%)
Securities' firm	6 (1.2%)	74 (15.9%)	27 (5.8%)	23 (9.3%)	19 (7.7%)	24 (9.7%)
Insurance company	0.3 (0.1%)	14 (3.0%)	88 (18.9%)	11 (4.4%)	6 (2.4%)	46 (18.6%)

(b) Cross-border merger and acquisition deals

Acquiring institution	Target institution								
	US-non US			Intra-Europe			Europe-non Europe		
	Bank	Securities	Insurance	Bank	Securities	Insurance	Bank	Securities	Insurance
Commercial bank	9.5 (13.6%)	4.4 (6.3%)	0.2 (0.3%)	15.0 (17.9%)	8.7 (10.4%)	0.4 (0.5%)	14.5 (14.5%)	4.3 (4.3%)	0.3 (0.3%)
Securities' firm	3.0 (4.3%)	14.7 (21.0%)	7.7 (11.0%)	4.3 (5.1%)	5.8 (6.9%)	1.1 (1.3%)	15.6 (15.6%)	15.9 (15.9%)	12.9 (12.9%)
Insurance company	0.6 (0.8%)	3.9 (5.6%)	25.9 (37.1%)	11.2 (13.4%)	0.3 (0.4%)	37.0 (44.2%)	1.0 (1.0%)	3.1 (3.1%)	32.7 (32.6%)

Note: The figures reported are the sum of the equity values of the target institutions.

Source: Berger et al. (1998a)

Table 4.2b shows to what extent merger and acquisition deals have been limited to domestic firms. This is certainly the case for the United States, where domestic mergers and acquisitions dominate international deals for all sectors in the industry. In Europe this is true for deals among commercial banks, but not for cross-industry deals: here the sum of intra-European and Europe – non-Europe deals dominates the value of domestic deals. This evidence is complemented by the data in Table 4.3 (see p. 62) which further documents the extent of within-country consolidation in the European commercial banking industry, but also the extent of cross-border, cross-industry activity.

Table 4.3 *Bank acquisition in Europe (US\$ billion)*

	1993	1995	1997
Domestic bank/bank	9	24	60
Cross-border bank/bank	1	8	7
Bank/non-bank	9	8	55

Source: Goldman Sachs

Additional evidence on European mergers and acquisitions activity is provided in a study of 72 large listed banking merger and acquisition deals between 1988 and 1997.² The study finds that more than 80% of all bank-to-bank deals were domestic; cross-border purely commercial bank deals has been limited to a few exceptions. Cross-border deals mostly involved a commercial or universal bank buying an investment bank.³ Recently, however, there have been a number of smaller cross-border acquisitions – sometimes partial acquisitions – of commercial banks which, because of their limited size, do not make it to the sample discussed above. Examples are the Dutch ING buying a stake in Allgemeine Deutsche Direktbank (Germany), or *Crédit Agricole* buying *Bankoia* in Spain and becoming a large shareholder of *Banca Intesa* in Italy. These transactions were explicitly aimed at extending local networks across national boundaries and although less spectacular than the big acquisitions, may constitute important steps towards the integration of banking in Europe. Equally interesting is the model of *Dexia*, an almost pan-European banking group composed of *Crédit Communal* of Belgium, *Crédit Local* of France,

² Cybo-Ottone and Murgia (1998). These authors consider all mergers and acquisitions which occurred between 1988 and 1997, worth more than US \$100 million, in which (1) the target was listed on some European stock market, and (2) the target was a European bank, or the bidder was a European bank and the target a European financial services company.

³ Such as Swiss Bank Corporation buying SG Warburg or Dresdner Bank buying Kleinwort Benson.

Berliner Hypothekenbank of Germany, Crediop of Italy and others. Dexia combines aspects of a partnership (among larger banks) and a conglomerate (with acquired smaller banks). The Dexia experience, and similar experiences in Switzerland raise the question whether full integration, i.e. a complete merger, is the only way to reap the benefits of the new economies of scale, and the extent to which softer arrangements (networking) are an alternative. We discuss this issue in Box 4.2.

Another characteristic of European bank mergers is the emergence of regional banking markets. This is particularly visible in the case of the Benelux countries (where most of the cross-border activity has so far been concentrated) but also concerns the Nordic countries, and may come to other regions as well, such as the Club-Med states.⁴ In the Benelux, cross-border mergers and acquisitions activity has been so pronounced that one now can speak of a unified Belgian-Dutch banking market.⁵

Cross-border consolidation, however, has not extended beyond these special circumstances. In particular, foreign institutions have been virtually sealed out of France and Germany. The natural question that arises is why has there been so little cross-border consolidation among European commercial banks, and whether this is desirable? We address this question in the remaining section of this chapter, and we shall return to it in Chapter 6.

Box 4.2 *Full mergers versus networking*

The discussion of bank mergers raises an intriguing question, which goes far beyond the context of banking and touches upon the foundations of organizational theory and of economics more broadly: why merge rather than cooperating through networks or, alternatively, outsourcing? There is by now a substantial body of research devoted to this problem, both theoretical and empirical and for many different industries. Few general answers, however, have emerged.⁶ In the context of commercial banking the question is even more acute if we really believe (as indicated in Chapter 1) that the future of many European banks lies in local lending, particularly to smaller firms. If

continued

⁴ A first move being BBV of Spain which became the single largest shareholder of BNL of Italy.

⁵ ING, the number 3 of the Netherlands bought BBL, number 3 in Belgium; Fortis, the large Dutch-Belgian bank-insurance group bought VSB-Bank and Mees-Pierson in the Netherlands and in Belgium CGER, the number 5 Belgian bank, and Générale de Banque, the number 1; there is talk about an alliance between the Belgian Kredietbank and Rabobank, the number 2 in the Netherlands.

⁶ For an introduction to parts of this literature see Milgrom and Roberts (1992).

continued from page 57

local lending will characterize the European bank of the future, why not stay local and just cooperate with other local partners? In particular, why cannot networks produce the desired economies of scale in Information Technology or research which are often the main goals of mergers? Or why not achieve diversification through joint portfolio investments or securitisation – a special form of outsourcing?

First, it should be noted that different types of networking already exist in some countries, and often with considerable success. For example, the Swiss cantonal banks have put in common their mutual fund operations (into Swissca) and, at least some of them, run a joint IT subsidiary (Unicable). Another model is that of Deka Bank GmbH, the asset management subsidiary of the German Savings and Loans sector. Founded in 1996, Deka Bank is 100% owned by the umbrella institution which covers the hundreds of German local savings banks, and provides them with a large spectrum of asset management services. The networking idea is not a new one. As Litan noted some time ago, networking 'appears to be the strategy of such successful institutions as BankOne of Ohio which, counter to the conventional wisdom, believes that geographic expansion by holding companies offers better prospects for commercial success than expansion by branching [at the time still forbidden]. The reason: each bank has its own officers and directors drawn from the local community, with local contacts and knowledge of the local credit markets' (Litan, 1991, p. 49). Also, recently some of the consolidation that occurred in Italy has happened through the creation of umbrella holding companies, such as in the case of Banca Intesa which controls Cariplo and Ambroveneto.

There are, however, a number of caveats which leave us suspicious about networking – except in the case of specific niche players – and suggest that this may be a second-best solution compared to straight mergers. First, networking raises difficult issues of revenue and cost sharing, which may be unstable over the long term – one version of the famous 'hold-up problem' in contract theory. An important special case of this problem arises because networking provides only partial insurance against future shocks, in the sense that the alliance may be dissolved when large, permanent shocks affect one of the partners. Furthermore, merging or combining business cultures is even harder in a looser institutional set-up with diffused responsibilities – and banking may increasingly reflect corporate culture. Finally, the high degree of flexibility and quickness which is necessary in today's financial markets may be better achieved through a more centralized organizational structure.

4.3 Mergers and diversification: why Europe is different?

Why is there such a preference for domestic mergers in Europe, which is so different from what is observed in the United States, where instead intrastate mergers are the exception? A natural hypothesis is that there is a pecking order in mergers and acquisitions. Everything else being the same – in particular controlling for the benefits of a merger – the first deal is the easiest one, and this is a deal where the partner or the target is geographically close, shares the same language, the same culture, and the same legal and regulatory framework. Merging two corporate cultures is known to be a difficult exercise; it is even more so if the two cultures span two different countries and possibly two different languages. In this sense, finance (and business) indeed is also about culture and language. Of course one would not expect culture to be an overriding factor, and one does observe cross-country, cross-language mergers, be they in banking or in other industries. To complete the explanation we thus have to turn to the benefit side of consolidations.

All but one of the benefits from consolidation identified in connection with the recent US merger wave can be obtained by merging intra-country. Leaving aside the diversification argument for the moment, one can see why the first steps in reaching for size would naturally be taken nationally, where it is easier from the point of view of culture and regulation, and where the benefits from eliminating redundancies in branch networks lead to easily identified cost reductions. Moreover, in the current context of segmented markets, national size may bring with it local market power, a welcome relief from increasing competitive pressures.

The only specific benefit of cross-border consolidation is associated with the extra-gains that arise from diversifying the macroeconomic risks associated with a bank's portfolio of loans and deposits. Cross-border consolidation allows the lending and deposit base to be spread across regions subject to imperfectly correlated macroeconomic shocks. As discussed in Section 2.3.2, diversification of macroeconomic risk has been a driving factor behind the wave of interstate mergers in the United States. But then the puzzle: why not so, or not yet so, in Europe?

The key observation for resolving this puzzle is that, maybe counter-intuitively, diversification possibilities, in Europe, are almost as good within countries as they are across countries. This is in contrast with the United States where states are more homogeneous, and diversification benefits must be searched for across state borders. Fatàs (1997) studies cross-country and cross-regional correlations of

employment growth rates in Europe from 1966 to 1992. He identifies a general increase in cross-country correlations, at the same time as the correlations among regions belonging to the same country fall. As a result of this trend, for the most recent period under study, 1979–92, the average correlation between the employment growth rates of a given region and their national counterpart is barely larger than their correlation with the EU-12 average.

The relevant data is shown in Table 4.4. For the 1979–92 period, the correlation between regional and national employment growth rates, averaged over the 38 regions, is 0.573. The correlation between the regional employment growth rates and that for the EU-12 is 0.481. The corresponding figures for the 1966–79 period were 0.727 and 0.431, respectively. Note that in the case of a country of the European periphery, Italy, the correlation with the EU-12 is significantly smaller than for other EU states, indicating, quite intuitively, more de-synchronization in employment cycles and better diversification opportunities. The same can be said, however, when the comparison standpoint is national employment growth – in fact in this case the two numbers for Italy are almost identical – 0.283 vs. 0.271. All this effectively means that diversification opportunities are not measurably better across borders than across regions of the same country. Again the situation is different in the United States. Clark (1998), for instance, reports considerable heterogeneity in the employment growth rates of US states with 41% of the cyclical innovations being attributable to the region-specific component.

Table 4.4 *Correlations of regional employment growth rates with the country average and with the EU-12 average*

<i>Regions</i>	<i>1966–92</i>		<i>1966–79</i>		<i>1979–92</i>	
	<i>Country</i>	<i>EU-12</i>	<i>Country</i>	<i>EU-12</i>	<i>Country</i>	<i>EU-12</i>
All (38 regions)	0.638	0.435	0.727	0.431	0.573	0.481
Germany (8 regions)	0.706	0.552	0.736	0.570	0.682	0.583
Italy (11 regions)	0.470	0.208	0.592	0.149	0.283	0.271
France (8 regions)	0.756	0.477	0.788	0.432	0.722	0.557
United Kingdom (11 regions)	0.669	0.546	0.809	0.609	0.639	0.563

Source: Fatàs (1997) – see this reference for details on the data and regional definitions

In other words, European countries, as opposed to US states, typically represent reasonably well diversified portfolios of regions. Accordingly, a good deal of diversification can be achieved in Europe on a national basis. Combine this with the pecking-order view of mergers and acquisitions, and you would easily understand why European banks attempt to grow within their national borders. Thus, even if European banks were growing in the attempt to diversify their portfolios, we should not necessarily expect cross-border mergers of already largely diversified institutions, such as Abn-Amro, Deutsche Bank and *Crédit Agricole*. Attempts at exploiting the economies of scale that originate from risk diversification will first drive further within-country consolidation among smaller institutions.

Three final observations. The first is that geographic diversification of the branch network might soon become an outdated concept. As already mentioned in Chapter 1, credit derivatives and on-line banking make a bank's physical base increasingly less important. Second, and going in the opposite direction, the correlations reported above are, of course, pre-EMU correlations. There has been a lot of speculation on the extent to which business cycles with Euroland will become more or less synchronized. A possible scenario is that elimination of the cushion to national shocks provided by exchange-rate adjustments will, in the future, increase the importance of the national components in cyclical variations and thus the benefits from cross-country diversification. Third, if diversification of macro-economic risk were really an important objective, one should see cross-border deals involving a bank based in the EU and one based elsewhere in the world. Spanish banks, indeed, building on their comparative advantage in language and culture, have increased their presence in Latin America, thus achieving much more diversification than would ever be possible within the borders of the EU. The extra cost in terms of additional risk is probably substantial, however.

The bottom line is that we see too little private incentives for the creation of large pan-EMU commercial banks – and too many incentives for European banks to grow domestically, at no cost in terms of diversification gains, and with likely benefits for them, but not their clients, in terms of local market power.

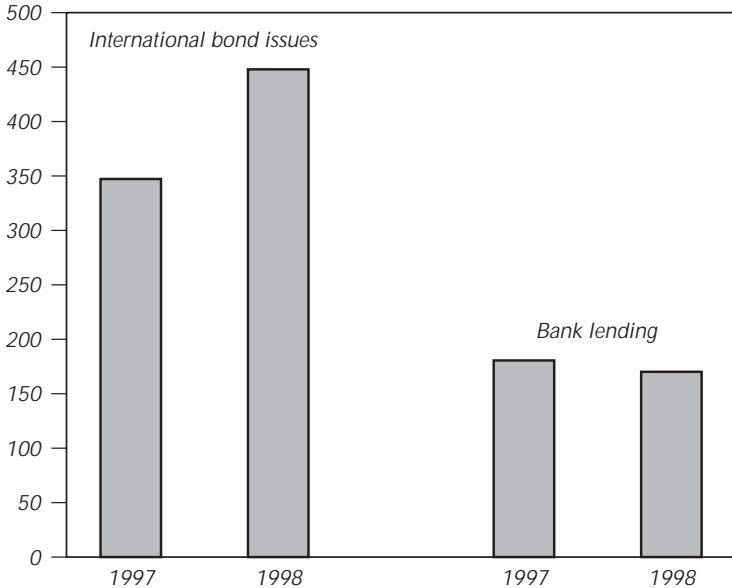
5 Asset Management and Investment Banking in EMU: Whose Turf will it be? The Contest between European Universal Banks and US Investment Banks

5.1 Asset management, corporate finance and the euro

In November 1998, Deutsche Bank announced its US \$10 billion bid for Bankers Trust, a US universal bank with an important investment banking division. The talks, which started earlier in the year, between Dresdner Bank and PaineWebber, a large US distributor of financial products to households and institutional investors, appear to be continuing. Is it a coincidence that these attempts at creating EU-based universal banks happen a few months before the start of EMU, or do they reflect a reaction to the advent of the euro? We note that these deals target asset management and investment banking, instead of commercial banking, the branch of banking with which we have been mostly concerned up to now: as such they confirm the tendency already documented in Tables 4.2 and 4.3. Is there something special, however, in the way the euro will affect asset management and investment banking which justifies the recent acceleration in the pace of cross-border, cross-industry financial deals?

Two consequences of EMU are relevant in this respect: the effects of monetary union on asset allocation and its effects on the financing of firms. Both open up opportunities for new economies of scale in banking, thus suggesting additional arguments why we may see more concentration.

By creating a less segmented and more liquid capital market, the euro will affect banks in their role of intermediaries between the production of savings by households and their use by firms. On the supply side, the single currency will facilitate the cross-border diversification of savings. It will also make European investors more alike: French and German portfolio investors will from now on be 'euro-



Note: All figures refer to the first half of each year.

Source: Capital Data Bondware

Figure 5.1 *International bonds and lending*

based investors'.¹ To keep hold of their clients, banks will have to convince them that they own the in-house experience needed to manage an internationally diversified portfolio and that they can do it better not only than their national competitors but than other euro-based institutions as well.

On the demand side, the process exhibited in Figure 5.1 will continue and intensify: firms resorting increasingly to the capital market directly, issuing bonds and commercial paper. Figure 5.1 documents the substantial increase in international debt finance which occurred between 1997 and 1998, with bank lending actually declining slightly over the period. This shift in the sources of corporate finance will accelerate as EMU creates a deeper and more liquid market. As a consequence, European firms will request from their banks ever fewer loans, and more and more investment banking services.

¹ Admittedly there will still be room to distinguish French investors subject to the French business cycle risk from German investors affected by the German business cycle risk factor. Our assertion reflects our presumption that this distinction will not be implemented in practice.

5.2 Asset management in EMU

To what extent will the euro change the behaviour of European portfolio investors? While frequently asked, there is still no clear answer to this question. The fact is that researchers and analysts do not understand why the possibilities of international diversification remain so underexploited by portfolio investors: in the empirical finance literature this is called the home-bias puzzle.² Rational investors living in the world of modern financial theory would hold portfolios much more internationally diversified than their real world counterparts. For them, currency fluctuations are only a minor factor of risk – the more negligible the longer their investment horizon, given that real exchange rates tend to fluctuate around stable long-run averages (Froot, 1993). In such a world, the advent of the single currency should be a minor event with a negligible effect on portfolio composition.

Trying to go beyond this ideal world, one can first observe that, in Europe, an increasingly important segment of the market, the one composed of institutional investors, typically faces stringent regulatory restrictions on portfolio composition. Since most of these restrictions refer to the currency denomination of their assets, they should simply vanish with the advent of the single currency.

In the EU, insurance companies, for instance, are required to hold a large fraction (80%) of their assets in the currency of denomination of their liabilities, typically the home currency.³ As Table 5.1 shows, in 1993 (the last year for which we have precise data) insurance companies were by far the most important institutional investors in

Table 5.1 *Assets of institutional investors*
(% of total assets of institutional investors, 1993)

	<i>United States</i>	<i>United Kingdom</i>	<i>Germany</i>
Pension funds	45	45	7
Insurance companies	30	46	69
Mutual funds	25	9	25

Source: International Monetary Fund (1995a)

² See, for example, Tesar and Werner (1992) for a review.

³ This so-called '80% currency-matching rule', is part of the Third EU Directive on Life Insurances. In some countries, such as France, additional restrictions apply.

Germany – with mutual funds and pension funds coming a distant second and third.

The situation has not changed much since, and it is similar on most of the continent. Given the low share of equities in the portfolios of insurance companies in continental Europe,⁴ this means that more than one half of their assets is currently held in the form of domestic government bonds. With the introduction of the euro – even assuming that their preferred mix of bonds and equity will not change – insurance companies could shift a significant portion of their portfolios into foreign bonds and still satisfy the currency-matching regulation. Will they? We believe they will. When restrictions on the holding of domestic government bonds will be lifted – so that, from the regulatory viewpoint, Italian Treasury paper will be equivalent to German Treasury paper – a well diversified euro fixed-income portfolio will include bonds from different EMU countries. This is true except in the unlikely case where bonds and bills issued by different governments were perfect substitutes (in which case there is no diversification possible). Bond spreads, however, will not disappear, as they will keep reflecting the different risk characteristics of EMU members. Free from regulatory constraints, investors will thus optimize along the risk-return trade-off, in this case by taking account of the spreads and the correlation among returns on euro-denominated government bonds issued by the various members of the EMU.

Regulation has also introduced a domestic bias in the portfolios of European pension funds (see Table 5.2). Different EU states impose a variety of restrictions on investments made by pension funds: Denmark, Finland and Germany, for instance, have an 80% currency-matching rule.⁵ A Pension Funds Directive, which is supposed to deregulate the sector, so far has not been adopted. It is safe to predict, however, that the trend towards a larger share of equity in portfolios of pension funds will continue, and that, released from currency restrictions for investments within the euro zone, they will increasingly diversify their equity holdings at the European level.⁶

⁴ International Monetary Fund (1995a and b) reports that the share of German insurance companies' assets invested in foreign securities was only 1%.

⁵ See European Commission (1997).

⁶ Admittedly, in some countries the binding constraint may be, or become, one restricting the fraction of foreign assets pension funds may have in portfolio. The prospect for regulatory development – for instance one which, like in the case of Germany, would result in a distinction between EU equities (limited to 35%) and non-EU equities (no more than 6%) – is less certain.

Table 5.2 *Foreign assets in the portfolios of pension funds (% of total assets)*

United States (1997)	10
United Kingdom	27
Germany	6
France	4
Spain	3
Italy	n.a.
Netherlands	23
Portugal	6
Belgium	37
Austria	12
Ireland	39
Sweden	11
Finland	n.a.

Source: Davis (1998).

The response of individual investors is harder to predict, precisely because the unexplained component in their asset allocations is so large. Currently individual investors hold mostly domestic assets – that is, assets issued at home and denominated in the home currency. In fact, with the exception of the residents of a few very small countries (Benelux, Austria and Ireland) the share of foreign assets in the private portfolios of European investors is smaller than for those of US private investors. This is true although the relative size of European national stock markets is much smaller than that of the US stock market – a fact which would suggest that in Europe an optimally diversified portfolio should contain a higher share of foreign assets than in the United States. Whether European investors will change their portfolio composition depends on the extent to which the home bias is a currency or a country bias. If it were mostly a currency bias, we should expect significant reallocations in the short term. This is more likely for bonds. If instead it is a country bias, as could be the case for equity holdings, the effect should be small, at least initially.

Box 5.1, drawing on a recent experience in regional US markets, provides one non-conventional perspective on the potential impact of investor sentiment on portfolio diversification. Taken to one extreme, the example of Box 5.1 suggests that very little is likely to change in post-EMU European investment behaviour. At the other extreme, the example is but a peculiarity related to a specific type of stock, which is unlikely to influence large, pan-European asset managers, such as UBS, Axa or Barclays.

Box 5.1 Investing close to home

In a recent paper, Huberman (1997) examines the stock ownership records of the seven regional Bell operating companies (RBOCs). What he discovers is that, with the exception of residents of Montana(!), Americans are more likely to invest in their local regional Bell operating company than in any other. When they do, their holdings average \$14,400. For those who venture farther from home and hold stocks of the RBOC of another region than their own, the average holding is only \$8,246. Considering that everyone's local RBOC cannot be a better investment choice than any of the other six, Huberman interprets his finding as having to do with investors' psychological need to feel comfortable with where they put their money.

If Huberman is right and investors, indeed, have a predilection for investing in familiar stocks, they are likely to leave international investment opportunities largely unexploited and hold sub-optimally diversified portfolios. It is tempting to conjecture that such a psychological attitude might be even more pronounced in the highly diverse cultural contexts of European nations. This attitude, then, could explain the lack of cross-country portfolio investments and suggest that the internationalization of European individual portfolios will be a slow process.

The same argument also means, however, that the build-up of a European identity and the increasing tendency to 'think European' rather 'French', or 'German' – a tendency that is likely to be enhanced by the advent of a shared currency – are factors that could make European investors less reluctant to hold equity stakes in companies residing in a European state different from their own.

Table 5.3 *Households' assets managed by institutional investors
(% of total household assets, 1995)*

France	27.3
Germany	28.9
Italy	9.0
Spain	24.4
United Kingdom	52.0
United States	45.0

Source: International Monetary Fund (1997); for Italy, 1994 data from Davis (1998).

One element which is likely to encourage broader diversification across European stock markets is the emergence of European-wide stock indices. It is reasonable to believe that the home equity bias is due, at least in part, to the existence of different local indices, which induces investors to 'herd to their home index', thus overweighing the home index in their implicit benchmark. Herding behaviour typically makes investors, and their financial advisors, reluctant to venture too far into territories where poor performance (i.e. under-performance relative to the home index) can be easily detected, and penalized more than good performance would be rewarded. In other words it is easier to be wrong with the herd (i.e. when the local stock market is down) than it is to stand alone against the pack.⁷ Of course, this is only a partial and sketchy explanation for the home bias. It suggests, however, that, even if one associates the lack of international diversification with some form of irrationality on the part of investors, one may conclude that the advent of the EMU could be a significant factor in portfolio reallocations.

Precise predictions are obviously impossible in this area. Yet, it is fair to say that the introduction of the single currency will lower important objective, as well as subjective, hurdles for international investment and thus has the potential to reduce the home bias markedly. Another powerful factor behind the prospect of heightened diversification will be the inevitable increase in the share of private assets under management. In many EU countries (see Table 5.3) the share of assets under institutional management is still quite small. One of the reasons may be that many individuals still hold government bonds directly. Independently of the euro, the laggards are likely to catch up with the enthusiasm for mutual fund investing.

5.3 Banks and the new challenge of asset management

Even if the size and speed of change are hard to estimate, an increased demand for portfolio diversification across European stock markets is easy to predict. This transformation will confront banks with the need to upgrade their asset management services. Skills that so far were heavily concentrated on financial analysis of domestic companies will now need to be complemented with a strong and

⁷ There is by now a large amount of literature on herding in financial markets. For an overview see, for example, Devenow and Welch (1996).

convincing experience in the other stock markets of the euro zone. At the same time, local asset managers will lose the protection of their national borders – as the increased homogeneity among euro-based investors will make it possible to offer the same products and services to all of them. These two trends signify that it will pay like never before to try exploiting the very significant economies of scale that characterize the business of asset management.

Economies of scale in asset management derive from the fact that this is a knowledge-based activity, requiring essentially two inputs: human capital and technology. The output of good financial analysis and good asset allocation models can be applied at practically zero marginal cost without limit as to the volume of assets under management. The ingredients are, however, expensive. State-of-the-art technology requires heavy investments, particularly if the firm wishes to provide custom-designed products, for instance asset management based on dynamic asset allocation models. The best financial expertise needed to develop allocation and forecasting models, to engineer the new financial products and to value corporations, is among the most expensive in any profession, in part because 'good' is not enough and every firm searches to acquire the services of the best.⁸

In principle, it is possible to amortise the fixed costs by increasing the volumes under management on a purely domestic basis. The key element being volume, it makes no difference here whether the clients are all located in a single country. This explains some of the domestic mergers which have happened so far, including those (documented in Table 4.2) involving a bank and an insurance company, and there could be more. As hinted at in Table 3.3, the volume of assets management in most European institutions remains way below that of their US competitors. In fact, these size discrepancies even exist at the level of the top national players. Table 5.4 shows the world's ten largest asset managers at the end of 1997. According to these figures,⁹ the second largest British asset manager, Prudential (UK), would not make it onto the list even if it merged with the second largest player in France, Caisse des Dépôts.

⁸ One large European universal bank has assigned a budget of the order of US \$120 million to its Emerging Markets Research Group.

⁹ The ranking shown in Table 5.4 is an estimate by UBS. Other institutions show slightly different rankings.

Table 5.4 *The largest global asset managers*
(assets under management as of 31 Dec. 1997, US\$ billion)

UBS	1033
Kampo	799
Fidelity	640
Credit Suisse – Winterthur	600
Axa	531
Barclays	508
Merrill/MAM	446
Prudential (US)	370
Morgan Stanley-Dean Witter	356
Zürich ¹	342

¹ including Scudder, Kemper and Threadneedle Asset Management

Source: United Bank of Switzerland

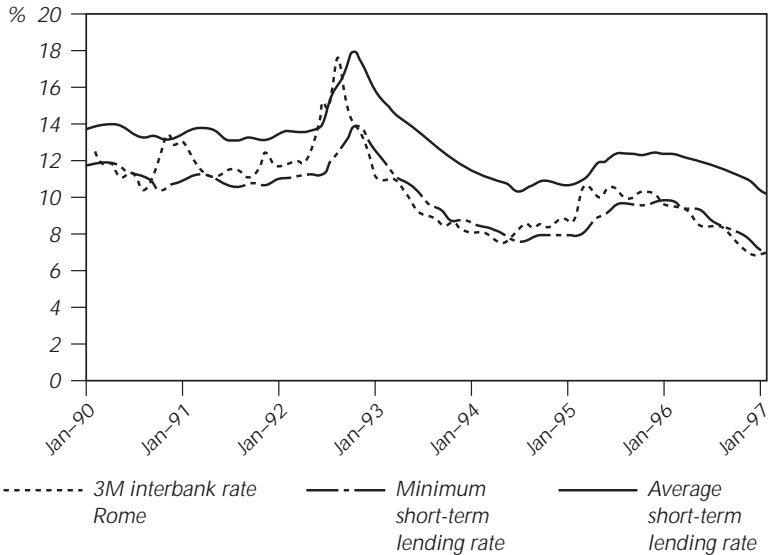
The acquisition of skills, however, is typically done across borders. This is partly due to the fact that building human capital in-house is costly and risky, and that firms often prefer buying an existing team with a known track record. Partly, on the other hand, it is due to precisely the segmentation of the market described earlier, which has encouraged domestic institutions to invest disproportionately in local know-how: French banks have built an expertise in the French market, German in the German market, etc. It would thus be natural for a French institution trying to build up expertise in German companies – in order to meet the changing demand it faces – to do so by associating in one way or another with a German partner. Since assets under management and (at least) local expertise naturally go hand-in-hand, cross-border acquisitions have the extra benefit that the volume of assets under management can be increased while simultaneously acquiring valuable expertise in financial analysis.

If, however, the skills in traditional financial analysis are probably relatively homogeneous across European markets, those more narrowly associated with the asset management process are not so equally distributed. A small group of Anglo-Saxon institutions indeed appear to be one step ahead of their continental counterparts. Hence the predilection of continental institutions to turn towards the United States and the United Kingdom, as in the case of the Deutsche Bank-Bankers Trust deal. Here, too, we can expect further

concentration across national boundaries, the only limit being the number of potential targets which is significantly smaller than the number of would-be-acquirers.

5.4 The new euro corporate bond market

In an integrated and liquid euro capital market, how fast will firms shift their borrowing from bank loans to corporate bonds and commercial paper? Two factors appear to be relevant. Increased competition will reduce the ability of banks to cross-subsidise some of their clients, big firms in particular. Currently, in some countries, banks lend to some firms at interest rates which do not reflect the (low) liquidity of the loan and its risk. They do so in the attempt to prevent them from substituting loans with other (market) instruments, and they recover the cost by 'squeezing' their smaller clients. There is some evidence of this in Figure 5.2 which shows that the lending rate of Italian banks to their best clients coincides, on average, with the interbank rate.



Source: Banca d'Italia

Figure 5.2 Italy: interbank rate, average lending rate and lending rate to the best borrowers

Corporate bonds, however, will only spread if a market is created in which they can be traded. So far a corporate bond market exists in France, but the bonds traded there are mostly those issued by state-owned utilities.¹⁰ Other markets exist in Switzerland and in the United Kingdom, but these will presumably keep trading local-currency bonds. Since the incentive of firms to move out of loans into bonds depends on the liquidity of the market, little will happen until a new euro-denominated market for corporate bonds is created. Who has the incentive to invest in setting up such a market, given that banks may be reluctant to do so, and risk losing some of their best corporate clients?

A strong incentive may come from the pressure of the banks' shareholders. Commercial loans are a poor tool to enhance shareholder value:¹¹ they tie up a lot of capital and their price sometimes (and partly for the reasons indicated above) does not reflect the risk the bank is taking.¹² Securitization of existing loans and a reduction in the volume of new loans is one way to enhance a bank's return-on-equity – as the rankings in Table 1.1 have shown. Some important players will thus have the incentive to invest in keeping the new euro-bond market deep and liquid – and those who move fast benefit from first mover's advantage. Others will be forced to follow their clients, once a market is firmly established. As firms substitute out of loans, the banks will have to adapt the services they offer accordingly. Basing their estimate on the growth of the original-issue junk bond and commercial paper markets in the United States from the early 1980s to 1996, McCauley and White (1997) compute that one-third of European banks' corporate loans are placed at risk by the potential development of corporate securities markets.

5.5 Who will serve the new European corporate clients?

The development of a new corporate bond market will confront banks with the need to foster new skills. These include, but are not limited to, the ability to assess and prepare firms for a securities issue (including drafting the prospectus, training management to meet

¹⁰ France accounts for 40% of the total EU-11 corporate bond market. Germany and the Netherlands make up almost all that is left with 20% and 10% each.

¹¹ See Gemini Consulting and EFMA (1993) for evidence on the lack of profitability of corporate lending in Europe.

¹² As remarked by a banker quoted in the *Financial Times* (15 July 1998) 'the loans just sit on our books and do nothing'.

investors, etc.) and the capacity to market financial instruments, once they are issued (including the building of a reputation in industry analysis). Will this market be captured by the specialized investment banks, or by universal banks?

Several aspects of these activities suggest that there are economies of scope between commercial and investment banking. First, commercial banks often have long-term relationships with their corporate clients. Through their core banking activities, such as loan monitoring, transaction services, etc., commercial banks obtain valuable information about their clients. A commercial bank is thus in a privileged position to understand whether a firm needs new funds, what funding is best suited to the firm's planned operations, and how the firm can back this funding (see, for example, Rajan, 1992b). A second area where economies of scope may be significant is retail distribution: through its branch network a commercial bank can have a comparative advantage in tapping the retail market to distribute the issues it underwrites. Third, there may be diversification benefits from pooling lending and underwriting activities.¹³

Regarding distribution, there is some evidence of economies of scope between corporate finance activities and distribution in the recent experience of the investment banking industry. Those investment banks which were strong in distribution, but weak in corporate finance, and thus had limited relations with corporate clients (Cazenove, BZW, NatWest, James Capel) have gradually disappeared from the market. The survivors are either 'pure corporate advisors' (such as Rothschilds and Wasserstein Perella) or fully integrated houses (such as Goldman Sachs and Morgan Stanley).

If corporate relations and distribution are important, commercial banks should be in a privileged position to enter the investment banking industry, thus transforming themselves into universal banks. The experience of some large commercial banks which have attempted this road, however, has up to now been mixed at best.¹⁴ There are a number of reasons for this lack of success. Organizational diseconomies – the difficulty of overseeing and coordinating different activities in large hierarchies (see, for exam-

¹³ White (1986) makes this point with reference to the US experience of universal banking between World War I and the Banking Act of 1933.

¹⁴ For a review of the recent German experience with universal banking see Lang and Welzel (1998) quoted in Berger et al. (1998a).

ples, Cerasi and Daltung, 1996); informational diseconomies – the market's distrust in, and therefore discounting of, securities issued by banks with potential inside information (see Rajan, 1992b). Moreover, in distribution, the relevant segment of the market are institutional investors, an area where owning a large retail network need not be very useful. More importantly, perhaps, the prevailing attitude in financial markets seems to be that the 'deal-making, superstar-oriented' investment banking business and the 'stodgy, relationship-based' commercial banking business are two alien 'cultures'. Finally, regulation induced by the attempt to stop commercial banks from taking up too much off-balance sheet risks could, make it impossible to take advantage of the economies of scope between commercial and investment banking (see Box 5.2).

If these factors will turn out to be more important than the more technical economies of scope described above, the separation of investment and commercial banking may be the future of global banking. The top Wall Street firms will remain independent and continue to dominate the investment banking industry, including in Europe where specialized global investment banks virtually do not exist.

One should not discount, however, the extent to which EMU will modify the incentives of European commercial banks. Those commercial banks which do not make it in the corporate finance business will lose the best customers on the firms' side; those which do not make it in asset management will lose the best customers on the households' side. Looking at the past experience with attempts to build universal banks misses the point precisely because it fails to recognize that incentives will rapidly change. If, in a segmented market, a commercial bank could afford an investment banking or an asset management flop, the same mistake could be fatal in the new euro market.

The historical experience of the United States in the 1920s is also relevant. There, commercial banks entered the securities business, either directly or through so-called 'affiliates', in massive numbers during the economic and financial boom of the 1920s (see Table 5.5). As Kroszner and Rajan (1994) have carefully documented, their performance was at least as good as that of specialized investment banks.¹⁵

¹⁵ In the same vein, a recent study by Vander Vennet (1998), using data from 2,375 banks of 17 European countries, finds that universal banks tend to be more cost efficient and profitable than specialized banks.

Table 5.5 *Number of national banks, state banks, and affiliates of national and state banks engaged in the securities business, 1922–33*

Year	Total	National banks		State banks	
		Directly engaged in securities business	Operating through affiliates	Directly engaged in securities business	Operating through affiliates
1922	277	62	10	197	8
1923	314	78	17	210	9
1924	372	97	26	236	13
1925	413	112	33	254	14
1926	464	128	45	274	17
1927	493	121	60	290	22
1928	561	150	69	310	32
1929	591	151	84	308	48
1930	566	126	105	260	75
1931	525	123	114	230	58
1932	475	109	104	209	53
1933	379	102	76	169	32

Source: Peach (1941) as reproduced in Kroszner and Rajan (1994).

5.6 How many universal banks?

The problem a commercial bank faces when it tries to build up investment banking skills are similar to those it faces in asset management – there are significant economies of scale. In an integrated capital market, asset allocation will be industry-wide and cross (European) borders. When a firm comes to the market, institutional investors will compare it with similar firms across Europe. Analysts will thus be required to produce industry-wide, cross-border research – which means following a very large number of European companies. There are also scale economies in the distribution of financial products to institutional investors. This is an activity which relies on the reputation built through on-going relationships ‘you sold me a good company last week: I am thus prepared to buy the one you are proposing this week’. Only very big institutions will be able to afford research departments and distribution teams

capable of doing this – as mentioned above, ‘good’ is not enough in these activities.

These scale economies suggest that in the investment banking industry only a handful of global players can survive. This is also because buying a team with a track record is a less risky strategy than building a new one in-house – and the number of available teams is limited. By pure arithmetic, consolidation of commercial and investment banks into Europe-wide or even global universal banks is limited in scope. There is a small number of independent investment banks left in the market, and therefore not all larger commercial banks can acquire their investment house. In a few years all but one of the traditional London investment banking houses have been acquired, often (as in the case of Morgan Grenfell and Kleinworth Benson) by commercial banks. The same has happened in the United States; one example is the concentration in the same group, Citigroup, of Citibank, Salomon Brothers and Smith Barney.

Few European banks will make it to the status of universal bank – Deutsche Bank and Dresdner are the only ones which appear to have made a start. Those who do make it will try to exploit the economies of scale across EMU fighting the battle with US universal banks and specialized investment banks. The jury is out. European universal banks will be boosted by the advantage of incumbency in most of the areas they will be active in. The difficulty of integrating investment and commercial banking cultures is the strongest point in favour of US specialized institutions – and the biggest challenge for the new European universal banks.¹⁶ Regulation induced by the attempt to stop commercial banks from taking up too much off-balance sheet risks could, however, slow down, or even stop, the emergence of European universal banks. The initial conditions do not appear to be particularly favourable to European banks: in 1998 US investment banks topped the European mergers and acquisitions market. One US bank alone (Morgan Stanley Dean Witter) achieved a market share as high as 33%.¹⁷

¹⁶ One is reminded at this point of the argument made by Allen and Gale (1994) that financial systems dominated by German-style universal banks may be ill-suited at financing innovation, compared to US-style specialized investment banks.

¹⁷ Source: *International Financing Review*, January 1999.

Box 5.2 *Outlawing universal banks?*

This chapter suggests that euro-enhanced economies of scope between investment and commercial banking constitute a significant advantage for universal banks which may thus become the dominant form of organization in the future. Regulation could, however, prevent such an evolution. Regulatory restrictions to universal banking could be motivated on two grounds. The first originates in the traditional view that undesirable conflicts of interests occur in universal banks, especially between the business of advising portfolio investors and the business of lending to firms, either directly or via placing their securities. These considerations were at the origin of the US legislation forcing the separation between commercial and investment banking in 1933.¹⁸ This motivation for regulating universal banks appears on the wane – it is disappearing in the United States, and is unlikely to be strong in Europe.

As a matter of fact, the argument could be plainly wrong. In a careful study of securities issues in the United States between 1921 and 1929, Kroszner and Rajan (1994) compare the performance of securities underwritten by commercial banks, or their affiliates, with those underwritten by 'pure' investment banks, and investigate whether there are any 'lemons' underwritten by universal banking. Not only do they find that the commercial banks underwritten securities performed better, on average, than comparable issues underwritten by specialized investment banks', but they also show that the market and the rating agencies imposed a 'lemons' discount on those securities underwritten by commercial banks which were likely to be more information-sensitive. This discount, in turn, made commercial banks shy away from information-sensitive

continued

¹⁸ A classic example of this type of argument is the following statement by Senator R. Bulkley in a congressional debate in 1932: 'The banker ought to be regarded as the financial confidant and mentor of his depositors. ... Obviously, the banker who has nothing to sell to his depositors is much better qualified to advise disinterestedly and to regard diligently the safety of depositors than the banker who uses the list of depositors in his savings department to distribute circulars concerning the advantages of this, that or the other investment'. (Cited in Kroszner and Rajan (1994), p. 815.)

continued from page 79

securities, and focus on underwriting rather senior securities, those of better known and larger firms. If the US experience of the 1920s is of any guidance to policy-makers today, Kroszner and Rajan's (1994) work suggests that the market has no difficulty in dealing with the in-house conflicts of interest of universal banks.

The events of the summer 1998, when some sizeable universal banks suffered heavy losses from their investment banking operations – for the new UBS the bill of the LTCM affair is approaching CHF 1 billion, but many competitors also suffered impressive losses in Russia, Asia and Latin America – could provide another motivation for regulatory measures concerning, and possibly splitting up, universal banks.

Here the argument would be that risk-taking by universal banks is different from that by a 'pure' investment bank, essentially because universal banks are active players in the payment system and can thus generate systemic risk. Again, the available evidence from the US universal banking experience of the 1920s suggests that this argument could be flawed. In his study of investment activities of national banks during the 1920s, White (1986) finds that those national banks which were engaged in securities operations did not have higher earnings volatilities, or higher default probabilities than banks without such operations. White (1986) concludes that the combination of the two banking activities probably had a risk-diversification effect which stabilized banking operations.

In practice, of course, universal banks set high standards for banking regulation, as already pointed out in Section 1.6. A prominent banking official in the US has put the concerns quite succinctly: 'In principle, putting more lines together diversifies risk, but in practice it also exposes each line of business to the indirect effects on capital and confidence resulting from losses elsewhere in the overall firm ... [T]his underlines the need for knowledgeable prudential supervision of the various financial business lines, and of the overall firm and its capital' (Bennett, 1996).¹⁹

¹⁹ The collection of essays edited by Saunders and Walter (1996), from which the cited article is taken, provides a rich, and on balance positive perspective on universal banking, stressing, however, the special needs for regulation.

With its Directives of the early 1990s, the European Commission is clearly in the tradition of Bennett's (1996) favourable recommendation concerning universal banking. The regulatory warning signs are there, however.²⁰ If the risk-aggregation problem turns out to be a legitimate concern in the European context, future regulation may take the form of investment restrictions for institutions with borrowing facilities at a central bank. Depending on the form they take, and on the severity of the imposed limitations, such restrictions might make it desirable once again to separate institutionally the traditional deposit and lending side of banking from the off-balance sheet operations, which effectively would mean outlawing universal banks.

²⁰ In addition to the concerns mentioned above, Boot and Schmeits (1998) argue that conglomerates hurt market discipline because only more aggregated information is being released.

6 Competition Policy: European Peers or National Champions?

6.1 On the source of shareholder value

One message of the two previous chapters is that we can expect the consolidation of the European banking industry to continue, if not to accelerate, but also that the incentives to expand domestically are for many reasons stronger than the urge to expand across national borders. This is true in particular because, in Europe, the diversification motive for expanding does not automatically invalidate the pecking order of mergers and acquisitions – productive risk pooling can be done to some extent within regions of a same country. One should add that when going abroad, the temptation may also be to reach farther than EU boundaries, either because extra diversification can thus be obtained (as when a Spanish bank acquires a Brazilian institution) or because the desired know-how is largely concentrated in the Anglo-Saxon world.

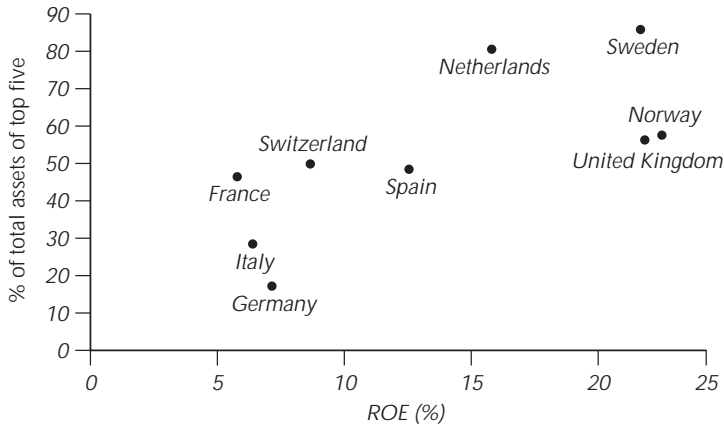
The consequence of the above is that we face the likely emergence of large domestic banks as current players grope to reach the 'minimum' size by domestic mergers and acquisitions and/or via the acquisition of an Anglo-Saxon securities house or investment bank. Should this be a cause for concern?

The answer from the limited empirical evidence available, would appear to be negative. Cybo-Ottone and Murgia (1998) have studied the stock market valuation of mergers and acquisition using a sample of 54 large European deals (including the Swiss market) that have occurred over the past ten years. They find significant positive abnormal returns¹ associated with the announcement of domestic bank to bank deals and by product diversification of banks into insurance.² This finding is surprising because it is at odds with what has been (amply) documented for the United States. There, all

recent studies show that, on average, interstate bank mergers tend to improve efficiency and shareholder value, while intrastate mergers do not, except for the case of an efficient bank taking over and restructuring an inefficient one.³

The findings for European bank mergers are consistent with the observation (discussed in Section 4.3) that, while macroeconomic diversification in the United States is mostly across-states, much of the diversification gains in Europe accrue already inside countries. Since diversification gains are a crucial component of economies of scale in banking, the benefit of merging across state boundaries should indeed be weaker in Europe than in the United States. The European findings also accord with the 'pecking order in mergers and acquisitions': cultural, language, legal and, especially, regulatory and tax barriers impose higher costs on international mergers than on domestic ones in Europe as compared to interstate mergers in the United States. Finally, the observed gains from in-country mergers are consistent with the overbanking view of Europe – as mergers between firms serving overlapping or identical markets increase efficiency by eliminating duplicated activities.⁴

- ¹ Shareholder value is measured in these studies by the sum of the cumulative abnormal stock returns of the acquirer and the target around the time of the announcement of the deal – the standard approach in empirical corporate finance, see for example, Jensen and Ruback (1983). There is need for additional empirical work on this issue (along the lines of the study we quote) which goes beyond collecting market sentiments, as the following two statements about the Merita-Nordbanken merger show: 'it was actually greeted with shareholder enthusiasm' (Goldman Sachs, 1998); 'the dismal share-price performance of Nordbanken and ING following the announcements of their mergers' (Morgan Stanley Dean Witter, 1997).
- ² Vander Vennet (1996, 1997) uses a larger sample of merger and acquisition deals, which also includes very small deals, over the same period. He finds some improvement in profitability in domestic mergers among equally sized entities, and some efficiency improvements in cross-border acquisitions. Cross-product deals are not included in this sample. A more recent study (Vander Vennet, 1998) finds that domestic majority participations and acquisitions are primarily motivated by market power and growth considerations, but rarely produce the expected benefits – both in the case of universal banks acquiring smaller institutions, and of shareholdings in which the individual banks remain independent. Domestic mergers between equally sized banks, on the other hand, appear to produce efficiency improvements.
- ³ See, in particular, Carow and Heron (1998), Rhoades (1998), and Hughes et al. (1998).
- ⁴ In the banking context, this argument can be found, for example, in Rhoades (1993).



Source: Morgan Stanley Dean Witter Research (1997).

Figure 6.1 *European banking industry: profitability and degree of concentration, 1996*

While all these observations make sense there remains an additional, less pleasing, hypothesis which is that domestic mergers are favourable simply because they confer more market power than cross-border ones. Since greater market power typically translates into higher profits, these transactions tend to increase shareholder value even if they fail to improve efficiency.⁵ Is this what we see in Figure 6.1 (taken from Morgan Stanley Dean Witter, 1997), which shows, in 1996, an impressive correlation between profitability and concentration in the banking sector for a sample of European countries? It is, at the minimum, a source of concern and a challenge for competition authorities. At least in the Netherlands and Sweden, national regulators may have given in too easily to demands for domestic consolidation.

To be sure, evidence of a positive correlation between profitability and in-market mergers is consistent both with the hypothesis that in-market mergers are driven by the quest for market power and

⁵ See Eckbo (1983). Recent empirical work showing the importance of local market power for pricing includes Berger and Hannan (1989) and Peterson and Rajan (1995) for the United States; Sapienza (1997) for Italy; and Harhoff and Körting (1998) for Germany.

with the alternative that they simply improve efficiency.⁶ If larger firms are more efficient, as claimed by Demsetz (1974), when the market concentrates, profits will rise. A concentrated market may be correlated with high profitability because it is dominated by large efficient firms, while some more inefficient firms still survive and allow the more efficient ones to earn rents.⁷ All in all however, the market power concern looms large in those domestic mergers which cannot prove efficiency gains.

6.2 European banks and the monetary policy transmission mechanism in EMU

There is another dimension along which the question of cross-border versus in-country consolidation is relevant: the degree of segmentation of European banking markets. As we shall see, this could be an important factor in determining the ability of the new European central bank to run a single monetary policy.

The single market will soon be a reality for large corporations. Freed from all restraints associated with currency denominations and risks, the managers of large firms will 'think European' satisfying their financing needs by borrowing from centralized European markets with the help of pan-European universal banks. The situation, however, will be different for smaller firms and consumers. As we have outlined in Chapter 1, local presence is a key characteristic of commercial banking, which makes it likely that, even in the presence of increased international competition, much of the business conducted with small to medium-size firms and consumers will be done by local institutions. These local banks will keep doing commercial banking their own way. In that sense, the current segmentation will remain a fact of life for a sizeable portion of the banking public. Should this be a cause for concern?

⁶ Farrell and Shapiro (1990) provide conditions under which mergers increase welfare, essentially because production of inefficient firms is reduced at the expense of more efficient ones. See Neven and von Ungern-Sternberg (1998) for a detailed discussion of this argument in the context of the recent merger between Union Bank of Switzerland and Swiss Bank Corporation.

⁷ To ascertain which hypothesis best explains the data a test should be performed along the lines suggested in Salinger (1990). In banking, early tests were performed by Smirlock (1985) concluding that the efficiency hypothesis holds in the United States. See Berger et al. (1998a) for further references.

The answer is yes when it comes to a matter at the heart of EMU – the monetary transmission mechanism. Even if one were to overlook the possibility that EMU members could be hit by idiosyncratic shocks, the question remains open as to whether the appropriate response to a *common* shock should be the same change in interest rates. The answer depends on the way in which a single monetary policy – a common change in the interest rate controlled by the ECB – will be transmitted to the economies of the member countries. Differences in the transmission mechanism will affect the timing and the magnitude of the impact on prices and output of the common interest rate change. Such differences could be a source of conflict among member states who may have different appreciations as to the appropriate stance of the policy to be followed by the ECB. Asymmetries in the transmission mechanism of monetary policy are thus at the core of the proper functioning of EMU (see Dornbusch et al., 1998).

One reason why transmission mechanisms differ across EMU states is the heterogeneous structure of the European financial industry, including the varying importance of banks and markets in the flow of savings from households to firms. As emphasized by Giovannetti and Marimon (1998) with the help of a general equilibrium model, differences in financial structures and in the roles played by financial intermediaries and markets give rise to differences in the speed and magnitude of a monetary impulse to economic activity. Segmentation of financial markets has so far prevented the disappearance of this heterogeneity.

As documented in Favero et al. (1999), in Europe the balance sheets of commercial banks play a central role in the transmission of monetary policy impulses to the economy – in other words the ‘credit channel’ is important in Europe. As, however, the structure of banking markets differs across Europe, and lending practices are also different from one country to another, the credit channel operates asymmetrically.

Of course, cross-country differences in the process of financial intermediation may be the result of varying preferences and traditions. Consequently, a consolidated, cross-border, financial institution may wish to continue offering different products in different markets, say a variable-rate mortgage in the United Kingdom and Spain, and a fixed-rate mortgage in Germany. Similarly, the respective roles of markets and intermediaries may be history-dependent in a way that will not allow for fast changes.

Nevertheless, the creation of cross-border suppliers of financial services, at a time when European consumers and firms are likely to become more similar, would plausibly result in a homogenization of

financial practices across EMU. One would expect, for instance, that the ability of medium-size Italian firms to make use of the opportunities offered by the emerging euro-wide financial markets would be improved if Deutsche Bank were to take over Banca Commerciale Italiana and the clients of Banca Commerciale could benefit from the universal banking experience of Deutsche Bank-Bankers Trust, as compared with the alternative of a domestic merger.

6.3 Discouraging national chauvinism

Both perspectives – increased market concentration and the transmission mechanism – suggest a similar conclusion: cross-border consolidation should be preferred to domestic consolidations. Cross-border mergers exploit economies of scale without posing any threat to competition. Mergers between banks with different financial expertise also facilitate the transmission of best practices across national boundaries, thus helping the convergence to a single model of different systems of financial intermediation.

Cross-border mergers among commercial banks, however, run against a deeply ingrained and widespread desire to foster national champions.⁸ More often than not, in some countries more than in others cross-border mergers (and most of all foreign acquisitions) are frowned upon, discouraged, or even prevented. What often appears as a question of national pride is in our view a misplaced attitude and it should be fought against by politicians and authorities. The public, and in particular small and medium-size firms, will be better served by a multinational bank, sufficiently large to be an efficient producer but with limited local market power, than by a national champion of similar size in an oligopolistic position on its local markets.

Crédit Lyonnais is a good illustration of the failure and high cost of a national champion policy. Since the beginning of the 1990s, the bank's problems have been followed by a chain of supervisory mistakes, political interference and lack of transparency, together with several ineffective rescue plans. Crédit Lyonnais was too big to fail. It ended up amassing up to about US \$17 billion in bad loans. Despite

⁸ Under the maintained hypothesis that the quest for size will inevitably result in more consolidation.

the efforts of the European Commission, it is likely that the French government will succeed in keeping the bank in French hands, avoiding a cross-border merger.

The chauvinistic support for national champions often hides itself behind the fear that local consumers and firms may be neglected by large institutions whose headquarters are located far away. Only domestic banks, preferably small and with a strong local presence, could, in this view, understand and service local clients appropriately. It is a documented fact, indeed, that commercial banks are the single most important source of credit to small firms (Cole et al., 1996).

This view was supported by an initial study on the transformation of the US banking industry which found that bank credit to small businesses had contracted substantially in the process (Berger et al., 1995). A more recent and focused study, however, using the same data (Berger et al., 1998b) comes to a different conclusion. While the direct effect of consolidation may well be that a larger, merged, entity tends to reduce small-business lending, over time this direct effect is offset by the reaction of other banks and, in some cases, by the subsequent response of the same consolidating institutions. In the end, the new study finds it unlikely that, in the US context where local competitive conditions have been preserved, the total supply of small business credit will be significantly affected by the consolidation of the banking industry. We expand on this point in Box 6.1.

Box 6.1 *Bank consolidation and small business lending*

Berger et al. (1995) document the patterns of bank lending to borrowers of different size, coming to the conclusion, confirmed by later studies, that large banks tend to lend to medium and large business borrowers, while small banks tend to specialize in lending to small businesses. This evidence would seem to support the fear that the ongoing consolidation process in the United States and in Europe will be detrimental to small businesses.

Specifically, Berger, Kashyap and Scalise (BKS) analyse a sample of over 1.6 million individual loans to domestic businesses by US banks over time. One of their key findings is that, during the first half of the

1990s, i.e. at a time of significant consolidation in the US banking sector, loans to borrowers with bank credit below US \$1 million contracted by an estimated 34.8%. BKS note that some of the reductions in credit may represent improvements in economic efficiency – i.e. the elimination of some negative net-present-value loans that were extended in a context where barriers to entry in local markets had weakened market discipline in both corporate control and in the product markets. They do not rule out, however, the possibility that some positive net-present-value loans were also cut, thus fuelling the fear of a consolidation process harmful to small businesses.

Revisiting the same issue three years later, Berger, Saunders, Scalise and Udell (BSSU) (Berger et al., 1998b) reassert the first observation that 'banks with less than \$100 million in assets devoted almost 9% of their portfolios to small business lending (i.e. loans to business borrowers with bank credit less than \$1 million) ... whereas banks with over \$10 billion in assets invested less than 2% of their assets in these loans'. Thus, 'on the surface this finding would seem to suggest that as banks assets are shifted from smaller to larger institutions through M&A's, the overall supply of credit to small businesses may fall substantially. As an extreme upper bound, if the industry were to become consolidated so that all banks were larger than \$10 billion and if the propensities to lend to small business were to remain constant, small business lending would fall by more than half'.

Yet, this is only one side of the issue, what BSSU call the static effect of a merger. In practice, a merger induces second-round effects. The new, merged, institution is likely to change focus and lending behaviour. In addition, competing banks and loan providers will react to the merger itself and to the altered behaviour of the consolidated institution. Going back to the data analysed by BKS, BSSU discover that the post-merger reactions of competitors (predominantly) and of the merged institutions themselves (in a minor way) almost entirely offset the initial negative impact of a merger on small business lending. Thus, while they estimate that the static effect of the studied bank mergers was to reduce lending to small businesses by US \$25.8 million, or 16% of total small business loans, they find that the post-merger effects, in particular the reactions of competitors, more than offset the static effect, leading, three years into the merger, to an actual increase in small business lending of US \$28.9 billion.

All in all, we conclude that the answer to the question posed in the title of this chapter is unambiguous: national consolidations should be discouraged, and regulatory and political barriers to cross-border mergers should be dismantled. Cross-border mergers permit the emergence of efficient producers without prejudice for competitive conditions, and they help homogenize banking practices. In so doing such consolidations promote the desired convergence of the mechanisms by which a single monetary policy will be transmitted to the real side of European economies. It is time to favour the emergence of European competitors rather than national champions

In this endeavour, the main players will be the national competition authorities. If domestic consolidation of the banking industry beyond a certain degree of concentration is made impossible by local competition authorities or by the European Commission – erring on the side of caution in case of doubt – national banks will be forced, and will progressively learn, to go against their natural tendencies and consolidate internationally if they need to. The intended economies of scale gains will be achieved without distorting the competitiveness of local markets – as the US experience documented in Table 2.1 shows. In reaching their decisions, competition authorities should consider the positive externality for European monetary authorities. At the same time, the role of European competition policy will remain important, in particular in checking that state aids do not derail the necessary restructuring of inefficient banks which qualify as national champions.

7 Should Supervision and Regulation be Centralized?

7.1 One money, one central bank, 11 independent supervisors

When the European Central Bank begins its operations in 1999, EMU will have a single currency and a single monetary authority, but 11 different national agencies regulating the banking system. Responsibility for supervision and prudential regulation is a grey area in the Maastricht Treaty. Article 105 says that the European System of Central Banks is responsible for the 'smooth functioning of the payment systems' but limits its responsibility in prudential supervision to contributing 'to the smooth conduct of the policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system'. Similarly, Article 25 of the ESCB statutes states that 'the ECB may offer advice and be consulted by the Council, the Commission and the competent authorities of the member states on the scope and implementation of Community legislation relating to the prudential supervision of credit institutions and to the stability of the financial system'.

Bank supervision inside EMU will remain decentralized. National authorities will retain their responsibilities in the area of supervision and it will be up to them to decide what information to provide to the ECB. As noted by the International Monetary Fund (1998), 'the current agreement about sharing information between the ECB and the national supervisors - which can be summarized by the formula "no real obligation, no real obstacle, and some understanding" - would probably not give the ECB the same authority as the Bundesbank in brokering a solution to a banking crisis at the EMU level.' The 1997 EMI Annual Report noted that 'although the ESCB should not need supervisory information for the purpose of its monetary and exchange policy operations as a rule, banking supervisors *will be prepared to consider requests* from the

ESCB in this area.[...] Should a banking crisis arise, in view of the possible systemic implications, banking supervisors *will be prepared to inform* the ESCB on a case by case basis' (p. 62, our italics).

The European Central Bank is thus essentially cut out from any systematic role in supervision and regulation. All responsibilities remain at the national level, as was the case before EMU. This is in a context where national arrangements differ: in some states (Germany, Belgium, Denmark, Sweden, France and recently also in the United Kingdom), responsibility for regulation and supervision rests with independent agencies (often in close cooperation with the central bank, such as in Germany, Finland and France); elsewhere (such as in Austria) with the Finance Ministry; most often (in seven states out of 15) the responsibility is exclusively in the hands of the national central bank.¹

7.2 EMU: the challenge of supervision

Inside EMU² a country is responsible for supervising the activities of its own banks, wherever they operate, that is also across borders; the host country is instead responsible for the stability of its own financial and payments system, that is independently of the nationality of the institution which may be in distress. Among the member states of the EU, Memoranda of Understanding have been signed, after the implementation of the home country principle (Second Banking Directive), concerning the exchange of information and the organizational aspects of cooperation among national supervisory authorities. Inside the EU, a Banking Supervisory Committee has been created within the ESCB to discuss common supervisory issues, and another one exists within the services of the European Commission.

The question is whether these arrangements will be sufficient to face the challenge of regulation and supervision inside EMU. The problems European supervisors will be confronted with are the direct consequence of the future characteristics of banking in EMU: larger and possibly cross-border banks, and banks increasingly involved in the capital markets. Consolidation will lead to the emergence of a number of heavy-weight pan-European universal banks for whom the "Too Big To Fail" motto will have to be taken for granted. These mammoths will give rise to unprecedented monitoring requirements, monitoring that

¹ See Barth, Nolle, and Rice (1997), Tables 4 and 11, for detailed descriptions of national supervisory practices.

² More precisely this is true across the entire European Economic Area.

will typically span several countries. Finally, these different developments will occur in a climate of increasingly fierce competition which, beyond the benefits it confers, is also associated with increasingly financial fragility (see Chapter 1). Are European supervisors prepared both technically and institutionally to tackle these new challenges?

Before addressing the issue of banking supervision inside EMU, we note that the design of the European Central Bank adds two dimensions to the fragility of the euro financial system, thus making banking supervision even more important.

The first is directly linked with the fundamental role of a currency as a medium of exchange. The full benefits of the euro will only be realized if payment systems are efficiently integrated across the euro area. The ECB has built a new system for settling euro payments: it bears the attractive name of TARGET, for Trans-European Automated Real-Time Gross settlement Express Transfers. TARGET is a real-time gross settlement for processing cross-border payments. The system was designed to shelter the ESCB from any risk related to a bank failure. Two features of the new system are relevant in this respect. All transactions in TARGET will be settled bilaterally, instantaneously and gross: as opposed to a netting system,³ gross settlement systems avoid the piling up of payment orders during the day that make it virtually impossible to unscramble a sequence of transactions at the end of the day, thus requiring the central bank to guarantee all intra-day transactions. Second moreover, if a payment that goes through TARGET needs central bank credit – as large-value transactions typically do – the sending bank can have access to such credit only if it puts up an adequate amount of collateral.

The problem with TARGET (as explained in detail in Begg et al., 1998) is that the system is expensive, compared with other (private) systems that compete with it.⁴ Its cost, which arises from the opportunity cost of having to freeze up the assets used as collateral, could be particularly

³ Such as, for instance CHIPS, the payments and settlement system for international dollar transactions.

⁴ As an alternative to TARGET, European banks could use private payments and settlement systems. Two in particular will compete with TARGET: the Euro Clearing System (ECS), a system run by the European Banking Association, and Euro Access Frankfurt (EAF2), a system owned by the Landeszentralbank in Hessen, Germany, which allows remote access. Both are *net* settlement systems where the collateral is only present in the form of a pool – although EAF2 is evolving towards TARGET by settling positions very frequently, every 20 minutes. In EAF2, however, while net positions will indeed be checked every 20 minutes, if a bank were then unable to liquidate its position, this will be carried into the next 20 minutes. Thus open positions could still accumulate during the day.

high for large-value transactions, those where systemic risk typically concentrates. The cost would be low in countries where a *repo* market is not developed, but high in those countries, such as France, where *repurchase agreements* represent a big market. In some countries banks will thus have an incentive to use one of the private systems, especially for large-value transactions. Such systems, however, are not immune from systemic risk. We could thus end up in a situation in which small-value payments transit through TARGET, while large-value transactions go through the private systems. If such systems were hit by a large insolvency, the collateral that supports them may not be sufficient to prevent a collapse: it would then be difficult for the ECB not to step in as the lender-of-last-resort. In such a situation it would be important for the ECB to have the supervisory information which would be necessary in order to distinguish between all-out insolvencies and technical failures – such as in the case of the famous 1985 Bank of New York episode in the United States.⁵

The second source of fragility, already mentioned in Chapter 1, is related to the ability of the ECB to provide liquidity to the market. If banks will take on more market risk, their ability to withstand sudden fluctuations in market prices will also depend on the readiness of the central bank to provide liquidity to the financial system and to banks in particular. The ECB is, in this respect, a very different institution from the Fed – more concerned, and more constrained, about the risks it may take on its own books, and thus likely to be less ready to provide liquidity to the banks. The very characteristics that make TARGET a secure system – the requirement of full and instantaneous collateral for access to central bank credit – could hinder its effectiveness during a crisis.⁶ As the 1987 crash illustrates, in the event of a sudden fall in stock prices the ECB may need to relax its monetary stance by rapidly increasing EMU-wide liquidity. This could be obtained through open market operations. According to the rules laid out by ECB,⁷ however, such transactions can only be in the form of a repurchase agreement of eligible assets or of a credit operation guaranteed by adequate collateral. A shortage of collateral, or of eligible assets – arising, for example, from a gridlock in the settlement system or simply from a sudden fall in the market price of the assets used as collateral – could make such interventions, and thus the

⁵ See, for example, Folkerts-Landau and Garber (1992).

⁶ On the use of collateral in interbank funds transfer systems, see Leinonen (1998).

⁷ Fischer (1999), quoting Bagehot, makes the point that during a crisis the central bank should lend any collateral that is marketable *in the ordinary course of business when there is no panic*.

ability of the ECB to provide the necessary liquidity, difficult to implement. Carefully designed to avoid risk, the ECB is ill-suited to take on risk in a situation in which systemic stability requires shifting some risks from the balance sheet of private institutions to that of the central bank.

7.3 Who should the supervisor be, and who should it supervise?

In deciding who should be responsible for banking supervision in EMU two issues overlap. The first, which we address in the present section, is whether supervision should rest with the central bank or with an independent agency. The second, dealt with in the next section, is whether banking supervision should be centralized, i.e. whether there should be a single supervisor for the entire monetary union, or whether this function could be decentralized.

Whether banking supervision should reside with the central bank or with an independent authority remains an open debate – both in general, and with specific reference to the EMU.⁸ Those who argue for an integration of the supervisory function into the central bank point to the existence of economies of scope in information gathering between the supervisory role and the lender-of-last-resort responsibility of the central bank. This is the lender-of-last-resort can only hope to be able to discriminate between illiquid and insolvent banks if it is aware of the lending histories and cash needs of troubled banks. As summarized by Goodhart and Schoenmaker (1992, p. 384) ‘For the time being, there is likely to be an important role of the central bank both in organizing and in supporting the payments system. This implies both the assumption of credit risk, and/or a need to deal with emerging liquidity risks. If so, the central bank is likely to maintain some regulatory and supervisory functions in order to limit such risks. This is, perhaps, the strongest current ground for advocating the combination of such functions.’

A different argument points to the value of supervisory information as an input to monetary policy decisions. There is some evidence, in the United States (see Peek et al., 1998a, b) that bank examination data – in particular the share of assets held by banks in trouble – can improve the forecasts of future unemployment and inflation, and is thus a valuable input to central bank decisions.

⁸ See, for example, Goodhart (1991), Giovannini (1992), and Vives (1992, 1998b).

Opponents typically argue that central banks should not be entrusted with the supervisory role because this would reduce their incentives to supervise banks properly. The option to create liquidity in order to avoid a bankruptcy would diminish their incentives to supervise banks *ex-ante*. An independent regulator would not face the conflict of interest between the credibility of monetary policy and the reputation of the regulator.

The arrangement in Germany is worth considering. Formally, the responsibility for banking supervision is assigned to an independent agency (the Federal Banking Supervisory Office), but the supervisory information is collected and processed by the Bundesbank, via the Landeszentralbanken.

Whether regulation of banks and financial markets should be integrated in a single agency is another important factor in the choice of a regulatory structure. The recent reform in the United Kingdom has created a single regulator (the UK Financial Services Authority (FSA)) of both banks and markets. A reason for the integration of regulation in a single regulatory body, separate from the central bank, is the convergence between the activities of banks and markets, and the derived difficulty in separating market risk from the risk of the bank.

As noted by the International Monetary Fund (1998) universal banks, defined as groups of companies under common control, active in different financial sectors (banking, securities, insurance) entail the risk of regulatory arbitrage, that is the exploitation within the group of differing regulatory arrangements. In such situations, to assess the position of the bank, the supervisor needs to be able to obtain information on financial flows and relationships within the group, as well as on the financial conditions of the non-bank companies in the group. Special challenges arise when a universal bank is active internationally – an issue to which we return in the next section.

The institutional model that has been chosen by the United Kingdom (and is currently being considered in Australia) is one in which three independent agencies co-exist. The central bank, responsible for the overall stability of the financial system, through its lender-of-last-resort function; an independent supervisor and regulator of all financial intermediaries, including banks, securities houses and life insurance companies; an agency responsible for competition.⁹

⁹ See Di Noia and Piatti (1998).

7.4 National regulators, multinational actors

Is the choice of maintaining, within EMU, 11 national regulators – in some states the national central banks, in other an independent agency – a safe arrangement? The argument in favour of decentralized supervision points to the benefits of competing regulators.¹⁰ Competition could result in the production of more information and better regulatory mechanisms: in the end only the best regulators would prosper and the laggards should adapt. As described in Chapter 3, the principles of home country control and mutual recognition in the EU provide a competitive setting for regulation at the national level. A bank chartered in one country can operate in another and this, to some extent, puts EU regulators in competition with one another. In the European context, however, there are reasons to be wary of regulatory competition, while the benefits of centralization are substantial.

First, the risk of capture of a domestic regulator are higher – as the recent experience in many Asian countries has demonstrated¹¹ – compared to a supranational regulator which keeps at a safe distance from the institution he or she regulates.

The second benefit has to do with the ability to respond to a crisis. A financial crisis, like a sinking boat, calls for determination and an immediate reaction: it is hardly a situation that can wait for compromises among different players, each with his own incentives. When the principals of LTCM called the New-York Fed in September 1998 and declared their inability to meet margin calls on the huge positions accumulated in several markets, they knew they were calling an institution with unmatched clout. As a supervisor, the NY Fed had detailed information on the financial situation and relationship to LTCM of most, if not all, major players on the world-wide financial scene. In a very short time, the Fed was able to congregate all the large creditors of LTCM and twist their arms into allotting US \$3.9 billion in the recapitalization of the failing hedge fund, thus restoring its ability to meet outstanding obligations, all in the name of the stability of financial markets. No minor feat, not only because of the sums involved, but also because of the significant free-rider problem characterizing the exercise. Given that $(n-1)$ institutions pitch in and that financial stability was preserved, the utmost interest of the n th group was to abstain. And indeed, it has been revealed that at least

¹⁰ See, for instance Kane (1989) and Chapters 7 and 8 in Ballbé and Padrós (1997).

¹¹ 'Lax prudential rules and financial oversight had permitted the quality of banks' loan portfolios to deteriorate sharply' (Fischer, 1998).

one of the institutions with significant stakes in LTCM got out 'free' and thus fully benefited from the operation at zero cost.¹²

Would such a swift and effective response be possible inside EMU if a similar situation were to arise? Coordination among 11 national agencies runs two risks. First, it is unlikely that a rescue operation could be carried out without market participants being aware that such an operation is in progress. Second, national supervisors have private information concerning the exposure of individual banks in their jurisdiction, and they might be reluctant to reveal such information in order to protect them. Coming to a decision could thus involve a difficult game: among the regulators first, and then between the regulators and the banks. As the banks would know that the regulators would not have full information, their readiness to intervene would be far less than in the US case.

The problem with decentralized regulation is not only one of asymmetric information leading to too little or too slow intervention, as in the case discussed above. It is also conceivable that a decentralized mechanism would be prone to excessive interventionism – with the resulting moral hazard implications – as a consequence of the perception that each national entity could end up paying only a fraction of the cost of any rescue operation.

Moreover, decentralized supervision could be a safe arrangement as long as the European banking industry remains segmented. Who will supervise the new bank formed from the merger between the Dutch ING and the German BHF, however? If the headquarters are in Amsterdam, responsibility for supervision will remain there. What if ING goes on acquiring more and more banks? The Dutch supervisor will increasingly be at a disadvantage, because the internationalization process of Dutch banks will not be accompanied by a corresponding access to local market information by the Dutch supervisor.

The incentives of home supervisors to monitor the foreign activities of domestic banks may also be blunted by the fact that they do not have the ultimate responsibility of intervention in case of financial distress in a foreign country. As cross-border mergers and the construction of EU-wide banks progress, decentralized supervision thus becomes less and less efficient.

The incentives issue is important.¹³ Home supervisors may be reluctant to reveal the problems of domestic banks, fearing that the spread

¹² The brokerage house, Bear Stearns, through which LTCM was clearing most of its trades.

¹³ As clearly noted in Mayes and Vesala (1998) and Vives (1998b).

of such information may be the last stroke to a distressed institution. With large cross-border institutions, situations could arise where the systemic impact of the financial distress of a bank (and thus the incentives to intervene swiftly) in the home (large) country are much smaller than the systemic impact in a foreign (small) country. For instance, if a bank had 80% of its operations in Germany and only 20% in Finland, the consequences would still be five times as important in Finland, given the relative size of the two countries. In such a situation German supervisors could decide that the systemic risk in Germany of allowing a bank to fail are limited, and thus refrain from intervening. A failure of the bank, however, could create a systemic risk in Finland. The Finnish supervisor, on the other hand, may find it politically difficult to provide liquidity to a foreign institution, thus effectively bailing out foreign shareholders. In such situations greater market disclosure and transparency by banks would alleviate the incentive problem of national regulators by reducing the asymmetry of information among them.

In this respect it will be instructive to monitor the evolving arrangements in the United States. Bank supervision in the United States has traditionally been conducted by three different bodies: state agencies, the Fed and the Treasury through the Comptroller of the Currency. Quite naturally, the end of Glass-Steagall and the emergence of nation-wide banks has shifted the supervisory role away from the states to the two national bodies. A fierce battle is currently going on between the Fed and the Treasury to decide which institution will emerge as the nation-wide supervisor. Independently of who will be the winner in Washington, there is a certain loser, the state agencies.

Finally, as argued earlier, EMU will strengthen competitive pressures on European banks, leading to further restructuring and consolidation. The risks associated with this process could result in casualties among the weakest institutions. Natural candidates for running into trouble are domestic nation-wide banks, too spread out to have valuable local information, but not big enough to compete with the heavy-weights in asset management and investment banking. Either they will be merged into EU-wide institutions, or they are doomed. The point is worth noting because some of these institutions are – or were until recently – state-owned national champions, with strong political protection trying to prevent their takeover by ‘foreigners’.¹⁴ Failure of one of these big banks could have systemic consequences. Banking supervision should if anything be strengthened in EMU precisely because the frequency of failures could increase.

¹⁴ The French, for instance, are trying to avoid the outcome that a non-French institution wins the auction for the control of *Crédit Lyonnais*.

7.5 The risk of giving in to petty national jealousies

To sum up, the advent of cross-border banking, the likely emergence of pan-European universal banks, and, more generally, the new competitive climate of European banking, confront national supervisors with delicate coordination issues. In the face of these challenges, we doubt that the simple coordination among independent national authorities – as provided for by the Second Banking Directive – will be a safe arrangement.

The past European experience with national supervision has not always been satisfactory. Incidents such as *Crédit Lyonnais* in France, and *Banco di Napoli* in Italy suggest that domestic supervisors have sometimes been too close to the institutions they regulate, thus risking being captured – particularly when those institutions are state owned and supported by powerful political lobbies. The natural distance that a supranational regulator keeps would thus appear to be particularly healthy. It is ironic that while the international financial community – precisely for these reasons, that is to avoid local capture – is studying the possibility of setting up a ‘world financial regulator’, petty national jealousies appear to be preventing this from happening at the European level, thus putting the stability of European financial markets at risk.

Building a centralized supervisory body is a possibility already foreseen in the Maastricht Treaty. Article 105(6) leaves open the possibility of a change in the assignment of responsibilities: ‘The Council may, acting unanimously on a proposal from the Commission, after consulting the ECB and after receiving the assent of the European Parliament, confer upon the ECB specific tasks concerning policies relating to the prudential supervision of credit institutions and other financial institutions with the exception of insurance undertakings.’

Article 105(6), however, appears only to allow centralization of supervisory responsibilities inside the ECB. While a clear improvement on the current situation, this may not be the optimal arrangement. First, the ECB is already being perceived as accumulating too much power, and issues of accountability have been raised. It seems difficult therefore to envision that the ECB might also be entrusted with regulatory and supervisory responsibilities. An independent European-wide regulatory agency, distinct from the ECB, may generate less concerns in this respect while at the same time facilitating accountability.¹⁵

¹⁵ See Vives (1998b). For a different view see Lannoo (1998).

Thinking about a new European agency would also allow one to think afresh about the desirability of combining the supervision of banks and markets. As mentioned a number of times in the report, the likely emergence of large universal banks will make it increasingly difficult to distinguish between market risk and the risk of the bank. Moreover, while banks increase their exposure to market risk, markets have become more vulnerable to a liquidity crisis arising from the failure of a large intermediary – the role of derivatives in this process is central, as the cases of Barings and LTCM demonstrate. The argument for combining the two functions in a supranational EU independent agency seems overwhelming.¹⁶

¹⁶ The Report of the G-22 Working group on strengthening Financial Systems (Washington, October 1998, p. 22) . Similarly concludes that 'since a bank's liquidity problems do not necessarily originate in its traditional banking business but, for instance, in its securities business, this points to the need for a comprehensive regulatory structure that addresses all activities conducted by banks'. For a different view see Goodhart et al. (1998).

8 European Banking in the Twenty-First Century

8.1 Banks have a future

Banking is in turmoil. The bank as an institution is changing; the industry is changing. Advances in information and financial technologies are transforming banking practices. Regulatory changes have transformed banking markets, both in the United States – with the Riegle-Neal Act of 1994 and the gradual repeal of the 1933 Glass-Steagall Act – and in Europe where the ultimate regulatory change has been the adoption of a single currency.

These changes have been accompanied by an unprecedented wave of mergers and acquisitions which is transforming the industry. A few global institutions seem prepared to dominate the scene. At the same time, the Asian crisis has left deep wounds. Banks, European banks in particular, appear to be vulnerable to economic accidents such as Asia and Russia and, in some respects, more fragile than ever before as the near collapse of the Long Term Capital Management (LTCM) illustrates.

What differentiates banking from most other industries – also affected by technical progress and globalization – is that banks serve several functions, none of which could not, in one way or another, be served by non-bank organizations. As Bill Gates has repeatedly commented, ‘Banking is essential; banks are not’. This leads to the question of whether banks will survive at all, let alone prosper. It also raises questions as to the proper form regulation of the different institutions, which could potentially serve the same functions as banks.

As observed in Section 1.5, while US commercial banks have lost part of their traditional business, their importance has not diminished relative to other financial intermediaries. Over the past 10–15 years, commercial banks have been forced to broaden their scope from that of pure deposit-taking institutions to portfolio and market-making functions. In that process, their asset base has shrunk. But the economic rationale for com-

mercial banks will not disappear. Intermediation is taking on a different form but the need for intermediation is as vivid as ever.

As capital markets come to play a more central role in financial intermediation, their activities need to be supported by bank credit lines and a guaranteed settlement system. Increasingly commercial banks will thus be in the position of providing liquidity services to players in the capital markets.

Banks, at least those aspiring to a major role in the banking industry of the twenty-first century, are not what they use to be. They have been chasing new businesses in emerging markets (Asia, Russia, Latin America), and emerging products (derivatives, hedge funds). Bank fragility used to be associated with runs on deposits and was controlled and supervised accordingly. It now derives from other – market-based – sources of risks.

A bank whose main counterparts are large capital market players needs to be protected against liquidity crises originating in the financial market, where unexpected demands for settlement, due to large price variations (like in a stock market crash, when intermediaries suddenly must meet margin calls) may make banks vulnerable. Such crises require a 'lender-of-last-resort' facility if they are not to degenerate into systemic collapses. This risk is now of larger significance than the danger of a run on deposits. Such developments constitute important challenges for prudential regulation.

The function of originating and monitoring loans will also remain with the banks. The role of market instruments (corporate bonds, commercial paper, venture capital) in raising funds will expand – especially in Europe, where it has long been inhibited by the segmentation of financial markets – but banks will keep their role as fund providers for projects that are particularly difficult in terms of asymmetric information problems. The synergies between the liquidity provision function and this funding function are the foundation of the likely endurance of the banking institution.¹

8.2 Banking in Europe: will EMU be the watershed?

It is frequently heard that the advent of the euro is an event of larger significance for banks than for any other producers of goods and services because banking and currency union are both fundamentally

¹ See Diamond and Rajan (1998) and Myers and Rajan (1998).

about money. This assertion overlooks the fact that banking could be, as it has been in the past, an essentially local or regional activity barely affected by competitive conditions prevailing across national boundaries. But what makes EMU a significant event is that it is occurring in the context of a process of technological evolution characterized by the strengthening of returns to size and scope in banking. The euro – and the implementation, albeit slowly, of the Single Market rules – makes it possible to exploit these new economies of scale and scope.

The euro will combine with the technological evolution of banking to transform two important activities of banks: asset management and investment banking.

In *asset management* the euro creates the conditions of a true single market, and subverts the regulations that have so severely constrained institutional investors. Technology and the elimination of currency risk within EMU open up new economies of scale in asset management. A few large European banks are likely to dominate this industry – because they will be able to exploit the new scale economies, their traditional access to European consumers and their historical presence in European financial markets. This is in contrast with the situation in the United States where non-bank institutions are the leading asset managers. The existence of economies of scope in this sector of activity between banks and insurance companies reinforces the formers' positions vis-à-vis independent asset managers.

In *investment banking* the euro creates the conditions for the emergence of wide and deep securities markets where government and large corporations will satisfy their borrowing needs. The success of these markets is not a sure thing (we have discussed in Chapter 5 the private incentive to set up such markets) but, if it materializes, large firms will rapidly replace bank loans with commercial paper issues. They will, in the process, require investment banking services. Here is a strong, new incentive for European commercial banks to be able to provide such services – the alternative being the loss of some of their best clients. Commercial banks will build their new investment banking units by buying specialized teams, or acquiring existing investment banks. Because the number of such teams and of such banks is limited, just a handful of commercial banks will make it to the status of universal banks.

At the end of the exercise, our assessment is that European universal banks, boosted with the advantage of incumbency in most of

the areas they will be active in, may well emerge as the dominant form of organization. Barring regulatory hindrances (see Box 5.2: Outlawing universal banks), they will survive and may prosper, though they will be very different institutions from today's notion of a bank. They will also be a lot fewer, more international, and they will be regulated differently.

The few European banks making it to universal banks will try to exploit the economies of scale across EMU fighting the battle with US asset managers and specialized investment banks. The outcome is uncertain. European universal banks will have the advantages of incumbency. But the difficulty of integrating investment and commercial banking cultures is the strongest point in favour of specialized US institutions – and the biggest challenge for the new European universal banks.

None of these changes, however, can be taken for granted. There is still room for an unraveling of the European banking business. We cannot rule out a scenario where European universal banks are unable to face the competition of US and UK specialized asset managers, thus ending up losing important portions of this market. And the same could happen for investment banking if European universal banks turn out not to be able to integrate the investment banking culture into their heavy organizational structures.

Not all banking activities are similarly affected by the euro and by the technological evolution of banking. Even after EMU, Europe will remain a fragmented banking market for consumers and, more importantly, for small and medium-sized firms. This is because barriers to entry into the retail market will remain high – at least until consumers adapt to direct banking – while profitability is not. And the monitoring function of banks in the relationships with small firms does lend itself to scale economies.

Regional banks will maintain a competitive advantage in this market, as their capacity to elicit, retain and process local information will give them an edge over larger institutions in dealing with local firms. But their activities will shrink. In asset management they will become local supermarkets, distributors of financial products built by the large asset managers. And, as we have argued in Box 4.2, it is possible that they will bolster their competitive position by sharing the costs of technology investments and maintenance either through outsourcing or networking with similar institutions.

A broad and liquid euro securities market will help the establishment of a serious venture capital market – at present there are 6,000 firms listed on NASDAQ, only 50 on EASDAQ. The fragmentation of national capital markets in Europe has been a major hindrance to the development of venture capital and junk bond markets, resulting in a corporate securities market disproportionately concentrated (compared to the US market) towards AAA and AA issues, with correspondingly few sub-investment grade issues. All this will change rapidly and could put some of the banks' business at risk.

8.3 History matters

In this report we have used as a 'straw man' the possibility that the European banking industry would end up no different than its US counterpart. We wanted this to serve as an indication of the magnitude of the changes facing the industry. On purely objective grounds, the post Riegle-Neal Act United States and post-EMU Europe will be very similar, suggesting our hypothesis that the two industries may converge.

At the end of our inquiry, we conclude that although the European banking industry will certainly undergo major changes it is also likely to remain quite different from its US counterpart. The reasons have to do with fundamental European factors: first EMU countries are not US states: the diversification of macroeconomic risk requires less cross-border consolidation. Second, the weight of different European cultures and languages will not disappear, at least at the retail, consumer market level. And third, the legal framework is far from harmonized: this refers to law, taxation and, more importantly, to regulatory and supervisory institutions.

Finally, history matters: in the restructuring process, European banks will benefit from the advantage of incumbency in European markets. Conversely, in the United States, the incumbency advantage of US investment banks and asset managers is likely to more than compensate for their inability to exploit existing economies of scope with commercial banking activities. The convergence of banking models in Europe and in the United States will thus be conditioned by their history of specialized and universal banking respectively.

8.4 Is all this good for banks?

The first reaction to the start of EMU was that the euro would bring bad news for European banks. The rationale for this common wisdom was clearly explained by two BIS officials at the EMU Conference held at the International Monetary Fund in the Spring of 1997:

What is surprising, in light of all the forces for change, is how little impact they have had to date on the structure of the European financial industry, which continues to be basically 'national'. Banking products in many countries are still significantly overpriced relative to those supplied by low-cost providers elsewhere in Europe: one reason is the industry has not had many years to react to recent deregulatory initiatives. With time these impediments to change should disappear. Others, however, are likely to be longer lasting. There continue to be significant differences across European countries in the legal, tax, regulatory and supervisory frameworks within financial firms have to operate. The continuing and important role of the state in the banking business in many EU states is also a force acting to suppress international competition. Reflecting these realities, the ratio of bank share prices to general stock price indices has been falling in most European countries and downgradings of continental banks by rating agencies have become more common. (McCauley and White, 1997)²

A year later, the picture looked quite different. By July 1998, bank shares had outperformed the local market index in most EMU countries (with the important exception of Germany, see Table 8.1). Then in the late summer, European bank stocks were particularly hurt because of their exposure to Russia, Asia and Latin America as well as the involvement of some of them, in the LTCM crisis. But following that, bank stocks overperformed the market in most EU countries in the rally of October and November, when mergers and acquisitions picked up steam once more, particularly with the Deutsche Bank-Bankers Trust deal. What can we learn from this?

² At the same time, Dornbusch et al. (1998) referred to 'the demise of European banks'.

Table 8.1 *Stock market performance of bank stocks relative to local stock market indices*

	<i>5 years, ending July 1997 (%)</i>	<i>12 months, ending July 1998 (%)</i>	<i>Aug-Sept 1998 (%)</i>	<i>Oct-Nov 1998 (%)</i>
Belgium	7.30	-5.80	-10.40	-5.10
Finland	-16.70	0.50	-1.60	-2.50
France	-5.30	4.40	-4.60	-2.30
Germany	-0.90	-1.50	-3.60	4.80
Italy	-21.60	58.40	-5.90	-1.50
Netherlands	10.70	36.60	-1.50	13.90
Sweden	14.40	36.20	-4.60	11.70
Switzerland	-1.70	49.00	-11.00	9.40
United Kingdom	13.90	-4.20	-1.00	9.20

Source: Datastream

First, while exercising caution in interpreting stock market movements over short periods of time, we can see these market movements as providing evidence in favour of the new returns to scale and scope hypothesis: the market perceives the possibility of efficiency gains associated with size. The share prices of weak banks perform well because they are potential acquisition targets, while would-be acquirers also benefit because the anticipated efficiency gains are large enough not to be totally exhausted in the acquisition premium.

Second, the new volatility of bank stocks is obviously associated with the shift of banks' activities away from their more traditional business towards new territories – a shift that often implies taking more risk onto the balance sheet. This increased volatility is likely to remain a feature of banks. The challenge is to make sure that in all cases the risks are fully borne – and circumscribed to – their shareholders.

8.5 Is it good for Europeans?

'Bankers are the gatekeepers of modern capitalist development' said Schumpeter in 1934. The transformation of the European financial industry is of no trivial consequences for the welfare of Europeans.

An efficient system of intermediation should encourage savings by offering consumers a large choice of high performance savings instruments, and promote investment by providing adequate and low-cost financing to all projects susceptible to feed economic growth.

The fulfilment of this objective is predicated on the success of euro-wide securities markets (including a market for closed-end funds, venture capital and lower-grade paper) where firms will be able to satisfy their capital and borrowing needs at the lowest intermediation costs. Two factors could prevent this from happening: attempts by the banks to defend their turf, by obstructing the rapid growth of such a market; and actions by governments, inspired by national chauvinism, to foster and protect 'national champions'. The cost for Europeans would be high.

In an efficient financial system, banks need to be large enough to reap the benefits of size and scope we have identified; they also need to be diversified across EU borders to promoting as a corollary, the convergence of banking practices – an important issue for the smooth operation of a single monetary policy. The euro capital market will confront them with new demands for liquidity, and for payments and settlement services: banks will have to provide such services, particularly if, as discussed in Chapter 7, the ECB will be less prone than the Fed to respond to the demand for liquidity from the capital markets. All this requires an appropriate regulatory and supervisory framework through which systemic risks are checked at the lowest possible cost.

9 An Agenda for Policy

With the recent financial crisis in Asia and Latin America, the popularity of restrictions on the activity of financial intermediaries is growing. In the face of uncertainty and turbulence, the word 'control' is used increasingly. In contrast, we advocate an approach that minimizes interference with the market and which, in fact, uses market mechanisms to improve regulation. The right word is 'regulation', not 'control'. But we must make sure to get regulation right.

Banking should be subject to only two types of constraints. The first comes out of a concern for the stability of the financial system because of the potential negative externalities of banking failures and subsequent contagion. Bank supervision has traditionally focused on the assessment of the quality of a bank's balance sheet at a specific point in time – and on whether it complies with capital requirements and restrictions on portfolio composition. This approach is no longer adequate in a world in which banks are active players in the capital markets and can be driven into insolvency extremely rapidly from trading losses.

We have pointed out the dangers of decentralized supervision. Within EMU, such dangers are enhanced by a central bank which was carefully designed to avoid risk, and could thus be ill-suited to take on risk in a situation in which systemic stability requires shifting some risks from the balance sheet of private institutions to that of the central bank.

We have also argued in favor of combining the supervision of banks and markets. As explained in Chapter 7, universal banking makes it increasingly difficult to distinguish between market risk and the risk of the bank. The argument for combining the two functions in a supranational EU independent agency seems overwhelming. This is the most urgent policy challenge.

The second type of constraint arises from the need to check market power. Here national as well as European competition authorities

should play a role. As demonstrated successfully by the US authorities, the days in which banking was off-limits for competition policy are passed and should not return. European banks have a natural tendency to consolidate within national boundaries leading to industry concentration ratios much above those observed in the United States. This is because of culture and trust, potential cost-cutting and, indeed, the quest for market power at a time of insecurity and change. Sheep get closer together when in danger.

In commercial banking, diversification gains explain the success of interstate consolidation in the United States. The anemia of the equivalent cross-border mergers and acquisitions business in Europe is worrying. It can be explained by the fact that a good deal of the gains from diversification can be obtained within the borders of individual European states. But it matters if European commercial banks will want to reach the higher minimum size in their business simply by acquiring or merging with their national competitors. The observed tendency towards consolidation within national boundaries is a challenge for competition authorities as it is likely to reinforce local monopoly power. This is particularly important for small-firm lending, as large firms will access the euro capital markets directly, while consumers will have the option of turning to specialized asset managers and to direct banking.

Cross-border consolidation suffers the double handicap of being culturally more challenging and defying national chauvinism. Merging two banks is a complicated exercise: if the two banks operate under different supervisions, regulations and legal frameworks and are subject to different systems of taxation, the exercise may appear forbidding.

Finally it should be recognized that, important as it may be for the growth of European firms, an efficient euro corporate bond market will not spring up in a vacuum. Banks could see in such a market a strong competitor, and use their incumbency advantage to prevent it from developing. Authorities cannot guarantee that Europe-wide securities markets flourish, but they certainly can make sure that efforts to build then fail – through inappropriate regulation and taxation.

As importantly, a liquid corporate bond market will only thrive if the central bank is prepared to provide liquidity to the system when necessary. Although there is no direct mention of this task in the statutes of the ECB, the Board of the Bank should carefully consider the role that the Fed has played in fostering liquid markets in the United States.

References

- Allen, C., M. Gasiorek and A. Smith (1998) 'The competition effects of the single market in Europe', *Economic Policy* 27.
- Allen, F. and D. Gale (1994) 'A welfare comparison of intermediaries and financial markets in Germany and the US', Federal Reserve Bank of Philadelphia Research Working Paper 95/3.
- Amihud, Y. and G. Miller (1997) *Bank Mergers and Acquisitions*, Boston: Kluwer Academic Publishers.
- Ballbé, M. and C. Padrós (1997) 'Estado Competitivo y Armonización Europea', Editorial Ariel, S.A.
- Baltensperger, E. and J. Dermine (1987) 'Banking deregulation', *Economic Policy* 4.
- Bank for International Settlements (1995), *Financial Structure and the Monetary Policy Transmission Mechanism*, Basel.
- Barth, J. R., D. E. Nolle and T. N. Rice (1997) 'Commercial banking structure, regulation, and performance: an international comparison', mimeo, Office of the Comptroller of the Currency, Washington, D.C.
- Bauer, P. W. and D. Hancock (1995) 'Scale economies and technological change in Federal Reserve ACH payment processing', *Federal Reserve Bank of Cleveland Economic Review* 31.
- Begg, D., P. De Grauwe, F. Giavazzi, and H. Uhlig (1998) 'The ECB: safe at any speed?', *Monitoring the European Central Bank* 1, London: CEPR.
- Bennett, P. (1996) 'Information asymmetries, speed and risk concentrations', in A. Saunders and I. Walter (1996) *Universal Banking*, Chicago, London, Singapore: Irwin.
- Berger, A. N. and T. H. Hannan (1989) 'The price-concentration relationship in banking', *Review of Economics and Statistics* 71.
- Berger, A. and D. Humphrey (1992) 'Measurement and efficiency issues in commercial banking' in Z. Griliches eds. (1992) *Output Measurement in the Service Sectors (Nber Studies in Income and Wealth, Vol. 56)* Chicago: University of Chicago Press.

- Berger, A. N., A. K. Kashyap and J. M. Scalise (1995) 'The transformation of the US banking industry: what a long, strange trip it's been', *Brookings Papers on Economic Activity* 2.
- Berger, A. N. and G. Udell (1995) 'Relationship lending and lines of credit in small firm finance', *Journal of Business* 65.
- Berger, A. N., R. S. Demsetz, and P. E. Strahan (1998a) 'The consolidation of the financial services industry: causes, consequences, and implications for the future', mimeo, Board of Governors of the Federal Reserve System, November.
- Berger, A. N., A. Saunders, J. M. Scalise and G. Udell (1998b) 'The effects of bank mergers and acquisitions on small business lending', mimeo, forthcoming in *Journal of Financial Economics*.
- Besanko, D. and A. Thakor (1993) 'Relationship banking, deposit insurance and bank portfolio' in C. Mayer and X. Vives eds., *Capital Markets and Financial Intermediation*, Cambridge: Cambridge University Press.
- Bingham, T. (1985) *Banking and Monetary Policy*, Paris: OECD.
- Black, F. and M. Scholes (1973) 'The pricing of options and corporate liabilities', *Journal of Political Economy* 81.
- Boot, A. and A. Schmeits (1998), 'Market discipline and incentive problems in conglomerate banks', CEPR Working Paper 1949.
- Boot, A. and A. Thakor (1994) 'Moral hazard and secured lending in an infinitely repeated credit market game', *International Economic Review* 35.
- Boot, A. and A. Thakor (1997) 'Banking scope and financial innovation', *Review of Financial Studies* 10.
- Boyd, J. H. and M. Gertler (1994) 'Are banks dead or are the reports greatly exaggerated?', *Federal Reserve Bank of Minneapolis Quarterly Review* 18.
- Calomiris, Ch. (1997), 'The postmodern bank safety net: lessons from developed and developing countries', Washington, D.C.: American Enterprise Institute.
- Calomiris, Ch. and J. Karceski (1998) 'Is the bank merger wave of the 90s efficient? lessons from nine case studies', in S. Kaplan, eds., *Mergers and Productivity*, Chicago: University of Chicago Press.
- Caminal, R. and C. Matutes (1997) 'Can competition in the credit market be excessive', CEPR Discussion Paper 1725.
- Carow and Heron (1998) 'The interstate banking and branching efficiency act of 1994: a wealth event for acquisition targets', *Journal of Banking and Finance* 22.

- Cerasi, V., B. Chizzolini and M. Ivaldi (1998) 'Sunk costs and competitiveness of European banks after deregulation', LSE, FMG, Discussion Paper 290.
- Cerasi, V. and S. Daltung (1996) 'The optimal size of a bank: costs and benefits of diversification', LSE, FMG, Discussion Paper 231.
- Clark, T. O. (1998) 'Employment fluctuations in U.S. regions and industries: the roles of national, region-specific and industry-specific shocks', *Journal of Labor Economics* 16.
- Cole, R. A, J. D. Wolken and R. L. Woodburn (1996) 'Bank and non-bank competition for small business credit: evidence from the 1987 and 1993 national surveys of small business finances', *Federal Reserve Bulletin* 82.
- Cordella, T. and L. Yeyati (1998), Public disclosure and bank failures, CEPR Working Paper 1886.
- Cybo-Ottone, A. and M. Murgia (1998) 'Mergers and shareholder wealth in European banking', *The Journal of Banking and Finance*, forthcoming.
- Davis, E. (1998) 'The role of institutional investors in the evolution of financial structure behaviour', mimeo.
- De Cecco, M. (1998) 'The lender of last resort under the European Central Bank', CIDEI Working Paper 45, University of Rome.
- Demsetz, H. (1974) 'Two Systems of Belief About Monopoly', in H. J. Goldschmid, H. M. Mann and J. F. Weston, eds., *Industrial Concentration: The New Learning*, Boston: Little Brown.
- Demsetz, R. S. and P. E. Strahan (1997) 'Diversification, size, and risk at bank holding companies', *Journal of Money, Credit and Banking* 29(3), pp. 300-13.
- Devenow, A. and I. Welch (1996) 'Rational herding in financial economics', *European Economic Review* 40.
- Dewatripont, M. and J. Tirole (1994) *The Prudential Regulation of Banks*, Cambridge, Mass.: MIT Press.
- Diamond, D. (1984) 'Financial intermediation and delegated monitoring', *Review of Economic Studies* 51.
- Diamond, D. (1991) 'Monitoring and Reputation: The choice between bank loans and directly placed debt', *Journal of Political Economy* 99.
- Diamond, D. (1997) 'Liquidity, banks and markets', *Journal of Political Economy* 105.
- Diamond, D. and P. Dybvig (1983) 'Bank runs, deposit insurance, and liquidity', *Journal of Political Economy* 91.
- Diamond, D. and R. Rajan (1998) 'Liquidity risk, liquidity creation and financial fragility: a theory of banking', mimeo, University of Chicago.

- Di Noia, C. and L. Piatt (1998) 'Regolamentazione e mercato finanziario: Anali e Prospettive di Ri forma pu il Sistema Italian0' *Quaderno 30*, Rome: Comsob.
- Dornbusch, R., C. Favero and F. Giavazzi (1998) 'Immediate challenges for the ECB', *Economic Policy* 26.
- Eckbo, E. (1983) 'Horizontal mergers, collusion, and shareholder wealth', *Journal of Financial Economics* 11.
- Economic Research Europe (1997) *A Study of the Effectiveness and Impact of Internal Market Integration on the Banking and Credit Sector*.
- European Central Bank (1998) *The Single Monetary Policy in Stage Three*, Frankfurt, September 1998.
- European Commission (1997) *Supplementary Pensions in the Single Market. A Green paper*.
- Fama, E. (1985) 'What's different about banks?', *Journal of Monetary Economics* 15.
- Farrell, J. and C. Shapiro (1990) 'Horizontal mergers: an equilibrium analysis', *American Economic Review* 80.
- Fatàs, A. (1997) 'EMU: countries or regions?', *European Economic Review* 41.
- Favero, C. A., L. Flabbi and F. Giavazzi (1999), 'The credit channel and (a)symmetries in the monetary transmission mechanism: evidence from the balance sheets of European banks', mimeo. Milan: IGIER.
- Fischer, K. (1990) 'Hausbankbeziehungen als Instrument der Bindung zwischen Banken und Unternehmen', unpublished PhD dissertation, Universität Bonn.
- Fischer, S. (1998) 'The IMF and the Asian Crisis', mimeo. Washington: International Monetary Fund.
- Fischer, S. (1999) 'On the need for an international lender of last resort', mimeo, Washington: International Monetary Fund.
- Flam, H. (1998) 'Discussion of Allen, Gasiorek and Smith (1998)', *Economic Policy* 27.
- Folkerts-Landau, D. and P. Garber (1992) 'The ECB: a central bank or a monetary policy rule?' , in Canzoneri, M., V. Grilli, and P. Masson eds., *Establishing a Central Bank: Issues in Europe and Lessons from the US*, Cambridge: Cambridge University Press.
- Freixas, X. and J-C. Rochet (1997) *Microeconomics of Banking*, Cambridge, Mass.: MIT Press.
- Froot, K. (1993) 'Currency hedging over long horizons', NBER Working Paper 4355.
- Gemini Consulting and EFMA (1993) *European Banking: A View to 2005*, London.

- Giovanetti, G. and R. Marimon (1998) 'An EMU with different transmission mechanisms?', mimeo, European University Institute.
- Giovannini, A. (1992) 'Central banking in a monetary union: reflections on the proposed statute of the European Central Bank', CEPR Occasional Paper 9.
- Goldman Sachs (1998) 'Restructuring? It's all happening!' Goldman Sachs Investment Research *European Banks Fact Sheet*, 1 May 1998.
- Goodhart, C. (1991) 'The draft statute of European System of central banks: a commentary', LSE, FMG, Special Paper 37.
- Goodhart, C. (1998) *Financial Regulation. Why, How and Where now?*, London: Bank of England.
- Goodhart, C. and D. Schoenmaker (1992) 'Institutional separation between supervisory and monetary agencies', *Giornale degli Economisti*, pp. 353-439.
- Gual, J. and D. Neven (1993) 'Deregulation of the European banking industry (1980-1991)', *European Economy/Social Europe* 3.
- Hannan, T. H. (1991) 'Bank commercial loan markets and the role of market structures: evidence from surveys of commercial lending', *Journal of Banking and Finance* 15.
- Harhoff, D. and T. Körting (1998) 'Lending relationships in Germany: empirical evidence from survey data', mimeo, Universität Mannheim.
- Hellwig, M. (1994) 'Liquidity provision, banking and the allocation of interest rate risk', *European Economic Review* 38.
- Hellwig, M. (1998a) 'Banks, markets and the allocation of risks in an economy', *Journal of Institutional and Theoretical Economics* 154.
- Hellwig, M. (1998b) 'Banking and finance at the end of the twentieth century', forthcoming in *Scandinavian Journal of Economics*.
- Holmström, B. and J. Tirole (1998) 'Private and public supply of liquidity', *Journal of Political Economy* 106.
- Huberman, G. (1997) 'Familiarity breeds investment', mimeo, Columbia Business School.
- Hughes, J. P., W. Lang, L. Mester and C. G. Moon (1996) 'Efficient banking under interstate branching', *Journal of Money, Credit and Banking* 28.
- Hughes, J. P., W. Lang, L. Mester and C. G. Moon (1998) 'The dollars and sense of bank consolidation', Federal Reserve Bank of Philadelphia Working Paper 10.
- International Monetary Fund (1995a) *Capital Markets Report*, August.
- International Monetary Fund (1995b) *Capital Markets Report*, November.
- International Monetary Fund (1997) *International Capital Markets*, November.

- International Monetary Fund (1998) *Towards a Framework for Financial Stability*, January.
- James, C. (1987), 'Some Evidence on the Uniqueness of Bank Loans', *Journal of Financial Economics* 19.
- Jensen, M. and R. Ruback (1983) 'The market for corporate control: the scientific evidence', *Journal of Financial Economics* 11.
- Kane, E. J., (1989) 'How market forces influence the structure of financial regulation', in W. S. Haraf and R. M. Kushmeider, eds. *Restructuring banking and financial services in America*, Washington D.C.: American Enterprise Institute.
- Kane, E. J. (1996) 'De Jure interstate banking: why only now?', *Journal of Money, Credit and Banking* 28.
- Keeley, M. (1990) 'Deposit insurance, risk, and market power in banking', *American Economic Review* 80.
- Kroszner, R. and R. Rajan (1994) 'Is the Glass-Steagall act justified? A study of the U.S. experience with universal banking before 1933', *American Economic Review* 84.
- Lang, G. and P. Welzel (1998) 'Technology and cost efficiency in universal banking: a thick frontier approach', *Journal of Productivity Analysis* 10, pp. 63–84.
- Lannoo, K. (1998) 'From 1992 to EMU: The implications of prudential supervision', CEPS Research Report 23, Brussels: Centre for European Policy Studies.
- Lannoo, K., D. Shoenmaker and S. van Tilborg (1995) 'The single market in banking: from 1992 to EMU', CEPS Research Report 17.
- Leinonen, H. (1998) 'Interbank funds transfer systems: liquidity needs, counterparty risks and collateral', Bank of Finland Discussion Paper 16/98.
- Litan, R. E. (1991) *The Revolution in U.S. Finance*, Washington D.C.: The Brookings Institution.
- McCauley, R. N. and R. Seth (1992) 'Foreign bank credit to U.S. corporations: the implications of offshore loans', *Federal Reserve Bank of New York Quarterly Review* 17.
- McCauley, R. N. and W. R. White (1997) 'The euro and European financial markets', in P. R. Masson, T. H. Krueger and B.G. Turtleboom eds., *EMU and the International Monetary System*, Washington: International Monetary Fund.
- Masson, P. R., T. H. Krueger and B. G. Turtleboom (eds.) (1997) *EMU and the International Monetary System*, Washington: International Monetary Fund.

- Matutes, C. and X. Vives (1996) 'Competition for deposits, fragility, and insurance', *Journal of Financial Intermediation* 5.
- Matutes, C. and X. Vives (1998) 'Imperfect competition, risk taking and regulation in banking', forthcoming in *European Economic Review*.
- Mayes, D. and J. Vesala (1998) 'On the problems of home country control', Bank of Finland Discussion Paper 20.
- Merton R. C. (1973) 'Theory of rational option pricing' in R.C Merton and P. A. Samuelson (1992) *Continuous-time finance*, Oxford: Blackwell.
- Milgrom, P. and J. Roberts (1992) *Economics, Organisation and Management*, Englewood Cliffs, New Jersey: Prentice Hall.
- Mishkin, F. S. (1996) 'Bank consolidation: a central banker's perspective', NBER Working Paper 5849.
- Morgan Stanley Dean Witter (1997) 'European banking - the pace of consolidation accelerates'.
- Moore, R. R. and T. F. Siems (1998) 'Bank mergers: creating value or destroying competition?', Federal Reserve Bank of Dallas, *Financial Industry Issues*, third quarter.
- Myers, S. and R. Rajan (1998) 'The Paradox of Liquidity', forthcoming in *Quarterly Journal of Economics*.
- Neven, D. and Th. Von Ungern-Sternberg (1998) 'The competitive impact of the UBS-SBC mergers', Cahiers de recherches économiques du DEEP 9805, Université de Lausanne.
- Ongena, S. and D. Smith (1998), 'Bank relationships: a review', mimeo, Norwegian School of Management.
- Padoa-Schioppa, T. and F. Saccomanni (1991) 'Agenda for stage two: preparing the monetary platform', CEPR Occasional Paper 7.
- Peach, W. N. (1941) *The Security Affiliates of National Banks*, Baltimore: Johns Hopkins University Press.
- Peek, J., E. S. Rosengren and G. M. B. Tootell (1998a) 'Does the Federal Reserve have an informational advantage?', Federal Reserve Bank of Boston, Working Paper 98/2.
- Peek, J., E. S. Rosengren and G. M. B. Tootell (1998b) 'Is bank supervision central to central banking?' Federal Reserve Bank of Boston, Working Paper.
- Petersen, M. and R. Rajan (1994) 'The benefits of lending relationships: evidence from small business data', *Journal of Finance* 49.
- Petersen, M. and R. Rajan (1995) 'The effects of credit market competition on lending relationships', *Quarterly Journal of Economics* 110.
- Piloff, S. and A. Santomero (1996) 'The value effects of bank mergers and acquisitions' Wharton Financial Institutions Center Working Paper 97/7.

- Postlewaite, A. and X. Vives (1987) 'Bank runs as an equilibrium phenomenon', *Journal of Political Economy* 95.
- Prati, A. and G. J. Schinasi (1997) 'EMU and international capital markets: structural implications and risks', in P. R. Masson, T. H. Krueger and B. G. Turtleboom eds., *EMU and the International Monetary System*, Washington: International Monetary Fund.
- Rajan, R. (1992a) 'Insiders and outsiders: the choice between informed and arm's-length debt', *Journal of Finance* 47.
- Rajan, R. (1992b) 'A Theory of the costs and benefits of universal banking', mimeo, Graduate School of Business, University of Chicago.
- Rhoades, S. A. (1993) 'Efficiency effects of horizontal (in-market) bank mergers', *Journal of Banking and Finance* 17.
- Rhoades, S. A. (1996) 'Bank mergers and industrywide structure, 1980-94' Board of Governors of the Federal Reserve System, Staff Study 169.
- Rhoades, S. A. (1998) 'The efficiency effects of bank mergers: an overview of case studies of nine mergers', *Journal of Banking and Finance* 22.
- Ricerche e Studi (1998) *International Financial Aggregates: 239 companies*, Milan.
- Rochet, J. Ch. (1999) 'Solvency Regulations and the Management of Banking Risks', *European Economic Review*, forthcoming.
- Rochet, J. Ch. and J. Tirole (1996) 'Interbank lending and systemic risk', *Journal of Money, Credit and Banking* 28.
- Rolnick, A. (1987) 'The benefits of bank deposit rate ceilings: new evidence on bank rates and risk in the 1920s', *Quarterly Review of the Federal Reserve Bank of Minneapolis*, Summer.
- Salinger, M. (1990) 'The concentration-margins relationship reconsidered', *Brookings Papers on Economic Activity*.
- Sapienza, P. (1997) 'The effects of banking mergers on loan contracts', mimeo.
- Saunders, A. and I. Walter (1994) *Universal Banking in the US. What we could gain? What we could lose?*, New York: Oxford University Press.
- Saunders, A. and I. Walter (1996), *Universal Banking*, Chicago, London, Singapore: Irwin.
- Schumpeter, J. (1934), *The Theory of Economic Development*, Cambridge, Mass.: Harvard University Press (reprinted New York: Oxford University Press, 1961).
- Sharpe, S. A. (1990) 'Asymmetric information, bank lending and implicit contracts: a stylized model of customer relationships', *Journal of Finance* 45.
- Smirlock, M. (1985) 'Evidence on the (non) relationship between concentration and profitability in banking', *Journal of Money, Credit and Banking* 17.

- Sutton, J. (1991) *Sunk Costs and Market Structure: Price Competition, Advertising, and the Evolution on Concentration*, Cambridge, Mass.: The MIT Press.
- Task Force on the International Competitiveness of US Financial Institutions (1991) *Report*, Washington, D.C.: US Government Printing Office.
- Tesar, L. L. and I. M. Werner (1992) 'Home bias and the globalization of securities markets', NBER Working Paper 4218.
- Vander Vennet, R. (1996) 'The effects of mergers and acquisitions on the efficiency and profitability of EC credit institutions', *The Journal of Banking and Finance* 20, pp. 1531-58.
- Vander Vennet, R. (1997) 'Determinants of EU bank takeovers: a logit analysis', mimeo, Universiteit Gent.
- Vander Vennet, R. (1998) 'Cost and profit dynamics in financial conglomerates and universal banks in Europe', paper presented at the 1998 SUER/CFS Colloquium, October.
- Vives, X. (1991a) 'Banking competition and European integration', in A. Giovanni and C. Mayer (eds.), *European Financial Integration*, Cambridge: Cambridge University Press.
- Vives, X. (1991b) 'Regulatory reform in European banking', *European Economic Review* 35.
- Vives, X. (1992) 'The supervisory function of the European system of central banks', *Giornale degli Economisti e Annali di Economia* 51.
- Vives, X. (1998a) 'Competition and regulation in European banking', mimeo, Barcelona: IAE.
- Vives, X. (1998b), 'La supervisión bancaria en la Unión Monetaria Europea', forthcoming in *EL euro y sus repercusiones en la economía española*. Madrid: Fundación BBV.
- von Thadden, E. L. (1995) 'Long-term contracts, short-term investment, and monitoring', *Review of Economic Studies* 62.
- von Thadden, E. L. (1998) 'Asymmetric information, bank lending and implicit contracts: the winner's curse', mimeo, Université de Lausanne.
- von Thadden, E. L. (1999), 'Liquidity creation through banks and markets: multiple insurance and limited market access', *European Economic Review*, forthcoming.
- White, E. (1986) 'Before the Glass-Steagall act: an analysis of the investment banking activities of national banks', *Explorations in Economic History* 23.
- White, W. R. (1998) 'The coming transformation of the European banking industry', mimeo, Basel: Bank of International Settlements.