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European banking after EMU



European Investment Bank

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On the road to wonderland? Bank restructuring after EMU

"Now here you see, it takes all the running
you can do just to stay in the same place.

If you want to get somewhere else, you
must run at least twice as fast as that!"

Lewis Carroll, *Through the looking glass*.



Christopher Hurst



Eric Perée



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1. Introduction

Throughout the industrialised world the banking sector has embarked on a programme of restructuring and consolidation. In Japan the severity of the banking crisis has recently forced both the banking sector and the authorities to recognise deep-rooted problems and to take decisive action. In North America, the banking landscape is also undergoing major changes. Segmentation of activities enshrined in the Glass-Steagall act is being reduced and most restrictions to interstate banking consolidation have been abolished. Similar developments also characterise the European banking scene. However, as long as European countries maintained their monetary sovereignty, the scope for cross-border banking consolidation was limited. The introduction of the euro may, therefore, usher a period of restructuring and consolidation in Europe.

This paper discusses the restructuring of the banking sector in Europe and how it is affected by EMU. In order to identify the fundamental forces shaping the restructuring process, the next section looks back at the evolution of the banking industry over the last twenty years and how EMU interacts with these forces. Section 3 then focuses on the role of banks, their interaction with the capital markets and some idiosyncrasies of the European banking sector. Section 4 reviews the overall financial performance of banks to diagnose the potential strengths and weaknesses of European banks. Section 5 then turns to the discussion of the recent experience of consolidation and restructuring of the banking system on both sides of the Atlantic Ocean, while Section 6 attempts to map out the likely restructuring of the European banking industry in the coming years.

Throughout the paper, we take a global view of the banking sector. We do not attempt to discuss the situation in the individual countries of Euroland, and even less of developments in the various market segments.

2. Changing landscape leading to EMU

In the thirty-year period between the end of World War II and the mid-1970s countries of the OECD zone recorded rapid growth and their economic structure underwent profound changes. However, the overall organisation of the banking industry remained broadly unchanged. The major features characterising the sector rested on the following principles. First, the authorities were more concerned by the stability of the financial system than by its efficiency and competitive behaviour; they imposed heavy regulation on banks. Second, the provision of financial services was segmented and the various types of banking institutions each had their own privileged fields of

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operations. Third, banks operated in an environment where many interest rates, on both the asset and liability sides of the balance sheet, were regulated. In several countries there were also quantitative restrictions on the operations that banks could undertake. Fourth, bank operations were conducted within clear national boundaries, and cross border banking activities were undeveloped.

Strains in this organisation progressively built up and became visible by the mid-1970s. A rapid period of change in the financial sector followed. Deteriorating macroeconomic performance, rising inflation and interest rates undermined the competitive balance between banks and attracted competition from non-bank enterprises. On the asset side, the banking industry lost market power over many of its large borrowers, who could choose among alternative sources of finance. On the liability side, banks evolved from a protected position in which they could access deposits at regulated below-market interest rates, towards a setting in which they had to pay competitive prices to raise funds (Berger, Kashyap and Scalise, 1995). Behind the above changes to financial architecture, demographic trends, the accumulation of wealth, rapid developments in computing and information technology played an essential role. Technology had a deeply enabling role, as it made possible a dramatic reduction in the cost of processing routine transactions, and a widening of both the variety of products on offer and the distribution channels to end-users.

In addition to these changes, a more subtle transformation has taken place, and the basic role of banking has changed. Traditionally banks have been viewed as financial intermediaries playing the middleman between savers and borrowers, and providing a solution to high transaction costs and information and monitoring problems. While this role of banks remains valid nowadays (indeed this is still the business of most small and middle-sized banks), the business of larger banks has widened to become facilitators of risk transfer (see Allen and Santomero, 1998).

While the traditional intermediation role of banks remains valid, the business of larger banks has widened to become facilitators of risk transfer.

Finally, a further major change in the banking landscape has been the dramatic growth of international activities. This has taken the form of cross-border finance, together with the establishment of banking offshoots in other countries. Naturally, the expansion of cross-border banking activities has prompted the development of international co-operation/co-ordination for the supervision and monitoring of banks, and the establishment of commonly accepted rules. The Basle Committee for Banking Supervision has played a decisive role in this respect through the establishment of industry standards of good management.

The European banking scene has broadly followed the pattern of evolution observed in other industrialised countries. However, the integration process in the European Union has meant that the pressures to co-ordinate have been greater. Over the years, activities in the financial sphere have been subject to a number of European Directives. For the banking sector, the most important has been the Second Banking Directive, part of the Single Market Programme. It introduced the concept of the "single passport" and the recognition of "home country control". In plain English it means that banks recognised and approved in their home country could freely offer banking services across the European Union, and that the supervisory function was allocated to the home country supervisor. In addition, the Second Banking Directive also endorsed universal banking as the EU

banking model (1). While in theory the Directive allowed an integrated banking market in the EU, practice has not lived up to expectations, especially in the retail and small business sector (see European Commission, 1997).

As long as countries continued to enjoy monetary sovereignty, the currency factor hampered integration of the banking market. While it is true that expansion beyond the national borders in other EU markets would normally provide a better geographic diversification of risks and make banks less sensitive to region- or country-specific shocks, currency segmentation exposed banks to additional financial risks unless they also matched assets with liabilities of the same currency, or engaged in expensive hedging.

The introduction of the euro removes one big roadblock to integration, and the consequences are likely to be wide ranging.

Thus, the introduction of the euro removes one big roadblock to integration, and the consequences are likely to be wide-ranging. On the one hand, it diminishes the need to maintain banking relationships in several countries and opens the way for corporations to consolidate their operations on fewer institutions. In the same spirit, it also permits banks to aim for retail customers in a range of countries without having to support currency risk. Indeed, it also improves the price transparency in the provision of financial services, and takes away the informational and funding "edge" enjoyed by local banks with respect to domestic monetary policy.

3. Comparisons between financial systems

The global impact of banking depends on the relative size of the banking industry. In this respect, it is worthwhile to look at some indicators of the size of the banking and financial industry in Euroland relative to other regions.

Table 1 presents some aggregate indicators on the structure of financial markets in Euroland, the UK, the US and Japan. To eliminate differences resulting from the size of the economy, all figures are presented as ratios to GDP. Funds from savers to investors can be channelled either through the banking sector or through the capital market (bonds or shares). The first line of Table 1 provides the relative size of the sum of bank assets, equity market capitalisation and the bond market. While there are some differences, the ratio for all zones is in the range from 300 percent to 375 percent (2) and suggests that the aggregate level of financial development is similar in all countries. The following two lines split total financial assets between the banking sector and the capital market. Here some sharp differences emerge. Euroland stands at one end of the spectrum, as the banking sector accounts for over 50 percent of financial intermediation. At the other end is the US, where the banking sector represents only about one-fifth of the total. The UK and Japan are somewhere in between these two extremes.

1) Other Directives have harmonised the definition of a credit institution, the definition of own funds, solvency ratios and large exposures.

2) Note that this indicator is influenced by the level of share prices. The other elements (bonds and banking assets) are recorded at nominal value.

Table 1. International comparison of financial architecture

	Euroland	UK	USA	Japan
Total (% GDP)	291%	376%	377%	303%
of which: Banks	54%	32%	20%	38%
Markets	46%	68%	80%	62%
of which: Stocks	33%	75%	48%	45%
Bonds	67%	25%	52%	55%

Note: Figures for the banking sector are net of interbank claims

Sources: OECD Financial accounts, OECD Banking profitability, EU European Economy, IFC Emerging stock market factbook, BIS International banking and financial market developments, IMF IFS

The differences between Euroland and the US do not stop here, however. Within the capital market, the relative weights of the bond and the equity markets are markedly different. Indeed, in the US, the bond and stock market are about the same size, while in Euroland the bond market accounts for about two-thirds of the capital market. Furthermore, the bond market in Euroland is much more skewed towards high quality borrowers than in the US.

Broad indicators such as the ones presented above are relatively crude, and one should recognise that the roles of the capital market and banks are not necessarily antagonistic. In the US a significant share of large banks' off-balance sheet activities ultimately support the capital market. For example, back-up lines of credit and derivatives are linked to capital market transactions. According to Gertler (1995), this represented about 30 percent of the balance sheet of the US banking sector in the early 1990s.

The differences between the US and Euroland result not only from history, but also from policy action taken by the authorities. In Anglophone countries, the development of the capital market has been supported with tax breaks for the constitution of pension assets, and, in the US, guarantees offered to support the development of the mortgage market. Similarly, in the US, the Glass-Steagall act segmented the market for financial services and induced competition for commercial banking activities from non-banks. On the other hand, in Continental Europe the universal banking model has tended to concentrate most financial activities within the banking sector. Indeed, in Euroland banks engage in a host of financial activities that are provided by different organisations in the US (i.e., mutual funds, asset management, investment banking).

4. Bank performance in Euroland

Before assessing the potential effects of EMU on European banks, it is useful to examine how well banks have coped over the last decade or so with the changes outlined in Section 2. With this aim, we look at the evolution of a range of conventional balance sheet and profit and loss ratios for Euroland, as well as for British and North American banks. The raw statistical data are taken from the OECD Banking Profitability Statistics (3). It is clear that aggregate banking ratios hide the diversity that exists across countries and individual institutions, and that they are a relatively coarse

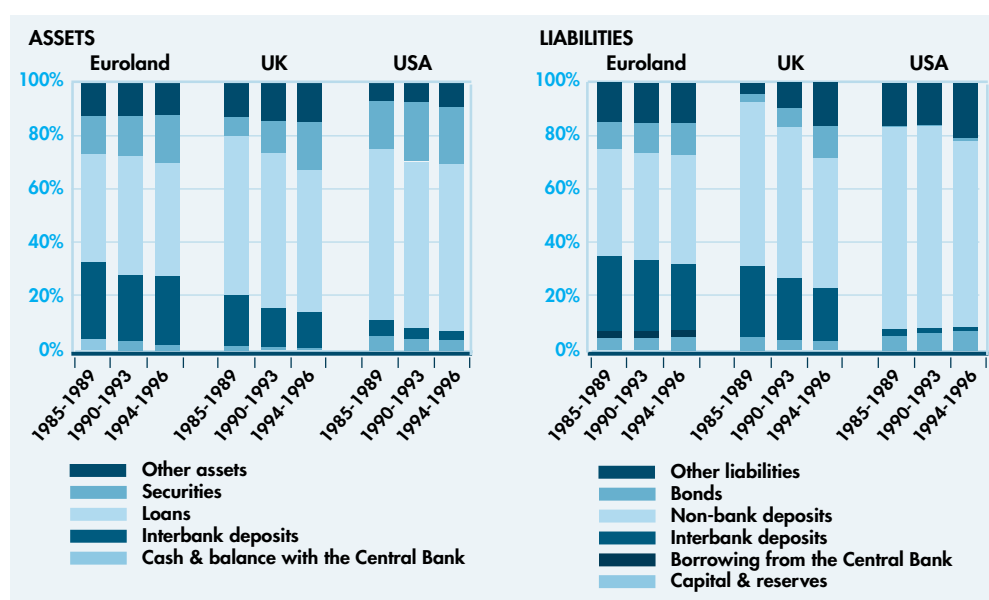
3) Before 1995, the OECD did not report any statistics for banks operating in Ireland. Hence, when we refer to Euroland banks it actually excludes Ireland. Furthermore, we only consider commercial banks in this section. The term "banks" is used loosely to describe this group of institutions.

The differences in financial markets between the US and Euroland result not only from history, but also from policy action taken by the authorities.

way to gauge the health of the banking sector. Despite these limitations, such ratios do provide some insight into the state of the banking sector in Euroland.

We proceed by analysing the evolution of the main determinants of the profitability of Euroland banks, moving from income, to operating costs and provisioning. To the extent that the typical balance sheet structure of banks in the three regions differ, some distortions to the ratios is likely to result. Hence, a useful starting point is to look at the structure of balance sheets. This is given in Figure 1.

Figure 1. Balance sheet structure of commercial banks



The breakdown of assets is quite different. In Euroland more than a quarter were made of interbank deposits, while in the US they represented only 3 percent.

Consider first the asset side of the balance sheet. In all regions there has been a marked increase in the proportion of total assets invested in securities. By the mid-1990s securities represent about one-fifth of total assets. There is also the similarity between regions, in that the sum of loans and interbank deposits are about 70 percent of total assets; however, the breakdown between loans and interbank deposits is quite different. In Euroland more than a quarter of assets were made of interbank deposits, while in the UK and the US, they represented only 11 percent and 3 percent, respectively. As a consequence, loans represent a much larger share of total assets in both the UK (60 percent) and the US (66 percent) than in Euroland (where they account for barely 45 percent of total assets).

On the liability side, similar disparities exist. US commercial banks fund their operations almost exclusively with deposits from non-banks (representing more than 70 percent of liabilities), while in Euroland these deposits are only 40 percent of the total. British banks fall somewhere in between. Funding from the interbank and the capital markets, is negligible in the US. By contrast, Euroland banks funding from the same sources accounts for about a third of their liabilities.

4.1 Structure of income

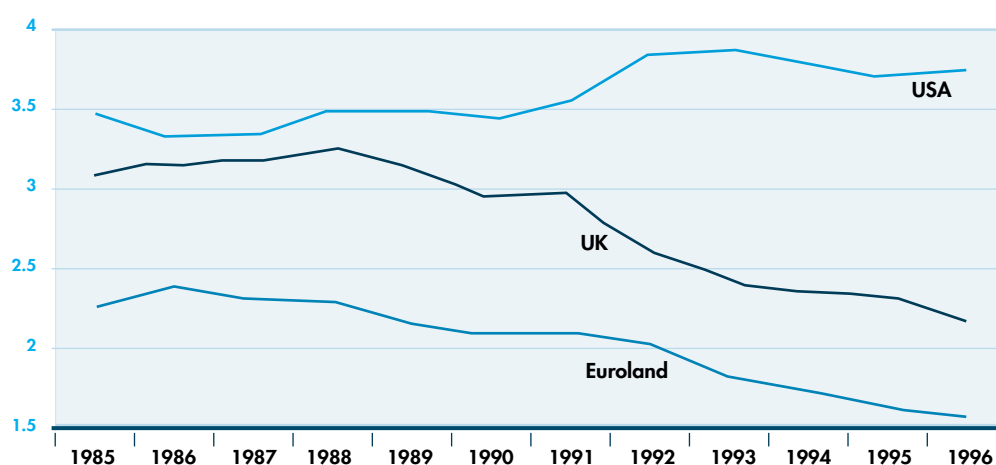
The income from banking operations is usually split in two groups. The first comprises the net interest income from financial intermediation. The second represents the income earned from the alternative

services provided by banks (i.e., fees and commissions earned from transaction services or off-balance sheet activities) and from own-account investment (i.e., proprietary trading activities). In most industrial countries, interest income generally accounts for 60 percent to 75 percent of total income.

The interest margins of both Euroland and the UK trended downwards. There is no evidence of a similar trend in the US.

Figure 2 depicts the evolution of net interest margins (i.e., net interest income divided by total assets) for the three regions from 1985 to 1996. Throughout the period, net interest margins in Euroland were significantly lower than in both the UK and the US. By the end of the period, the net interest margin in Euroland was a paltry 1.5 percent of assets, compared with 2.25 percent in the UK and 3.5 percent in the US. Though the margins of both Euroland and the UK trended downwards for most of the period, there is no evidence of a similar trend in the US.

Figure 2. Net interest margins, percent of assets

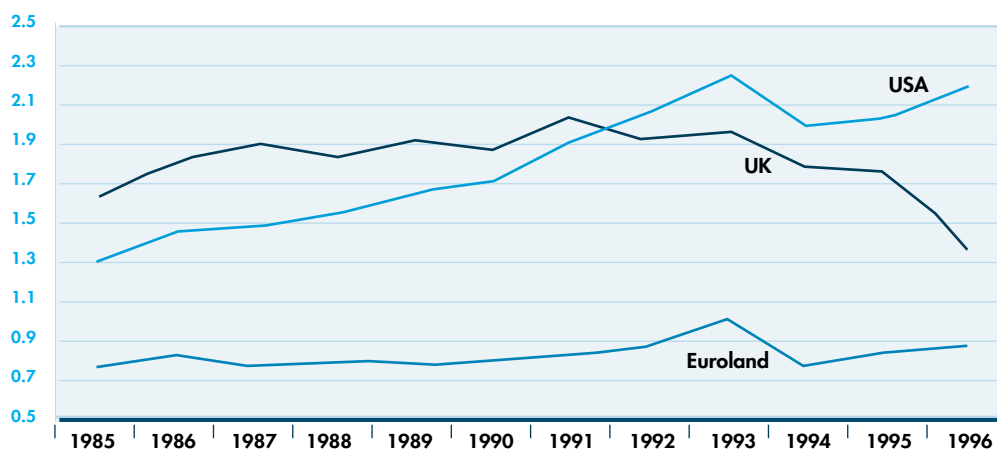


Such striking differences naturally raise the question of how they come about. We have seen that interbank operations are a significant share of the activities of Euroland banks. The margin on this business is very small, and this much reduces the overall average. However, that is not all. The low level of development of the capital market in Europe also means that a large share of lending goes to high quality corporate borrowers, and hence attracts lower margins. Public sector lending is also more important in Continental Europe, and this is another low-risk, low-return business (4). Finally, falling inflation and nominal interest rates in Europe could have removed one source of support for the margin.

Income is also generated by fees and own-account trading. Figure 3 depicts the evolution of non-interest margin in the three regions. Here again major differences emerge. In Euroland there has been no significant change, and the margin hovers between 0.7 percent and 1 percent during the whole period. Conversely, in the US, non-interest margins increased steadily until 1993, and then stabilised at a high level of around 2.25 percent. In the UK, non-interest margins are also significantly higher than in Euroland, though British margins have fallen significantly in the mid-1990s.

4) Consider the following simple illustration. The interest margin is 3.75 percent of assets for American banks. Euroland banks charge the same margin for small and medium enterprises and retail customers, but these loans represent only 30 percent of the balance sheet (compared to 70% in the US). The difference is made up by interbank and high quality corporate loans carrying a margin of, say, 25 basis points. The average net interest margin from these assumptions falls to only 1.75 percent for Euroland banks. While this is just a simple example, it is close to the actual figures observed in the mid-1990s.

Figure 3. Non-interest margin, percent of assets

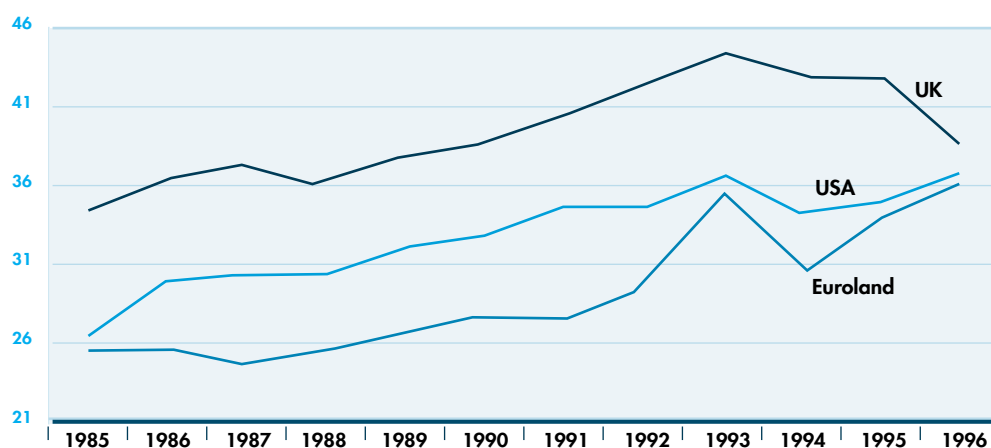


Since the mid-1980s, bond market investments have generated robust performance as interest rates and inflation fell. However, the large investments in bond portfolios by Euroland banks have failed to exert a significant positive impact on their income.

At this stage, it is useful to contrast the evolution presented in Figure 3 with another yardstick that is often used when discussing the evolution of non-interest income: the share of total income derived from sources other than interest payments. This is presented in Figure 4. Seen in this way, one gets quite a different picture. The share of gross income derived from the non-interest margin has increased markedly both for American and Euroland banks, and ended up at about 40 percent of total income in all three regions. At first sight this suggests that there has been a dramatic adjustment of business away from traditional intermediation in favour of fee-based activities. However, this conclusion does not stand a closer inspection. While it is correct that American banks have been successful in expanding their fee-related operations, in Europe the increase seen in Figure 4 has little to do with the growth of this business. It is essentially driven by the sharp contraction of the interest margin over the same period.

The share of gross income from the non-interest sources has increased for Euroland banks, but this is essentially driven by the sharp contraction of the interest margin.

Figure 4. Share of non-interest income in total income, percentage

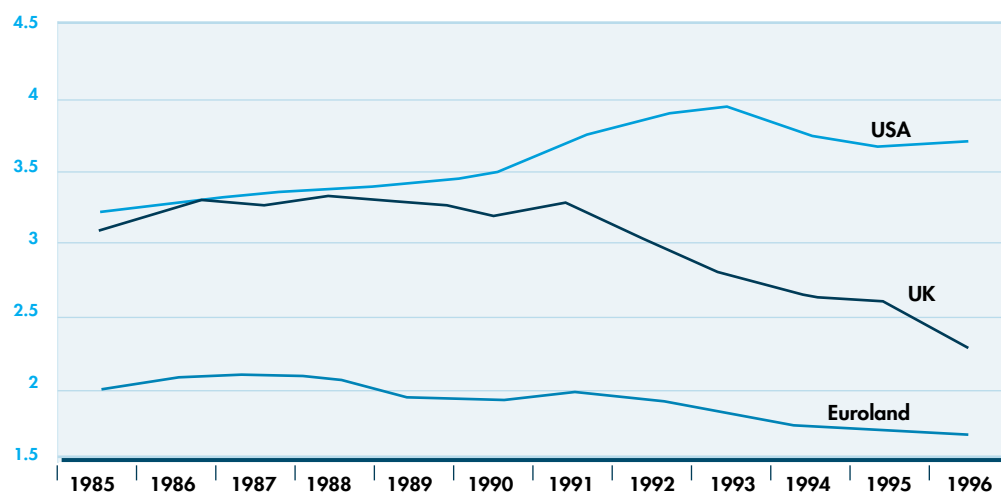


On the whole, the above evidence suggests that, when compared to American commercial banks, European banks have much lower margins. The interest margin has followed a downward trend since the mid-1980s, while the non-interest margin has been stagnant. Total gross income for Euroland banks in the mid-1990s was only about 2.5 percent of assets, compared with about 6 percent in the US and 4 percent in the UK. However, the balance sheet structure of Euroland and American banks is markedly different and this explains some of the gap, though how much is due to this is difficult to quantify.

4.2 Costs

Naturally, the profitability of banks is not only driven by revenue generation, but also by costs. Figure 5 depicts the evolution of total operating costs to total assets over the period. Operating costs of American banks rose steadily until 1993, and then stabilised at around 3.75 percent of assets. In both the UK and Euroland, operating costs have followed a different path. Relatively stable until the beginning of the 1990s, they have trended down. By the mid-1990s, Euroland bank costs were equivalent to about 1.75 percent of assets. In the UK, cost reductions have been much sharper, falling, by a full percentage point in a period of five years, to around 2.25 percent. As with the margin, these ratios are influenced by the structure of the balance sheet. In particular, interbank lending is not only low-margin, but also low cost, business.

Figure 5. Operating costs, percent of assets

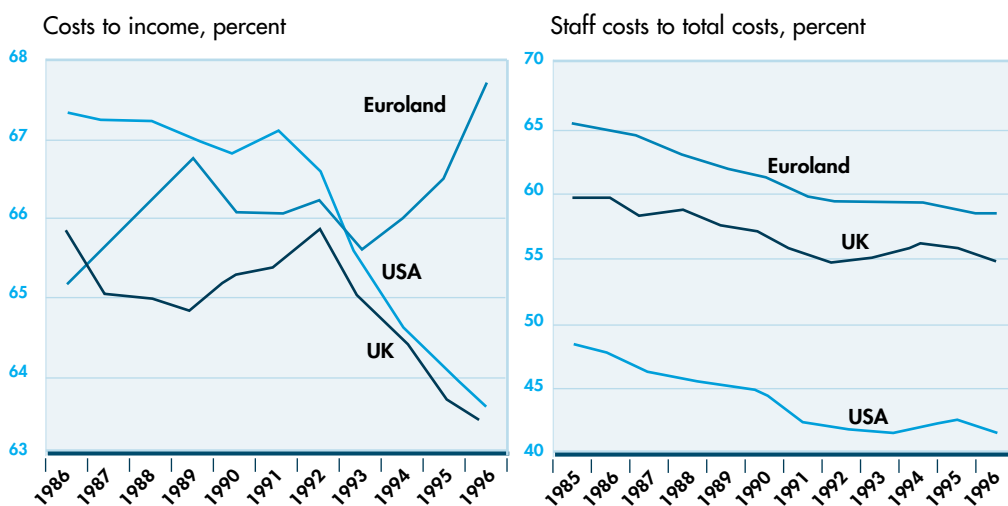


The decreasing cost ratio in Europe must also be seen in the context of the evolution of assets. In Euroland, costs have grown by 3.5 percent per year since 1985 while assets were expanding at double that rate. There is a somewhat similar evolution in the UK. Thus, the relative improvement in Europe is essentially driven by balance sheet growth rather than cost cutting.

The relative cost improvement in Continental Europe is essentially driven by balance sheet growth rather than cost-cutting.

An alternative way to look at the cost of banks is to compare it to gross income. Now, Euroland banks appear in a much less favourable light. Indeed, as depicted on the left-hand side of Figure 6, the cost base of Euroland banks has deteriorated significantly, i.e., operating costs fell less rapidly than operating margins. By contrast, in both the US and the UK, the fraction of gross income eaten away by operating costs has fallen markedly since the turn of the decade.

Figure 6. Operating costs



Note: three-year moving average

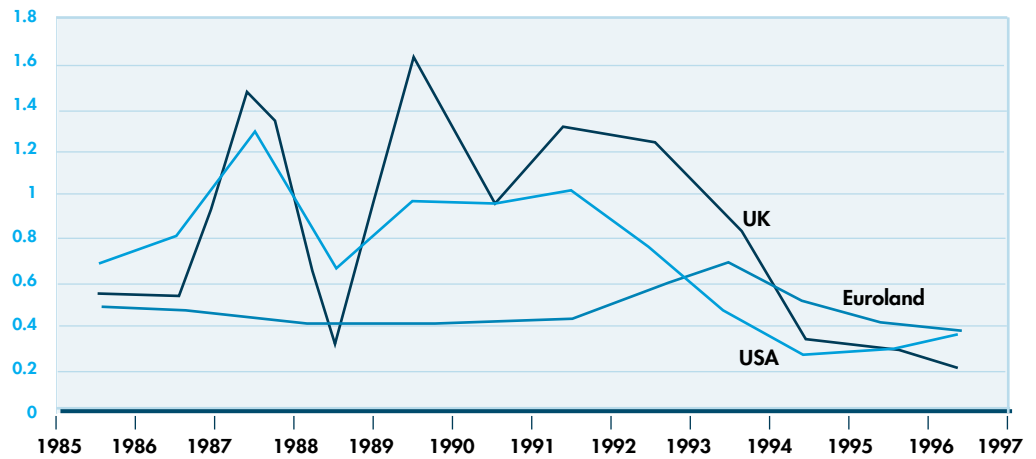
The right-hand panel of Figure 6 depicts the evolution of the share of operating costs absorbed by staff. The dominant feature is that the ratio of personnel costs to total costs has fallen by between 5 and 7 percentage points in each region, although there has been essentially no improvement in the UK and the US since 1992. Despite the similarity in the broad downwards trend, the Euroland staff cost ratio remains about one-half above that of the US.

4.3 Provisions

Since banking activities are risky, looking at gross income and operating cost provides only a partial view of their profitability. One of the missing elements is the cost of provisioning. Figure 7 presents the evolution of net provisions over the last 12 years. The evolution of provisioning over time is heavily influenced by the business cycle and the rate of provisioning depends on the average credit quality of the asset base. The business cycle effect is clearly visible in 1991-92 in the US and the UK, when these economies were in recession. In Euroland, a similar hump can be seen in 1993-94.

While the provisioning rates for all three zones have converged from 1994, the average rate of provisioning in Euroland over the whole period is much lower than in the UK and the US. Over the decade, Euroland banks have had to make annual provisions equivalent to about 0.45 percent of assets, while in the US and the UK the average rate of provisioning was nearly twice as large. The reason for this difference is to be found in the balance sheet structures discussed before.

Figure 7. Net provisions, percent of assets



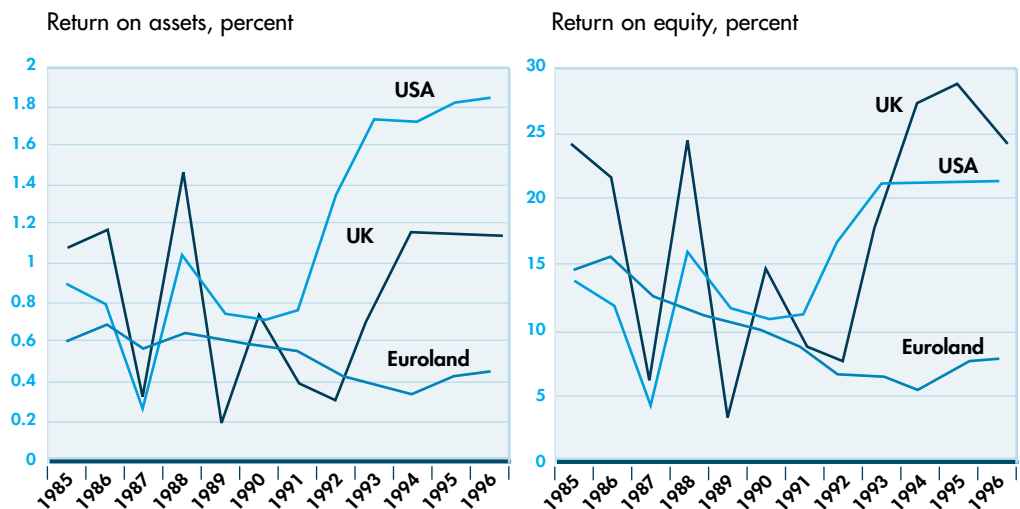
4.4 Profitability

The return on assets have followed sharply different paths since the beginning of the 1990s with a dramatic increase in the profitability of British and American banks.

Having looked at the various components of income and costs, how do these elements come together in terms of overall profitability? Figure 8 presents the evolution of pre-tax profitability relative to both assets and equity (5).

Consider first the return on assets (ROA). Two striking features emerge. On the one hand, ROA is much less volatile in Euroland than in both the UK and the US. On the other hand, ROA in Euroland and in Anglophone countries has followed sharply different paths since the beginning of the 1990s. While the business cycle probably plays some role in the dramatic increase in the profitability of British and

Figure 8. Profitability



5) Using after-tax profit instead of pre-tax profit would not lead to any significant changes in the global evolution as the actual average tax rate (at between 35 percent to 45 percent of pre-tax profit) has not changed substantially over time, and is similar across the three regions.

American banks in the 1990s, their average profit rate over the whole sample period (0.82 percent and 1.15 percent) is noticeably higher than that achieved by Euroland banks (0.57 percent).

With the introduction of the Basle capital ratios for broad classes of credit risk, the capital that banks must maintain depends on the riskiness of their assets. Indeed, measured on a nominal basis the (shareholders') equity to asset ratio of Euroland banks (5.5 percent from 1992 to 1996) is markedly lower than for American banks (8.2 percent over the same period). Thus, the comparison on a ROA basis might lead to a distorted picture since the lower average risk of the balance sheet allows Euroland banks to operate with a higher leverage. However, using the return on equity (ROE) as the yardstick for profitability does not change the basic thrust of the conclusions (see the right-hand panel of Figure 8). While Euroland banks' profitability recovered slightly with the economic rebound in 1995, the performance of both UK and US banks after 1992 is significantly higher than during the previous ten years. However, it should be remembered that this has been supported by an extraordinarily positive domestic environment, especially in the US, and such performance may not be sustainable in the medium-term.

4.5 The overall check-up

From the comparison of Euroland commercial banks to their British and American peers, the following overall diagnosis emerges:

- Euroland banks generate a relatively low gross revenue stream and have higher costs.
- Despite higher leverage, due to their better average asset quality, the return on shareholder funds in Euroland in the 1990s is much lower than for banks in Anglophone countries.

For the sector as a whole, wastage due to poor management is over one-third of gross profits.

The view that costs are not well-managed in many European banks is supported by other empirical work carried out by the Chief Economist's Department of the EIB and also reported in this volume (see Wagenvoort and Schure). This work has shown that there are substantial managerial inefficiencies in European banks. Most other studies have also found that there are large potential gains from improving management skills in controlling costs - average X-inefficiency in the sector is of the order of 15 to 20 percent (6). Another way to look at this is that, for the sector as a whole, "wastage" due to poor management is over one-third of gross profits. Many studies show similar management shortfalls in the US, and substantial possibilities to reduce costs in that country as well.

While there are many factors that could potentially explain the poor performance of Euroland banks, it is extremely difficult to quantify them with any precision (7). However, several broad classes of causes can be distinguished:

- Euroland banks may have inadequate product mixes and pricing strategies for corporate clients, together with a lack of understanding of cross-subsides between product lines and customers.
- In addition, the cost structure of European banks appears both too high and too inflexible. We have seen that the costs of Euroland banks are considerably more skewed towards labour than in the US. Low labour flexibility then results in a more rigid cost base.

6) X-inefficiency is the difference in costs between a particular firm and a firm producing exactly the same outputs but operating at the industry's best practice.

7) See also European Central Bank (1999), Danthine et al., (1999) and White (1998).

- Low profitability could also be the result of a distorted competitive environment. Even if commercial banks were driven purely by profit motives, their profitability would not be immune to the behaviour of competitors that do not consider profits as a decisive target. In several European countries, a large share of the banking market has been captured by mutual banks and/or public sector banks (see Wagenvoort and Schure, for more details of the structure of the banking sector in different European countries). For example, these institutions are responsible for as much as three-quarters of German bank assets.

Consistent low profitability in any industry is usually associated with excess capacity. While on the basis of a range of indicators there is reason to suspect that Euroland could be over-banked, it is difficult to pinpoint a precise measure of excess capacity. Indeed, within the universal banking model adopted in Europe, physical measures of over-banking, such as the number of branches or staff, cannot capture the fact that there are possibilities for extending the range of products that the branch network can sell.

5. Restructuring and consolidation

5.1 Getting into shape

It is clear that poorly performing banks will need to look seriously at ways to improve in the more competitive post-EMU environment. There are two alternative and complementary ways to do this. In the first approach, banks can transform themselves from the inside by altering the way they operate. This could be seen as a bank moving autonomously toward best practice. The other approach relies on the market for corporate control to bring about the necessary changes. Here, improvements come from the transfer of management skills from better-run institutions.

Let us consider the first approach, and assume that European bank managers wish to boost profitability (as measured by the return on equity). How could this be achieved? The naïve recommendation would be to focus on the profitable operations and to discontinue unprofitable business. However, putting this into practise is a real challenge. There are four factors determining the profitability of operations: the capital required, the cost of producing the service, the price charged for the service and the potential cross-(dis)economies of producing and selling the services. Typically, banks provide a bundle of financial services and look at profitability on the basis of the complete relationship with a given customer, rather than on disaggregated business lines. Thus, for the sake of maintaining a banking relationship, banks may accept to underprice some services as a "loss-leader" for other operations. The problem arises when a lack of understanding of cross-subsidies, or over optimistic expectations, mean that these loss-leaders actually lead to nothing but losses.

The development of the capital market provides a competitive threat. But it also offers ways for banks to manage their balance sheets.

Irrespective of whether such cross-subsidisation has been a necessary evil in the past, a cross-subsidy between lending and fee-business may no longer be required in the future. Indeed, with the development of the capital market and advances in securitisation techniques, it becomes easier for banks to sell some of their loans in the form of securities to the capital market. In this way, a bank can maintain a relationship with a customer without tying-up capital in unprofitable lending. In this respect, the development of the capital market provides both a competitive threat and opportunities for banks. On the one hand, banks will be faced with disintermediation as investors and savers side-step them. On the other hand, it offers ways for banks themselves to manage their balance sheets.

Naturally, the way securitisation will develop in Europe also depends on the evolution of the capital requirements of banks. Currently, there is no difference between lending to large creditworthy corporations and to small enterprises. Should, in the future, the capital required to back lending to the corporate sector be more finely differentiated, then the argument for selling loans to the capital market might weaken. But the underlying logic will be preserved - banks should sell to the capital market those parts of the loan book that private investors are willing to refinance at lower returns than bank shareholders require. Should securitisation take-off on a grand scale, then a substantial reduction of the balance sheet of the banking sector would follow (8). In turn this would free up some capital for other more profitable purposes.

The second route to improving performance is by replacing management. In this context, it should be recalled that the industrial structure of the banking sector deeply influences the transformation process. The market for banking services is segmented, and some segments are subject to acute inertia. It is a well-known fact that for both small and medium enterprises and retail customers, banking relationships tend to be long-term. Transferring business to a new bank implies large search and switching costs. Likewise, in lending to SMEs, banks accumulate private information that tend to lock small companies into a captive relationship. Another feature of the banking sector is that entry of new banks and exit of existing banks are relatively uncommon. This is because high sunk costs, coupled with customer inertia, discourage the emergence of new banking firms, and make it extremely costly for well-managed banks to drive their weaker competitors out of the market. This means that the main vehicle for restructuring the sector is through the merger of existing institutions. To use the words of Vives (1990, p. 20): "*merger looks better than predation*".

5.2 The possible benefits of mergers and acquisitions (M&A)

Mergers between banks are subject to regulatory scrutiny and are often friendly deals rather than hostile take-overs. However, they can still yield substantial efficiency gains. Benefits can come about in a number of ways. For example, the merged institution may be able to reduce costs through the consolidation of back office operations, or the closing of branches when networks overlap.

Does a bigger size in itself lead to lower average costs? The jury is still out on this question. Most studies of the US data have found that there were only economies of scale for very small banks (say, assets of less than EUR 250 million). However, a few other studies of the US and of Europe have found economies of scale to larger sizes (9). Associated with this result, it is argued that larger banks are needed now to afford "lumpy" investments in IT. However, Wagenvoort and Schure find the traditional result of rapidly exhausted economies of scale (they disappear when assets reach EUR 600 million). It is noteworthy that, in nearly all studies, average costs remain constant once the initial zone of economies of scale are exhausted. In the absence of additional evidence, we prefer to remain sceptical about either the additional benefits or additional costs of a large size.

8) According to estimates by McCauley and White (1997), about a third of the corporate loan book in Europe could move to the capital market.

9) One much quoted study by Berger and Udell (1997) with US data from the early 1990s (rather the 1980s data used in most of the literature) found economies of scale up to USD 25 billion of assets.

One advantage of a merger could be that the better diversification of assets and liabilities reduces the cost of risk management, and this is one justification for increased cross-border banking in Euroland. The stabilisation of returns from diversification means that the probability of bankruptcy is reduced and that risky but profitable business can be increased without additional capital being necessary.

Some studies find that US acquisitions do lead to greater risk diversification (e.g., Craig and Santos, 1997, and Hughes, Lang, Mester and Moon, 1998). However, the data reveal that the acquiring institution tends to change the composition of the target bank's assets so that the resulting integrated organisation becomes a larger version of itself (Craig and Santos, 1996). Banks do not appear to have the strategic goal of developing diversified asset structures when they enter into M&A deals, and risk management is one of the least cited reasons by management for a merger. Any benefits that do occur would appear to be a by-product, rather than the driving force behind acquisitions.

Take-overs may also allow banks to increase their market power. Some studies have shown that mergers which increase market concentration subsequently lead to lower deposit rates for depositors (see Prager and Hannan, 1998, and Simmons and Stavins, 1998). Clearly, the persistence of this phenomenon is linked to weak competition in retail markets, as discussed above.

Economies of scale and scope, risk diversification, and anti-competitive goals provide the incentives for some mergers. Nonetheless, a reduction in management inefficiency would seem to be the most important factor for success.

Perceptions regarding economies of scale and scope, risk diversification, and anti-competitive goals certainly do provide the incentive for some mergers. Nonetheless, a reduction in the high average X-inefficiency would seem to be the most important factor for success when looking at the sector as a whole. One survey of a number of bank consultants and stock analysts found the consensus view that the most significant cost savings could have been accomplished without a merger (Rhoades, 1998). Improvements to performance come through the transfer of management skills rather than technical issues per se.

5.3 The experience with bank mergers in the US

Over the last decade the US has experienced a banking merger-wave, with the number of banks dropping by about 30 percent. There have also been a growing number of very large mergers, a phenomenon, which was practically unseen before the 1980s. Mega-deals involving more than USD 100 billion of assets are also increasingly taking place (e.g., 1998 saw the merger of Citicorp and Travellers, Bank America with NationsBank, BancOne with First Chicago, and North West with Wells Fargo).

The US experience can give some insights into what could happen in Europe. Geographical limitations to branch networks have only recently been fully removed in the US, and that country is also moving from a group of regional banking markets into a national continent-wide market. The process of deregulation began in the 1980s as a number of US States reduced the barriers to out-of-state banks operating in their jurisdiction, and culminated in the passage of federal interstate banking regulation in 1994 (Berger, Kashyap and Scalise, 1995). One study (Brook, Hendershott and Lee, 1998) has found that US bank share prices reacted favourably to the 1994 legislation (i.e., the Riegle-Neal Interstate Banking and Branching Efficiency Act) and that its enactment could have generated of the order of USD 85 billion of shareholder value. A conclusion from this is that geographical restrictions had allowed inefficient banks to survive in the past.

A curious fact about all the US merger activity is that analysts are unable to find consistent improvement to performance in the merged companies.

However, a curious fact about all the US merger activity is that analysts are unable to find consistent improvements to performance in the merged companies (10). These gains are usually examined with "event" studies, that try to identify the impact of a merger on financial ratios of profitability and operating costs, or with stock price movements.

The overall lack of any net gain to shareholders of merger activity could be explained by the fact that managers are pursuing objectives that are not related to shareholder value. Managers could be trying to maintain an easy life, either through maintaining a dominant position in their local markets, or by making their institutions sufficiently large that they are difficult to swallow by prospective acquirers. Or they may simply be maximising their prestige, salary and perks, since these are often related to size.

Some insights into recent mergers can come from looking at the effective price paid to purchase a customer account. This increased from an average of a little over USD 1 000 in 1993, to some USD 2 500 in 1997. To generate a rate of return of 10 percent with this latter price would imply an average annual profit of over USD 400 per customer. Current average profits are about USD 150 per customer (*The Banker*, pp. 68-69, January 1999). Obviously this is an overly simple calculation, but it does show that recent mergers may only make sense if there is a tremendous growth in profits.

Management objectives that are unrelated to shareholder value certainly explain some mergers, but given the volume of M&A activity, it is hardly credible that all managers in the sector are either incompetent, or so systematically hoodwinking shareholders. One explanation for the results can be found in the technical difficulties with quantifying the affects of an acquisition. For example, in order to have "clean" data for the empirical analysis, merger studies often exclude those banks that have been involved in multiple mergers over the relevant time period. Some US banks have been very active in acquiring other banks (11), and it is exactly these banks that are likely to be most efficient at managing a merger. Indeed, De Young (1997) finds efficiency gains are concentrated among those banks that are frequent acquirers. There may, therefore, be an important selection bias that affects the results.

As regards those studies that analyse financial ratios, the accounting data used is based upon historic costs and this may give an inaccurate economic picture. Financial ratios may also be misleading indicators since they do not control for changes to product mix, essentially assuming that all assets are equally costly to produce. Changes to input prices are not accounted for, and there are often short-term transition costs, possibly lasting a few years, before the full gains of a merger appear. As we have seen in Section 3, interpreting changes to financial ratios can be a tricky business (12).

10) There are a very large number of studies in this area. See, for example, Berger, Demsetz and Strahan (1998), Berger, Hunter and Timme (1993), Calomiris and Karceski (1998), and Pilloff and Santomero (1997), for literature reviews.

11) For example, BancOne and Norwest Corp each absorbed of the order of 100 banks from 1980 to 1994 (Rhoades, 1996, provides further details).

12) Rather than looking at ratios, a few studies estimate cost functions and use these functions to estimate the relative efficiency of firms before and after merger (see, for example, Berger and Humphrey, 1992, and Peristana, 1997). This also allows the impact of economies of scale (when the target is very small) to be disentangled. Even with this more sophisticated approach, the results remain the same - no clear improvements in post-merger performance can be identified.

The efficiency of the stock market is also important for the restructuring of banks themselves.

Studies with stock market data avoid these measurement problems by using the value creation (or destruction) that the market believes will arise from the merger. Since the approach is based only on changes to market expectations, these may be effected by the leakage of news that a merger is planned. Even if there is no leakage of information, it may be that the market recognises better the chances of a bank being a target than it does the probability of it being a bidder. Thus, target firm stock prices are bid-up well in advance of a merger, though the stock price of acquiring banks are not bid down. Yet another factor is the possible signalling regarding management views on the value of company stock. Since most bids have been stock financed, the announcement of a bid could send a signal that the management considers that its stock is overvalued. This means that undervalued companies would refrain from bidding for other companies. Thus, the efficiency of the stock market is also important for the restructuring of banks themselves.

5.4 Mergers and acquisitions in Europe

If M&A activity in the US banking sector has such unclear results, what has happened in Europe? In total there has been much less activity in Europe, and the volume of mergers, at some USD 90 billion from 1985 to 1997 (see Walter, this volume), is only about one-third of that in the US - even though bank assets are more than twice as large in Europe. However, EU banks have also invested in insurance companies and securities firms (some USD 30 billion from 1985-97) to an extent much greater than that seen in the US.

Competitive pressures seem to be first driving EU banks to diversify rather than to merge with other banks. This is one consequence of the universal banking model. Such behaviour would be particularly striking if there are strong economies of scale, since it would imply even greater economies of scope through the cross-selling of products. This is at odds with most studies of scope economies, which find that changing product mix has only a minor impact on average costs (13). One of the few detailed studies of mergers between banks in the EU is that of Vander Venet (1996), who looks at approximately 500 take-overs from 1988 to 1993. The results vary depending upon the type of take-over. Some seem driven by size maximisation goals (this is seen in Vander Venet's sample for the domestic full acquisition of a small bank by a large bank), while others were able to reduce costs including the merger of back office activities and the closure of over-lapping branches (seen with domestic mergers of equal partners).

Since the methodologies used have their limitations, the most we can conclude is that some good acquisitions are offset by a significant number of ill-advised acquisitions due to empire building and the like. Without looking in detail at each transaction, the measurement problems discussed above mean that it is difficult to identify how many fall in each category. Certainly, many mergers do not lead to efficiency gains and the restructuring of the sector may be a relatively slow process.

6. A look through the European looking glass

Much of discussion on bank strategy post-EMU focuses on investment banking. It is argued that very large amounts of capital are needed to underwrite deals on international markets, and that as a

13) For example, Lang and Welzel (1998) find diseconomies in German universal banks producing loans and investment-oriented services in the same institution. Berger, Demsetz and Strahan (1988) provide a literature review of this issue.

result only mega-banks will flourish. However, this is only a relevant issue for those few banks with truly global aspirations. The core business of the vast majority of European banks will remain traditional commercial banking - taking deposits and making loans. Increasing competition from the capital markets may mean that this will not be growth business, but commercial banking is not about to disappear. Perhaps retail banking does not have the aura associated with international investment banking, but the example of Lloyds-TSB in the UK shows that it can be every bit as exciting for shareholders (14).

At least for medium term, the underlying economics of the traditional market segment will remain a dominant influence in the restructuring of the sector as a whole. A merger wave may still happen, though perhaps not driven by investment banking or other fee-related activities.

6.1 The logic for a merger wave in commercial banking

As we have seen, the key factor for a successful merger appears to be the ability to improve the management of poorly performing banks, though there is also scope for some specific banks to lower costs through integrating activities. Given the lack of clear empirical results, discussing how this is best achieved is extremely difficult. The most one can do is make some common sense observations:

- Improvements are most likely to be achieved when a small inefficient bank is absorbed by a larger efficient one. This simply means that there are sufficient resources available to transfer the better management culture.
- Maintaining a separate identity for the acquired institution (e.g., boards, operating departments, etc.) is likely to reduce the benefits.
- A strong cost control ethic by the acquirer is obviously critical. The ability to manage the integration of data processing systems has also been important in the past; however, these activities may be increasingly out-sourced in the future.

There is likely to be no shortage of candidates fitting these requirements, and consolidation can go on until the integrated organisations get too unwieldy to manage. As we have noted before, there is very little evidence of either economies or diseconomies of scale in banking (at least beyond some minimum size). The fact that average costs for efficient banks are independent of size means that there can be considerable consolidation of the bank sector, even in an extremely competitive environment (15).

Europe should see a merger wave much as has occurred in the US. It is the way in which management will be improved, and any excess capacity removed from the system.

One conclusion is that Europe should see a merger wave much as has occurred in the US. This has nothing to do with economies of scale or scope. It is simply the way in which management can be improved, and any excess capacity will be removed from the system. Of course, this statement begs the question as to why such a merger wave is not already in full swing.

14) Lloyds-TSB is Europe's largest bank by market capitalisation at more than EUR 70 billion. It has focussed primarily on the UK retail market (just 9 percent of profits come from international banking, and only 19 percent of profits are due to British wholesale banking). The company has achieved a return on equity of approximately 30 percent.

15) In a simple neoclassical model this process could go on until there is only one firm - the bank with the lowest average costs. More sophisticated modelling of industry structure takes into account the sunk costs of market entry and product differentiation. Using such a model, Danthine et al., (1999, Box 4.1) predict that: "In Euroland there will be only room for a limited number of players, likely to be smaller than the sum of all players in the separated markets".

6.2 Barriers to restructuring in Europe

Clearly, the problems seen in the US relating to empire building, or management inability to effectively implement merger plans, are likely to be every bit as present in the EU. Indeed, there are also additional factors in the EU, which may further delay restructuring. As mentioned in Section 4, the level of public ownership of banks is high in Europe. In so far as the state as owner is satisfied with a declining performance, then managers may face little pressure to restructure. And the restructuring that does take place may be influenced by non-economic motives (maintaining national champions, etc) - a statement which is sometimes re-phrased in stronger words: "*banks that are not accountable, and even worse, operate as the playground for government appointed cronies, are unlikely to follow value maximising strategies. Growth then becomes a managerial entrenchment strategy*" (Boot, 1999 p. 612).

However, EMU may prompt increased rigour in policing anti-competitive practices. While the architecture of the banking sector was only a matter for national authorities, the introduction of the euro will lead to a closer inspection of distortions to competition. Behaviour that was acceptable or tolerated within national markets might no longer be acceptable when the effects are felt beyond borders. It is not surprising that the competition directorate of the EU Commission is currently dealing with several cases of alleged unfair practices. In any case, privatisation, which is on-going, will change the picture.

Second, in some countries there are a large number of co-operative savings banks. Given their small size, it is likely that there are economies of scale within this sub-sector. Our analysis (see Wagenvoort and Schure, this volume) would also suggest that commercial banks can operate at lower cost than co-operative institutions (16). However, savings banks already have invested in shared resources, such as systems for data processing, credit scoring, and credit cards, etc. This has been most notable in Germany, through the German Savings Bank Association. It is likely that co-operative solutions of this type will be pursued further before any more drastic restructuring, such as demutualisation, takes place. This means that one important feature of the US experience - the mopping-up of smaller banks into larger organisations - is less likely in Europe in the medium term.

Third, one of the main ways of lowering costs is through the reduction of staff. In Section 4 we mentioned European labour rigidities as one explanation of the high operating costs in the sector. These rigidities will represent a barrier to the rate at which labour shedding can take place. For this reason, mergers that involve over-lapping branch networks may have the particular benefit in Europe that the closing of branches provide managers with the justification for reducing redundant labour. However, when privatisation is achieved through a trade sale the government could look for guarantees regarding future employment, thus limiting management freedom.

These factors will present formidable barriers to the restructuring process, with the braking effect varying widely between countries. For some countries, there may be a surge in mergers, while in others the change may be more subdued.

EMU should provide an important catalyst for competition on banking markets. However, not all factors may be positive in the short term.

6.3 A slow development for the Single Market?

What about cross-border investments, and the creation of the Single Market? We have argued that EMU should provide an important catalyst for competition in banking markets. However, not all factors may

16) A result also found by Lang and Welzel, 1996, in a study of German co-operative banks. It may be that co-operative banks offer different services from commercial banks and that this is not taken into account by the analysis. However, any differences between cooperatively-owned banks and joint-stock banks is certainly being eroded over time.

be positive in the short term. Greater price transparency could lead to more competition, but if banks still benefit from a dominant position in their home markets and are able to extract some monopoly profits, they may not wish to expose this via more competitive pricing policies in other regions.

Moreover, as a recent review of the Single Market has shown, there remain important tax and legal differences within the EU (see European Commission, 1997). These are complemented by linguistic and cultural barriers. As a result, cross-border activity has been limited. For example, the European Central Bank (1999, Table 5.1b) reports that the foreign ownership of bank assets in 1997 was well below 10 percent in most EU countries. Exceptions are Luxembourg, Ireland and the UK, where there are major international banking centres. As closing down over-lapping branches may be the first step to get the restructuring process going, then the focus is likely to be on home markets.

Banks will exploit M&A possibilities in national markets before going cross-border. Exceptions could be banks with a large market share in their own countries, and that see limited prospects nationally.

A further issue influencing cross-border transactions is the way in which they will be financed. In the US, stock deals (i.e., equity holdings in the target bank are simply swapped for a stake in the merged entity) are more common than cash acquisitions of banks. The possible implications for the share price of both acquirers and target banks were mentioned in the last section. These "paper" transactions may be more complex in Europe due to national tax issues and the lack of a pan-European stock market. There is, thus, a link between the integration of banking markets and the integration of stock markets. If cash transactions are more important for cross-border deals, then the acquirer must either use retained earnings or issue new equity on the domestic market. The level of "free" cashflow will be determined by profitability, while the ease of issuing new stock will depend upon a bank's reputation in managing mergers.

The US merger wave has increased the relative importance of the top banks (the share of total nation-wide assets held by the 8 largest banks increased from just under one-quarter in 1987 to over one-third in 1997) (17), but at the same time the list of which are the top banks has been shaken up. Given the financing issues above, it is not difficult to see that there could be a similar situation in Europe, as a group of successful banks gain steadily in profitability and reputation, and accelerate ahead of the pack in bank mergers.

Our overall conclusion is that most banks will exploit M&A possibilities in national markets before going cross-border. Exceptions could be those banks that have a large market share in their own countries, and that see limited prospects nationally (due to concentration in the banking sector, public ownership of competitors, etc). Nordic and Dutch banks could fall in this latter category (18). A few European banks with global aspirations may simply go cross-border as the most rapid route to achieve a mega-size. This may equally involve investment outside Europe, with the US as a clear target market.

EMU may mean that European capital markets integrate rapidly. It will also bring very different rules of the game for banks as competition intensifies. As a result, consolidation of the banking sector will be seen throughout Europe. This being said, the transition to a Single Market for banking may well be a very slow process.

17) See Berger, Demsetz and Strahan, 1998, Table 1. The top-ten banks in the US in terms of merger activity acquired on average 5 banks each per year from 1980-94. The average size of the acquired bank was USD 350 million (Rhoades, 1996).
18) In 1997, the top five banks accounted for 90 percent of the assets of the Swedish banking sector, 79 percent in the Netherlands, and 78 percent in Finland (European Central Bank, 1999).

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