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OVERVIEW, ASSESSMENT AND PROSPECTS”**

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SUERF – The European Money and Finance Forum
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CIP

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**BANKING MERGERS
AND ACQUISITIONS IN THE EU:
OVERVIEW, ASSESSMENT AND PROSPECTS**

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Abstract

This paper aims at providing a complete picture of banking mergers and acquisitions (M&As) in Europe during the 1990s and at offering economic evaluation and strategic analyses of the process.

The main characteristics of this process in the 1990s were the emergence of “mega banks” at the national scale, a slight increase of cross-border transactions and the emergence of few large pan-European financial groups.

Building on an extensive review of the US and EU literature, we examine the impact of M&As in European banking on profitability and efficiency, considering the breakdown between domestic and cross-border transactions. We first proceed with the profitability analysis of distinct completed M&As cases with different industrial strategies (based on the geographical dimension of the transaction and the initial activities of the merging banks). We find that domestic mergers contribute to cut costs for both partners, whereas, for the majority of cases studies, including domestic and cross-border mergers and acquisitions, the impact on profitability is insignificant, but a clear trend to diversify the sources of revenues was apparent.

The cost and profit efficiency analysis based on 33 bank-to-bank mergers, confirmed an improvement of cost efficiency and little improvement of profit efficiency for domestic transactions; whereas, no improvement of cost efficiency and a little improvement of profit efficiency for cross-border transactions. These results imply that domestic banking mergers in Europe fulfilled their objective to cut costs whereas they failed to achieve revenues synergies; cross-border mergers instead, were proved to better exploit from revenues synergies more likely due to geographical diversification.

Against this background, we provide the main prospective scenarios for banking consolidation in the medium term after examining the state of concentration and competition in the domestic banking markets and the role of the regulatory changes and remaining obstacles to a full European banking integration. Finally, we raise the main strategic challenges ahead banking institutions in terms of business models – Universal, multi specialised or specialised banking, optimal size, growth strategies – M&As or partnerships – and the prospects offered by the new Basel capital Accord. A first appraisal

suggests: a) a natural coexistence of different business models, each one having its specific characteristics and responding to individual needs, b) the optimal size is not synonym of a larger size and a larger size is not an absolute criterion of profitability and efficiency, c) M&As are not the only alternative to banking consolidation, and d) finally Basel II is redefining the rules of the game to European banking, but it is rather premature to make a final and exhaustive assessment in this respect.

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Introduction

The European banking sector has experienced a rapid process of merger and acquisition (M&A) during the 1990s. Besides deregulation, technological and financial innovations and the introduction of the euro, the imperative of value creation, efficiency and market power have fuelled the process.

Despite the break in the M&A trend in 2001 and 2002, which was mainly associated to the economic downturn, it seems that the world-wide M&A activity is picking up again announcing a new M&A wave. Indeed, faced with increased risks, uncertainty and enhanced competition, banking institutions will adopt the most economic strategic means to cut their costs and enhance their revenues. Moreover, the progress made in the Financial Services Action Plan (FSAP) followed by the new European Commission's initiatives towards complete integration of European financial markets and the new rules-setting envisaged by the new Capital Adequacy Directive 3 will act as an additional impetus to accelerate banking consolidation in the coming years.

Many studies however, have found that M&As are far from having proved their economic effectiveness. Consequently, one can question the real impact of these operations on banking performance, including profitability and efficiency.

As big banking groups emerge at the domestic level, this might raise competition concerns when the concentration threshold in a relevant market is reached. In the medium term, the acceleration of cross-border and cross-sectoral transactions is inevitable, envisioning a more integrated European banking market.

Finally, by accelerating the pace of strategic responses, the M&A process might lead to the homogenisation of banking behaviour. This raises the possible emergence of a dominant banking business model in Europe.

This report aims to provide a complete and up-to-date picture of banking M&As in Europe during the 1990s and offers economic and strategic analyses of the process.

10 Introduction

The first section shows briefly the main trends and characteristics of the banking M&A wave. Section 2 proposes an assessment of the banking M&As performance, Finally, the last section examines competitive and strategic prospects for the European banking sector.

1. The main characteristics of the recent wave of banking mergers and acquisitions in the EU

To characterise the mergers and acquisitions wave in European banking in the 1990s, a targeted statistical analysis² was carried out on a sample of 151 M&A transactions announced and completed (120 domestic and 31 cross-border) by banking institutions headquartered in the EU, over the period 1994–2000³. The deals were obtained essentially from the Thomson Financial Securities, M&A SDC database and from press coverage.

The period under scrutiny is of a particular interest because first it covers the upward trend to the point where the M&A activity has decreased; second, it immediately follows the regulatory changes associated with the completion of the single market programme in the EU, and it also covers the period before and after the introduction of the euro. As a breakdown is made between the domestic and the cross-border deals, both the single market programme and EMU are expected to be catalysts for cross-border M&A activity in banking. All the deals included in our study are large horizontal takeovers that can either be classified as complete mergers (involving the combination of the consolidating partners) or majority acquisitions exceeding the threshold of 49% of voting rights (in which the acquiring bank buys a controlling equity stake in the target bank, and both banks remain legally separate entities), in order to take into account all the operations having generated a transfer of capital control. The targets and the acquirers are banking institutions as defined in the Second Banking Directive. Insurance and ‘securities’ are excluded.

Statistical analysis was performed on the number, total value⁴ and average value⁵ of the transactions. The results show the following characteristics:

- an acceleration of M&A operations since 1996,
- the emergence of ‘mega banks’ at national level since 1999,

² The analysis was complemented by external observations as regards the evolution of M&A activity in banking since 2000.

³ Ayadi (2001).

⁴ Total value is based on the acquisition value, which equals to the number of shares multiplied by its market price the day of the announced transaction.

⁵ Average transaction value = total amount/number of announced and completed operations.

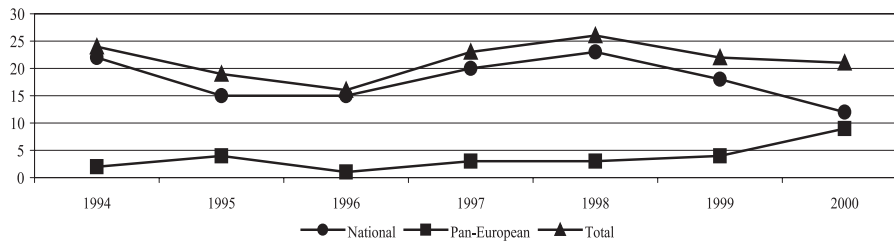
12 The main characteristics of the recent wave of banking mergers

- the timid development of cross-border transactions at Community level and
- the constitution of European financial conglomerates.

1.1 Acceleration of M&A activity since 1996

The annual breakdown in the number of transactions seems to confirm a significant upward trend since 1996 to reach a peak in 1998, before a slight decrease in 1999 and 2000 (Figure 1).

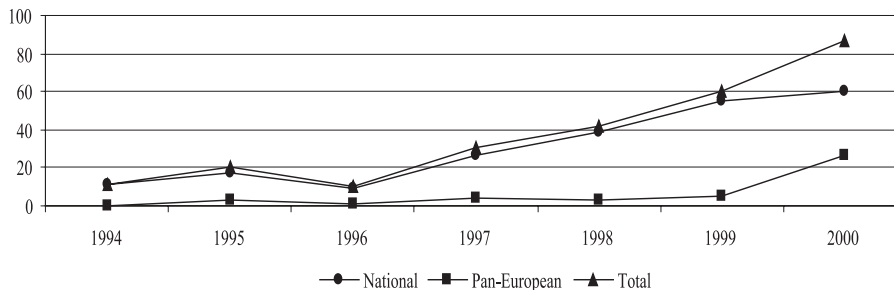
Figure 1. National vs. pan-European banking M&As, by number (1994–2000)



Source: SDC Platinum database on M&As (2001).

The aggregate value of all transactions over the period amounted to €262 billion. Since 1996, the annual value has grown much more rapidly than the number, to reach its peak in 2000 (see Figure 2). Globally, the number of M&A and the annual value of the transactions have followed different trends. The average transaction value, which takes into account both the number and the annual transaction value, has increased steadily over the period (Figure 3). Consequently, these developments confirm the strong growth of M&A activity in the EU banking industry.

Figure 2. National vs. pan-European banking M&As, by value (1994–2000)



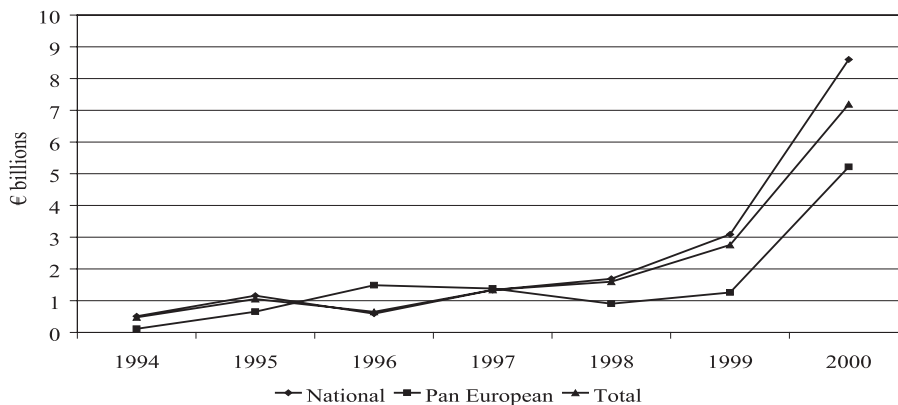
Source: SDC Platinum database on M&As (2001).

1.2 The emergence of ‘mega-banks’ at national scale since 1999

The evolution of the average transaction value is very interesting. After a steady growth between 1994–99, it jumped to reach a peak in 2000 (see Figure 3). As a consequence, the transaction value was especially large at the end of the decade.

In practice, this is reflected by the emergence of ‘mega-banks’ operating at a national scale in the major EU countries (BNP Paribas in France, SCH and BBVA in Spain, IntesaBCI and UniCredit in Italy, RBoS Group in UK and Bayerische HypoVereinsbank in Germany...). These developments indicate that a growing M&A activity will lead in the medium to long term to the co-existence of a few large actors at the domestic level, which will result in more concentrated banking markets.

Figure 3. National vs. pan-European banking M&As by average value (1994–2000)



Source: SDC Platinum database on M&As (2001).

Two hypotheses can be mentioned to explain the significant increase in the average value of these transactions in 1999 and 2000: either this increase is attributable to a few large transactions within the banking industry or it is the consequence of a widespread consolidation process affecting the whole banking industry.

In the first case, it would be a specific and prompt process of reconfiguration in which only the large-sized European banking institutions would take part. In the second case, however, it would reflect a major and a lasting

restructuring process, since all the European banking institutions, whatever their sizes would be involved.

The latter interpretation could be favoured if the banking domestic M&A distribution in Europe over time would show an overall distortion towards the right side, implying that the majority of the transactions would involve higher transaction values.

The latter interpretation is favoured if the distribution of banking domestic M&A over time would show an overall shift towards higher transaction values.

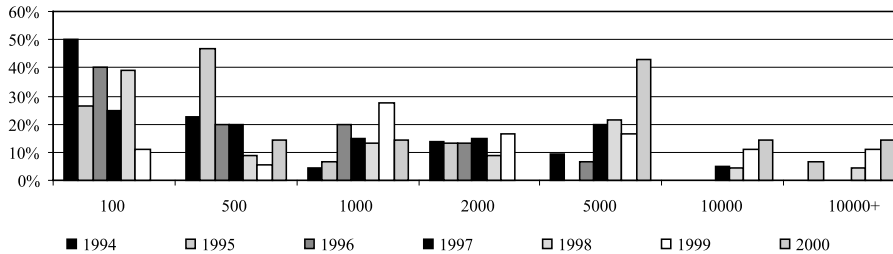
In order to analyse the domestic concentration process of the European banking industry throughout this given period, the distribution of M&A transactions⁶ is successively represented (see Table 1) per year and then per sub-period by considering the following intervals based on the annual transaction values:

- small transactions (less than €500 million),
- medium-sized transactions (between €500 and €5,000 million) and
- large-sized transactions (€5,000 million and more).

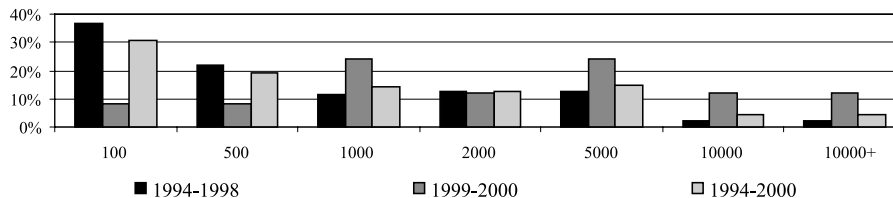
Table 1. Distribution of domestic M&A transactions per year

	1994	1995	1996	1997	1998	1999	2000
Number of M&As	22	15	15	20	23	18	7
Intervals (€ millions)	% of M&A transactions						
<100	50%	27%	40%	25%	39%	11%	0%
100-500	23%	47%	20%	20%	9%	6%	14%
500-1000	5%	7%	20%	15%	13%	28%	14%
1000-2000	14%	13%	13%	15%	9%	17%	0%
2000-5000	9%	0%	7%	20%	22%	17%	43%
5000-10000	0%	0%	0%	5%	4%	11%	14%
10000+	0%	7%	0%	0%	4%	11%	14%

Figure 4a. Changes in domestic M&A banking distribution per year



⁶ The analysis was carried out on a sample of 120 domestic transactions in which the transactions' values were made available.

Figure 4b. Changes in domestic M&A banking distribution per period

Figures 4a and 4b show the results of the statistical analysis. The distribution per period (figure 4b) indicates that the banking consolidation process within the EU has experienced two successive stages over the period 1994–2000. The first one, completed in 1998, was dominated by small- and medium-sized transactions.⁷ Indeed, these transactions accounted for more than 90% of the total. Over the period 1999–2000, a major change occurred and a second stage was started. Indeed, large-sized transactions accounted for more than 50% of the operations, with the persistence of medium-sized transactions (35%).

The distribution per year confirms these results (figure 4a). Whereas in 1994, the majority (approximately 75%) of the transactions were mainly motivated by the desire to reduce excess capacity and entailed less than €500 million, an apparent and progressive shift towards larger transactions has been experienced since 1997 and 1998, where almost 40 % of the transactions are medium-sized.

These results confirm an overall shift of the M&A transaction distribution over time towards higher transaction values (the right side of the distribution), implying larger sizes of the M&A transactions. Hence, the small, medium and large banking institutions have successively taken part in the consolidation process but in different stages.

To conclude, the recent consolidation process has been structural, profound and dynamic. Moreover, the same tendency is likely to continue towards the creation of both domestic and pan-European mega-banking groups. Indeed when the possibilities for acquisitions are exhausted in a domestic market and

⁷ The size of the transaction depends on its value (market value). The transaction value could be amplified by the stock market valuation following the announcement of the M&A, but we do not consider that this would have an important effect on the analysis.

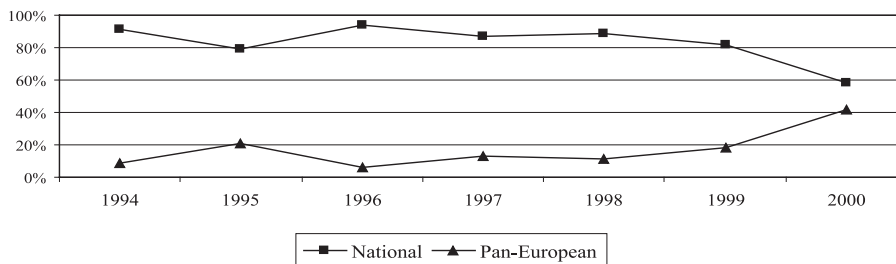
the concentration threshold is attained, banking institutions will look for other potential external growth opportunities in other markets.

1.3 The timid development of cross-border transactions at EU level

Cross-border consolidation activity was fairly modest in the first half of the 1990s. Domestic deals constituted the majority of M&A activity, accounting for 87% in number, and 90% in total value over the period 1994–2000 (see Figures 5 and 6). This evolution has clearly contributed to increased levels of concentration within individual European banking markets. As shown previously, the domestic consolidation process is advancing to the point at which the domestic markets are starting to reach a saturation level, encouraging banking institutions to move beyond their national frontiers to seek new growth opportunities.

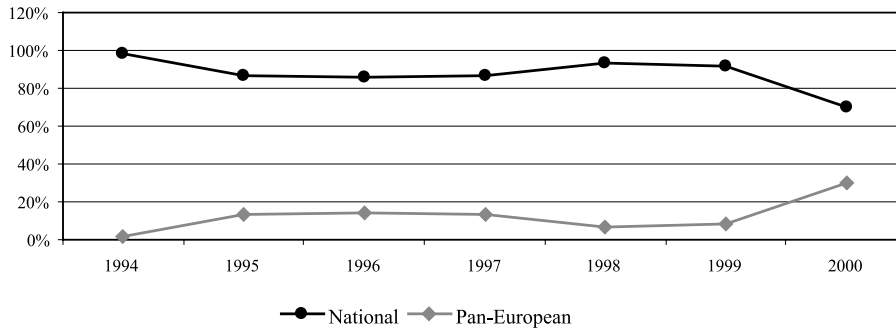
The statistical results show the predominance of domestic consolidation throughout the entire period, but a marked increase can be observed in cross-border transactions starting in 1999 to reach 42% in number and 30% in value in 2000. This modest growth of cross-border consolidation could be partly attributed to the elimination of the currency barriers stemming from the creation of the Economic and Monetary Union (EMU) in 1999 and the introduction of the euro.

Figure 5. Comparison of national vs. pan-European banking M&As, by number (1994–2000)



Source: SDC Platinum database on M&As (2001).

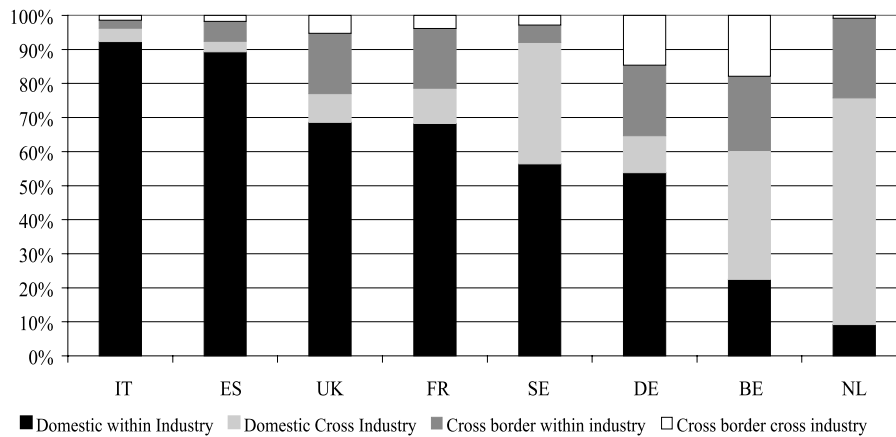
Figure 6. Comparison of national vs. pan-European banking M&As by total value (1994–2000)



Source: SDC Platinum database on M&As (2001).

Also several country-specific factors influenced cross-border consolidation in Europe. The Scandinavian and Benelux countries were indeed very active in cross-border transactions – not only as acquirers but also as targets (see Figure 7). Due to their small and rapidly saturated domestic markets and the relatively advanced domestic consolidation process, the main banking actors have been compelled to quickly develop their activities outside of the strictly national field more than elsewhere.

Figure 7. Value of European M&A transactions within the financial industry by country (in %, 1990–99)



Source: BIS (2001).

Nevertheless, European banking institutions have shown more interest in deploying to emerging areas offering high potential growth and new opportunities for development, such as Eastern Europe and Latin America, or to the United States in order to benefit from the know-how and the technological advances made in various activities, such as investment banking or asset management⁸.

1.4 Towards the constitution of European financial conglomerates

Traditionally, universal banking has been the prevailing reference model in Europe thanks to the provisions introduced by the Second Banking Directive in 1989. As their name suggests, banks may engage in a full range of investment services in addition to commercial banking activities.⁹ This trend is expected to continue after the implementation of the revised Investment Services Directive (ISD) of 1996 and the new Capital Adequacy Directive, which applies to credit institutions and investment firms.

Moreover, it is interesting to note that in some countries,¹⁰ the universal banking principle has been extended to insurance activities owing to the historical link between both industries and the increased interest on the part of some banking institutions to expand into insurance activities. In other countries, however, restrictive rules at the national level still exist aimed at separating banking and insurance activities.

The regulatory reforms undertaken in recent years have been the main accomplishments of the vast programme of the FSAP which started in 1999 and aims to remove most of the regulatory barriers to a single integrated financial market and to create a level playing field. Nevertheless, it is too early to draw a full picture of the most developed form of financial integration: the financial conglomerate. Indeed, reality shows that a majority of the M&A transactions were carried out within the same sector accounting for almost 67% against 33% across sectors in 1999 (see Table 2).

⁸ ECB(2000).

⁹ These activities should be undertaken in a direct way rather than through separately incorporated subsidiaries and banks may closely link themselves to non-banks by either equity holding or board participation (BIS, 2001).

¹⁰ In the Netherlands, the insurance industry has historically had a close relationship with the banking industry, explaining the early emergence of the bancassurance model there as compared to other European countries.

Table 2. Sectoral and geographical breakdown of M&As in the European financial sector (1999)

	National	Cross-border	Total
Within banks	320	11	331 66.60%
Cross-sector	94	72	166 33.40%
Total	414	83	497 100%

Source: ECB (2000b)

In the past few years, however, a distinguishing feature in Europe has been the relative importance of cross-industry transactions in the insurance field (see Table 3). Indeed, various banking institutions sought to develop new sources of income by widening the range of their supply through the development of insurance activities (life and non-life products).

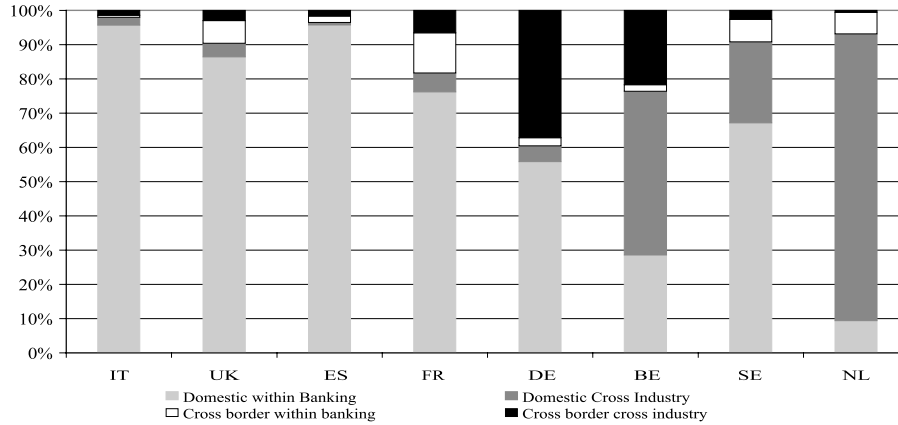
Table 3. The distribution of targets and acquirers industries in 1999 (\$ billion)

Acquirers	Targets			Total
	Banks	Securities	Insurance companies	
Banks	89 36.03%	9 3.64%	20 8.10%	118 47.77%
Securities	23 9.31%	19 7.69%	24 9.72%	66 26.72%
Insurance companies	11 4.45%	6 2.43%	46 18.62%	63 25.51%
Total	123 49.80%	34 13.77%	90 36.44%	247 100%

Source: Thomson Financial (2000)

Among European countries, Belgium and the Netherlands were home to a few but important domestic cross-industry transactions during the last decade. Indeed, in both countries, the aggregate value of domestic cross-industry transactions exceeded the value of domestic within-industry transactions (see Figure 8). These developments enabled the emergence of conglomerates that paired banking activities with insurance companies (Fortis and KBC in Belgium and ING in the Netherlands).

Figure 8. Share of different models of banking M&A transactions, by country (1990–99)



Source: BIS (2001).

In sum, the overall picture of the recent wave of financial consolidation initially showed an intensification of domestic M&A activity within the banking industry in the EU during the last decade. The rapid growth in the total transaction value, which was accompanied by an increase in the average transaction value, contributed to a change in the overall consolidation process towards larger-scale transactions. Accordingly, it seems that the recent M&A wave aims to finalise the domestic banking consolidation and is triggering cross-border consolidation.

Furthermore, as shown, banking institutions are now searching for new opportunities in external markets to replace or supplement declining domestic growth possibilities. The removal of regulatory barriers in the European financial services industry will give an additional impetus to cross-border and cross-industry consolidation and particularly to the emergence of the bancassurance model.

2. An attempt to assess banking mergers and acquisitions' performance

2.1 Theoretical and empirical backgrounds

Several studies have tried to assess the performance of M&A in banking in the 1990s. The majority have concentrated on the impact on shareholder value and efficiency on the one hand, and on the consequences for customers – households and SMEs – via the increase of market power on the other hand. Concerning the impact of M&As on shareholder value and efficiency, the results were mixed. Several academic studies have been carried out mainly in the United States, using a wide range of methodologies, from the most basic (event studies or balance-sheet-based indicators) to the most sophisticated (efficiency frontiers), but their findings have not been conclusive.

The studies on the impact of mergers on consumer welfare focused primarily on the possible market power effect without considering that under certain conditions, mergers might improve the consumers' surplus.

It is very difficult to make a final and exhaustive assessment of the effects of European banking M&As on performance for several reasons. Firstly, this phenomenon is still far too new in Europe to have produced sufficient empirical results worthy of serious academic study. As a result, the majority of the studies have mainly focused on the US¹¹, but the lessons cannot automatically be applied to the European environment since regulation and the structure of European banking markets are fundamentally different.¹²

Moreover, it is quite difficult to come up with general rules to assess M&As because each one depends on the particular context in which it was carried out (such as the flexibility of the labour market, the applicable takeover

¹¹ DeLong and DeYoung (2004) have advanced the “learning by observing” hypothesis which supposes that the mergers of the mid or late 1990s would have been more likely to create value than the mergers of the 1980 and this is due to the fact that bank managers would have benefited from observing a large number of mergers before starting one. This is typically linked to the information spillover hypothesis. It also suggests that the stock market would have been a more accurate predictor of the long run performance of banking mergers announced during the 1990s than those announced during the 1980s.

¹² Dietsch and Oung (2001).

regulations including the broader spectrum of anti-take-over mechanisms,¹³ the liquidity of the capital market, etc.), the different sizes of the institutions involved, the corporate structure (private, hybrid or public) and especially the intrinsic characteristics of the operation (friendly or hostile, cash or equity financed etc).

2.1.1 Banking M&As and value creation: Still not very conclusive results

The traditional argument that M&As increase shareholder value is based on the assumption that the anticipated value of the entity created by the merger of two groups will exceed, in terms of potential wealth creation, the sum of the respective values of the two separate groups. That is, $1+1=3$. Two main types of synergies are achieved: operating synergies and financial synergies. The former takes the form of either revenue enhancement or cost reduction. The latter refers to the possibility that the cost of capital may be lowered by combining one or more companies.

In theory, M&A operations in the banking sector could create value by obtaining gains either in terms of market power or in terms of efficiency.

A large number of event studies have been carried out to assess the effects of M&As on stock market values. They all tend to evaluate the change in total market value of the acquiring company plus target institutions – adjusted for changes in overall stock market values – associated with an M&A announcement. This embodies the present value of expected future changes in terms of efficiency and market power. Although these effects cannot be disentangled, the change in market value may be viewed as an understatement of the expected efficiency improvement, since it is unlikely that an M&A would reduce the market power of the participants¹⁴.

In the US, the empirical results were mixed.¹⁵ On average, the combined shareholder value (i.e. the bidder and the target) is not affected by the

¹³ The compromise reached by the Council to accelerate the adoption of the Takeover Directive in November 2003 has given a maximum flexibility to member states to implement its provisions. This will certainly create different applications from one country to another one.

¹⁴ Berger (2003).

¹⁵ Rhoades (1994) and Pilloff and Santomero (1997) provide a survey of event studies. Some studies of US banking M&As found increases in the combined value around the time of the M&As' announcement (Cornett and Tehranian, 1992 and Zhang, 1995); others found no improvement in combined value (Hannan and Wolken, 1989; Houston and Ryngaert, 1994; Pilloff, →

announcement of the deal since the bidder suffers a loss that offsets the gains of the target.¹⁶ Therefore, an M&A only implies a transfer of wealth from the shareholders of the bidder to those of the target. Compared to the 1980s, however, the evidence from the 1990s was more favourable where average abnormal returns have been higher for both bidders and targets.¹⁷

One problem with event studies is that the announcement of a deal mixes information concerning the proposed merger with information on its financing. Because investors consider the announcement of a stock issuance as 'bad news', the negative returns to the bidding bank could reflect the fact that mergers tend to be financed with stocks. Consistent with this notion, some findings suggest that returns to bidders are significantly higher when mergers are financed with cash relative to mergers financed with new equity.¹⁸

Other studies have examined the stock market reaction to different types of deals. Houston & Ryngaert (1994) found that the combined gains tend to be greater when the bidding firm is unusually profitable or when there is significant overlap between institutions. The first result is consistent with a market for corporate control favouring competent over incompetent managers. The second result is consistent with the market power hypothesis, according to which a higher market share leads to higher profits. DeLong (2001) found that mergers that concentrate banks geographically or in product create value while those that diversify them don't create value.

On the other hand, Zhang (1995) found results consistent with the diversification hypothesis, according to which geographical diversification leads to a lower variability of income; and that out-of-market transactions create value for shareholders. Higher market concentration is likely to lead to an increase in prices for retail financial services, leading in turn to an increase

1996 and Kwan and Eisenbeis, 1999); while still others found that the measured effects depended upon the characteristics of the M&A (Houston and Ryngaert, 1997). A study of domestic and cross-border M&A involving US banks found more value created by the cross-border M&A (DeLong, 1999).

¹⁶ Stock market event studies of bank mergers have shown that merger announcements typically result in a fall in the equity value of the acquiring firm and no significant gain in the combined value of the two firms together. This result suggests that the market believes that, on average, there are unlikely to be substantial gains realised from bank mergers. And since the value of the acquiring firm typically falls, the market also believes that acquiring firms tend to overpay for acquisitions in anticipation of merger benefits that are not likely to be realised. This is a common finding and is not limited to bank mergers, which points in the direction of a more general problem associated with the corporate governance of M&As.

¹⁷ Becher (2000), Houston and al. (2001).

¹⁸ Houston and Ryngaert (1997).

in profits. It is also true, however, that firms operating in more concentrated markets are generally found to be less efficient.¹⁹ This effect might offset the gains from an increase in market power and thus leave unchanged the market value of the bank.

In Europe, the few studies carried out to assess the value creation through M&As in banking found positive abnormal combined returns. In the study conducted by Van Beek & Rad (1997), these returns were not statistically significant. In a more recent study undertaken by Cybo-Ottone & Murgia (2000), shareholder value gains were positive and significant, mostly driven by domestic bank-to-bank deals and diversification of banks into insurance. In a recent study, Beitel and Schiereck (2001) found an increase of the combined values of bidders and targets for domestic M&As but a decrease in the case of cross-border M&As. These positive abnormal returns, however, do not necessarily mean that mergers improve efficiency; in fact, one possible explanation for the difference between the European and American markets is that weaker antitrust enforcement in some European countries allows gains in monopoly power from in-market mergers.

Globally, it seems that the large majority of M&As carried out recently, in Europe or in the US, are far from having proved their effectiveness in terms of value creation in the short run.²⁰

2.1.2 Banking M&As and Efficiency

An M&A allows the resulting company to obtain efficiency gains through cost reductions (or cost synergies), revenue increases (or revenue synergies), the exchange of best practices and/or risk diversification.

Cost synergies result from an improved organisation of banking production, a better scale and/or a better combination of production factors. The core objective is to extract benefits from cost complementarities and economies of

¹⁹ Berger and Hannan (1998).

²⁰ According to AT Kearney (1999): "58% of the M&As announced and completed are unfortunately a failure. Indeed, the stock market value of the merged entity two years after the operation is lower than the sum of both separated partners three months before". Similarly, Arthur D. Little's study (1999) has shown that: "Two years following the announcement of the operation, the stock market performance of 60% of the companies having merged has been lower than the average of their sector". Finally, according to a KPMG survey (2001): "30% of the M&As have increased the shareholders' value, 39% haven't brought any considerable change and almost 31% have destroyed value". In other words, 70% of mergers were unsuccessful in producing any business benefit as regards shareholder value.

scale and scope. In practice, cost synergies might be derived from: a) the integration of different skilled teams or information technology infrastructures, b) the combination of different back-office and general services or c) the rationalisation of the domestic and/or international banking networks. The more flexible the labour market, the more likely it is that the company will achieve cost synergies.

Revenue synergies also derive from a better combination of production factors. Improvements in the organisation of activities, however, offer benefits from product complementarities which help to enhance revenues. In practice, revenue synergies might result from the harmonisation of product ranges, the existing complementarities between activities, cross-selling and the generalisation of a 'multi-distribution channel' approach to the various segments of customers.

It should be noted, however, that revenue synergies are much more difficult to obtain compared to cost synergies, because they depend not only on managers' decisions but also on customer behaviour. In this respect, several studies have estimated that some 5% to 10% of a bank's customers leave the bank after a merger.²¹ Accordingly, M&As between banking institutions in Europe have very often targeted higher cost synergies than revenue synergies (see Table 4).

Table 4. Synergies announced in recent M&A deals in the EU

Banks	Year	Expected synergies (€ million)	Revenue synergies (%)	Cost synergies (%)
SCH-Abbey National	2004	560	20	80
Crédit Agricole-Crédit Lyonnais	2002	760	0	100
Caisses d'Epargne-CDC IXIS	2001	500	85	15
Allianz-Dresdner	2001	1080	88	12
Halifax-Bank of Scotland	2001	1113	51	49
Dexia-Artesia	2001	200	15	85
HVB-Bank Austria	2000	500	0	100
RBoS-Natwest	2000	2335	17	83
BNP-Paribas	1999	850	18	82
BBV-Argentaria	1999	511	0	100
Intesa-COMIT	1999	1000	50	50
Banco Santander-BCH	1999	630	0	100

Sources: Annual Reports and financial press.

To achieve the goal of efficiency, two types of strategies can be pointed out. Firstly, in theory, a merger or an acquisition involving two companies with

²¹ See Burger (2001).

homogeneous activity profiles should lead to economies of scale by reducing the unitary production costs, as a result of an increase in activity volume and a decrease in the fixed costs obtained by combining the support functions (marketing, information technology, physical infrastructures, personnel management...). The final objective is to obtain a competitive advantage in the activities involved.

In Europe, expectations ride high in the reinforcement of retail banking. The strategy consists firstly in merging domestic banking institutions, while maintaining the existing branch network and secondly in implementing upstream cost synergies, i.e. at the level of physical network management. The desire to achieve greater economies of scale can be seen in the recent operations of several retail banks: HVB in Germany, SCH and BBVA in Spain, CIC-Crédit Mutuel in France, UniCredit in Italy and Lloyds TSB or RBoS-Natwest in the United Kingdom.

The second strategy to achieve greater efficiency is adopted in circumstances where banking institutions are operating in heterogeneous but complementary markets. A merger or an acquisition not only allows the resulting company to widen its customers' portfolio but it also leads to a more diversified range of services and offers scope economies by optimising the synergies between the merged activities. Here, the main objective is to increase revenues, rather than to obtain economies of scale.

For this, two possibilities could be highlighted according to the complementarities attained through diversifying activities or geographical areas. In the first case, scope economies are generally obtained through a merger or an acquisition between either commercial banks and investment banks, or banking and insurance, as illustrated by a few recent transactions in Europe: Allianz-Dresdner in Germany, BNP-Paribas and Caisses d'Épargne-CDC IXIS in France or San Paolo-IMI in Italy. Similarly, the acquisition of Bankers Trust by Deutsche Bank was completed mainly to penetrate the American market for investment banking.²² In the second case, the principle of geographical complementarities has increased the interest on the part of Crédit Agricole to acquire Crédit Lyonnais in France. The first is firmly anchored in the provinces and in rural areas, whereas the second has a strong presence in the Ile-de-France (urban area of Paris) and other large French cities.

²² One might also mention in this context UBS and PaineWebber or Crédit Suisse Group and DLJ in 2000, and Dresdner Bank and Wasserstein Perella in 2001.

In sum, efficiency gains are obtained by input and output adjustments in order to reduce costs, increase revenues and/or reduce risks so as to increase the value added. Restructuring operations can also allow efficiency gains through the reorganisation of teams (managers and employees) and/or the generalisation of 'best practices', known as 'X-efficiency' that is the managerial ability to decide on input and output in order to minimise cost (or maximise revenues).²³

Lately, beyond greater economies of scale and scope, efficiency can also be improved by a greater diversification of risks (functional and/or geographical).²⁴

Efficiency may be improved following a merger or an acquisition, if the acquiring institution is more efficient *ex ante* and brings the efficiency of the target up to its own level by spreading its superior managerial expertise, policies and procedures.²⁵ Simulation evidence suggests that large efficiency gains are possible if the best practices of the acquirers reform the practices of inefficient targets.²⁶

The M&A event itself may also improve efficiency by awakening management to the need for improvement or to implement substantial restructuring. Alternatively, efficiency may worsen because of the costs of consummating the M&A (legal expenses, consultancy fees, severance pay...) or disruptions from downsizing, difficulties in integrating corporate cultures... Efficiency may also decline because of organisational diseconomies in operating or monitoring a more complex institution.

The studies carried out on a sample of US banks showed, on average, very little or no *cost efficiency* improvement from M&As in the 1980s.²⁷ However,

²³ Originally the concept of X-inefficiency was introduced by Leibenstein (1966) who noted that, for a variety of reasons people and organisations normally work neither as hard nor as effectively as they could. In technical terms, X-efficiency refers to the deviations from the production efficient frontier that depicts the maximum attainable output for a given level of output.

²⁴ According to Méon and Weill (2001), a comparison of the annual growth rate of real GDP suggests that the economic cycles of many European countries are not perfectly correlated. Consequently, geographical diversification could enable European banks to significantly reduce their risks.

²⁵ Generally, the acquiring bank in a merger is more cost efficient and more profitable than the institution being acquired. As noted in a recent survey (Berger and al., 1999), this holds for the US (Berger and Humphrey, 1992; Pilloff and Santomero, 1997; Peristiani, 1997; Cummins and al., 1999 and Fried and al., 1999) as well as for Europe (Vander Vennet, 1996 and Focarelli and al., 2002). The expectation is that the more efficient and profitable acquiring bank will restructure the target institution and implement policies and procedures to improve its performance.

²⁶ Shaffer (1993).

²⁷ Berger and Humphrey (1992), Srinivasan (1992) and Pilloff (1996).

more recent studies using data from the 1990s were mixed²⁸. On the one hand, some found that mergers produce no improvement in banks' cost efficiency,²⁹ especially when the deals involve very large banks.³⁰ It was also showed that on average, smaller banking institutions tend to exhibit larger variations in X-inefficiencies than larger institutions³¹.

This may be due to the organisational diseconomies of operating larger firms in relation to disruptions from the M&A process, which may offset most potential efficiency gains. And on the other hand, other studies found cost reductions also for very large US banks.³²

The evidence for European banks is broadly consistent with the US results. Domestic mergers among banks of equal size seem to improve cost efficiency, but these results do not hold for all countries and all banks.³³ More recent studies on Italian banks³⁴ or UK building societies³⁵ found significant cost efficiency gains following an M&A. Moreover, simulation evidence suggests that a cross-border acquisition may be associated with a reduction in the costs of the target, while little effect is found for domestic M&As.³⁶ On the contrary, Vander Vennet (2002) found no tangible gains in terms of cost efficiency in the case of cross-border M&As. The difficulties in improving cost efficiency may be related to the obstacles often encountered, especially in continental Europe, in reducing a bank's labour force. In fact, personnel

²⁸ One limitation applies to this literature, indeed, the efficiency gains or losses associated to M&A activity may take a very long period to materialise, but these studies only focus on a short period of time before and after each M&A, Berger (2003).

²⁹ Peristiani (1997), Berger (1998) and Rhoades (1998).

³⁰ Akhavein and al. (1997) and Berger (2000).

³¹ X-inefficiencies have been broadly investigated in the US but without giving a final answer. Indeed, the first cause is linked to the size, on average, operating costs of larger banks are found to be closer to the optimal frontier curve than those of smaller banks to their respective cost frontier (Kwan and Eisenbeis (1996). This could be explained by the fact that larger banks which operate in metropolitan markets are more likely to face stronger competition than smaller banks which are more likely to operate in suburban or rural areas. The second reason is linked to risk taking, inefficient institutions are found to take in a higher level of risk (Gorton and Rosen (1995). It is indeed very likely that managers of inefficient banks are more inclined to compensate the operating inefficiency by taking on more risk which may reward them with a higher yield. Finally, the third reason is the financial condition which is linked to the percentage of problem loans and other illiquid positions in the balance and off balance sheet. The correlation between poor asset quality and inefficiency may be an indication of poor management.

³² Houston and al. (2001).

³³ Vander Vennet (1996).

³⁴ Resti (1998).

³⁵ Haynes and Thompson (1999).

³⁶ Altunbas and al. (1997).

reduction, one of the main sources of savings, is hardly an option in countries with rigid labour markets.³⁷

Studies on *profit efficiency* of US banks more often found gains from M&As. The fact that cost efficiency is, on average, little improved as a result of a bank merger, does not necessarily mean that there is no improvement in profits. Profit efficiency incorporates both cost as well as revenue efficiency. Revenue efficiency can be improved by simply raising prices as market power³⁸ is expanded through the merger process itself. Or revenues may rise because the merged institution restructures its assets mix.

Two studies in particular have attempted to determine the profit effects of mergers. Akhavein et al. (1997) found little change in cost efficiency but an improvement in profit efficiency of large US banks from 1980–90 following M&As, especially when both merger participants were relatively inefficient prior to the merger.³⁹ Also, after merging, banks tended to shift their portfolios to take on more loans and fewer securities. They attribute gains in profit efficiency to the benefits of risk diversification: larger banks have more diversified loan portfolios and lower equity-asset ratios. But their measure of profit efficiency does not account for changes in risk likely to result from such a portfolio switch. Berger (1998) found similar results in a study that includes all US bank mergers, both large and small, from 1990 to 1995.

In Europe, Vander Venet (1996) found that domestic mergers of equals in European countries have a positive impact on profitability, mainly driven by improvements in operational efficiency. As regards, cross-border mergers and acquisitions, he only found a partial profit efficiency improvement that may be caused by changes in the pricing behaviour of the acquired banks⁴⁰. Focarelli et al. (2002) found that Italian deals that consist of the purchase of a majority (but not all) of the voting shares of the target appear to result in significant

³⁷ Focarelli and al. (2002).

³⁸ Many studies of market structure, price conduct and profit performance have found that higher bank concentration is significantly associated with lower prices for deposits, but the relationship between higher concentration and higher profits is often mixed, being sometimes significant and sometimes not. A recent study has found that cost efficiency tends to be lower in markets where concentration is higher (Berger and Hannan, 1998). Indeed, higher concentration (market power) may lead to higher prices and revenues but, with less competition, the incentive to reduce costs to their minimum levels is blunted. So, the higher revenues are largely absorbed in higher costs rather than contributing fully to expanded profits. From this perspective, market concentration seems to have a greater negative effect on cost efficiency than it does on prices.

³⁹ Other relevant studies include Berger (1993 and 1996), Berger and Mester (1997), Clark and Siems (1997), Cummins and al. (1999) and Berger (2000).

⁴⁰ Vander Venet (2002).

improvements, mainly due to a decrease in bad loans. For full mergers, they observe that Italian banks aim to change their business focus towards providing financial services and thus increase their non-interest income, rather than to obtain efficiency gains. After the merger, they observe an increase in profitability in the long run that is also related to a more efficient use of capital.

2.1.3 Banking M&As and market power

Theoretically, market power is defined as the capacity to fix market prices as a result of a dominant position in a certain market. The economic literature⁴¹ concludes that prices are positively correlated to local market shares in general, but this position is not justified in the context of international markets (inter-banking activities, multinational companies...). Therefore, increased market power can be gained through a merger or an acquisition of two competing institutions operating in the same local market.

Thus, value creation through market power would seem more likely to explain mergers at the local level and within the same activity (especially in retail banking), which appears to be coherent with the theoretical evidence noted above, in particular in the European Union, where the majority of the operations are within sectors and are national.⁴²

In practice, banking institutions can influence supply (as a supplier) or demand prices (as a client). In the first case, the size obtained following a merger or an acquisition might create a dominant position which enables the bank to manipulate price levels in a certain market either by: a) decreasing prices (by pre-emption and/or predation⁴³) to evict some non-competitive existing banking institutions and/or new entrants, or b) increasing prices in the absence of effective competition in the marketplace⁴⁴. In the second case, the size obtained will enable the new group to reduce its refinancing costs thanks to reputation, size or diversification effects.

Nevertheless, some recent studies⁴⁵ have shown that the previous correlation between concentration levels and market power diminished during the 1990s.

⁴¹ Hannan (1991) and Berger and Hannan (1989, 1997).

⁴² Vander Vennet (1996).

⁴³ *Pre-emption* implies that the price fixed by the bank is lower than the average cost while *predation* involves fixing the price at a level lower than the marginal cost.

⁴⁴ Market power could be gauged by looking at the transmission of market interest rates to bank retail rates.

⁴⁵ Hannan (1997) and Radecki (1998).

This could be attributed to the opening up of markets which has encouraged the entry of new competitors and thus increased the degree of contestability of the market.⁴⁶ Moreover, the emergence of new distribution channels such as e-banking, while contributing to the disappearance of the geographical boundaries, has made the concept of 'local market' less relevant.

Based on the hypothesis of the increase of market power, it appears that the creation of mega-banks, by altering the effective competition, does not allow for any immediate profit for consumers because of dominant position abuses⁴⁷ and consumers' surplus capture. The effects of an M&A on the collective welfare, however – mainly via prices – will depend on numerous factors.

Firstly, it is necessary to distinguish between national and cross-border M&A operations. Prior studies of the pricing effects of M&As⁴⁸ found that national consolidation, by strengthening the degree of concentration, could generate substantial market power, which is likely to be harmful for households and small and medium-sized enterprises (SMEs).

However, the few existing studies on European bank mergers seem to conclude that there are often significant efficiency gains which result in better conditions for consumers. Huizinga et al. (2001) analysed 52 major mergers between European banks between 1994 and 1998, which were found to be largely socially beneficial. Some other studies found strong evidence of positive effects of M&As at a country level, leading to more favourable prices for consumers.⁴⁹

⁴⁶ A contestable market is one with low barriers to entry and exit (Baumol and al., 1982). In such a situation, potential competitors may engage in hit-and-run behaviour to take advantage of the super normal profit situation of the market. Contestability hinges on the absence of exit costs (called 'sunk costs'), which are the costs that cannot be recovered by transferring assets to other uses or by selling them. Entry to the financial services sector requires substantial investment that tends to be sunk to a high degree.

⁴⁷ The possibility of a cartel in banking is not purely theoretical and can be prejudicial for effective competition, as shown by the "Cruickshank" report (2000) in the UK and in Canoy and Onderstal (2003) in the Netherlands.

⁴⁸ Berger and al. (1998,1999).

⁴⁹ A number of further studies exist at the country level. For example, Focarelli and Panetta (2002), by distinguishing between short-run and long-run effects of M&As, have found strong evidence that these effects are different. Precisely, they showed that national mergers leading to deposit rate changes are unfavourable to consumers in the short-run, but in the long run, if banks succeed in reducing costs, efficiency gains from mergers prevail over the market power effects, so that consumers benefit. Hence, the adverse price changes generated through consolidation are by all means temporary. Thus, studies restricted to a short post-merger period might fail to register the efficiency gains and as a consequence overestimate the adverse price changes.

Conversely, cross-border M&A operations would intensify competition in the domestic market but do not change the banks' local market shares. Consequently, the national authorities, after having encouraged the constitution of 'national champions', should promote cross-border and particularly pan-European operations.

Secondly, it is also essential to distinguish M&A operations according to the 'means' used – market power or efficiency gains – to create shareholder value. If the value creation occurs primarily through increased *market power*, the transaction would only constitute a simple profit redistribution in favour of shareholders, but to the detriment of the customers, employees and public authorities, without a net gain in terms of collective welfare. In this case, the transaction involves a simple redistribution between the various stakeholders of the banking institution, which does not create wealth for the economy because the increase of banking profits is much lower than the welfare loss suffered by the other economic agents.

On the other hand, value creation obtained through the improvement of *efficiency* (through scale and/or scope economies, risk diversification...), will benefit not only the shareholders, but also the customers (price drop and/or improvement in the quality of the services) and the public authorities (higher solvency of credit institutions). For the employees, the results remain unclear. The overall impact of the consolidation process remains ambiguous, according to whether market power or efficiency effects would prevail.

2.1.4 Classification of the industrial strategies pursued by the European banking sector through M&A operations

In order to identify the type of merger or acquisition according to its *ex ante* motives⁵⁰, we use both geographical (regional, domestic and cross-border – both EU and international) and activity (to distinguish between within-sectors or businesses and cross-sectors or businesses) criteria.

We are able to define the main characteristics of a typology of the underlying *ex ante* industrial strategies through M&A operations observed in recent years in the European banking sector. These strategies will have different economic effects, depending on the motives behind the transaction. We suppose that the majority of M&As in the European banking sector were at least dictated by one of these strategies. Some examples are given at the end of the table (see Table 5).

⁵⁰ For a more detailed analysis of the typology reference to Ayadi (2005)

Table 5. Main characteristics of a typology of industrial strategies⁵¹ through M&As in EU banking

	Domestic M&As			Cross-border M&As		
	Same region	Different regions		Pan-European M&As	International M&As	
Geographical Dimension						
Activity, Segment or business	Same activity, same business	Different activities		Same activity, different businesses	Same activity	Different activities
Industrial strategies	Domestic diversification (business)	Domestic and conglomerational diversification		Business diversification and pan European diversification	Activity consolidation and international diversification	Conglomerate and international diversification
Motivations resulting from M&A operations	Domestic consolidation (business)	Extension of the activities and diversification of sources of income at a domestic level	<i>Types of industrial strategy</i>			
	Increase of the market power in a given market	Extension of businesses and diversification of sources of income at the domestic level	<i>Motivations related to the strategies adopted</i>			
			<i>Possible economic effects</i>			
Economic effects resulting from the new strategy	Cost savings due to the increase of the volume of the production, rationalisation of the infrastructure and of the administrative office	Increase in revenues due to diversification of the activities; Possibilities of rationalisation in the administrative office that would involve economies of scale (costs savings)	Ataining an important size in a given business at a pan European level	Increased revenues due to complementarity in businesses	Increased revenues due to international development	Increased revenues to complete diversification
Other effects	Reduction of banking over capacity (M&A of small banking institutions)	Optimal use of the infrastructures due to complementary activities				
Examples	Crédit Agricole-Crédit Lyonnais (France)	Allianz-Dresdner (Germany)	HYB-Bank Austria (Germany/Austria)	SCH-AKB (Spain / Germany)	ABN-Amro-Stamertis (NL / Brazil)	Deutsche Bank-Banker Trust (Germany / USA)

⁵¹ The validation of this matrix is an ongoing work of Rym Ayadi (2005), forthcoming.

2.2 Attempt to assess banking M&As' performance in Europe

Profitability and efficiency analysis based on balance sheet indicators⁵² and efficiency scores consists in describing costs, revenue, risk and efficiency. All these indicators are analysed three years before and three after the merger for the acquirers and the targets and compared to a peer group of non merged banks. The three years time period was used because it is more likely that gains should appear at least one year after the merger and then all gains should be realized within three years. For the pre merger period, ratios for both the acquirers and the targets are examined to get an indication as the relative performance of the acquirer and the target. In addition, ratios for a peer group⁵³ were examined to provide a basis for comparing performance of the merged institutions to non merged ones that are similar in term of size, type and location.

For the post merger period, the focus of the analysis is on the combined institution relative to the control group. The peer group was particularly valuable as it permits an assessment of whether any observed changes in the combined firm simply reflects changes in the economic environment or instead were due to the merger. Post merger data were compared with the pre merger data to determine what changes occurred in performance following the merger or the acquisition.

2.2.1 Methodology

2.2.1.1 Balance-sheet ratios analysis⁵⁴

Four sets of balance-sheet ratios are examined including cost, profitability, risk and activity ratios.

- The cost ratios include *cost to income ratio* which permits to examine total costs (non interest expenses and interest expenses) to total operating revenues. This ratio reflects the ability of the bank to generate revenue from its expenditures. Furthermore, for many banks, revenues reflect income earned from the balance sheet as well from the off balance sheet⁵⁵.

⁵² Balance sheet data were provided by Bureau Van Dijk, Belgium.

⁵³ For the profitability analysis, the peer group is composed of European banking institutions – (securities firms and insurance are excluded) of various sizes, types and activities. We excluded foreign branches and subsidiaries that have their parent institution outside EU 15. We also excluded the institutions of our sample that were involved in a merger or a majority acquisition.

⁵⁴ Rhoades (1998).

It is also of a special interest to decompose total costs to *non interest costs* (personnel expenses, back office operations and branches, amortization expense of intangible assets) and *interest costs* (cost of financial capital) to total assets. The former should be directly affected by the cost savings that are frequently cited as resulting from horizontal bank mergers. The later may be significantly affected by the way the bank chooses to obtain deposits. For example, a bank may choose to shift from using core deposits (predominately retail deposits) as a source of funds to using purchased money. Obtaining core deposits tends to incur high non interest expenses from through the fixed costs of running the branches and the personnel while the opposite is true for obtaining purchased money, especially when interest rates are relatively low. The advantage of using total assets as a denominator in the cost ratios is that assets reflects the earnings base of the bank and they are not highly variable from one year to another, whereas revenues tend to be more variable.

- The profitability ratios include the *return on asset (ROA)* which is the ratio of gross income to average assets and the *return on equity (ROE)* which is the ratio of gross or net income to equity. Gross income⁵⁶ measure is preferred to net income⁵⁷ one to avoid the differences in taxation between the European countries. ROA is a good overall indicator of a banking organization's performance that illustrates the ability of a bank to generate profits from the assets at its disposal. It has the disadvantage however of not accounting for the profits generated from the off balance sheet operations. ROE is an alternative measure of profitability designed to reflect the return to owners' investment. It has also a disadvantage that the denominator may vary substantially across banks, even those of identical size due to the discretionary choices by management as to the mix between equity and debt capital as well as the total amount of capital held by a firm.

Finally, it is also worth decomposing the total revenue into its main streams: interest and non-interest revenues to measure the diversification of income. In addition, we will measure the ability of the bank to generate revenue by the asset productivity ratio which is total revenues on total assets.

⁵⁵ Among the large banks, derivatives are important off balance sheet item that may be larger as measured by notional value than total asset. For many other banks, unused commitments such as credit cards, and home equity lines of credit represent major off balance sheet items that are sometimes larger in value than assets. Standby and commercial letters of credit represent an important although much smaller source of off balance sheet items for mostly larger banks. Off balance sheet activities result in expenses and also revenues.

⁵⁶ Which is the income before taxes.

⁵⁷ Which is the income after taxes.

- The risk indicators are used to determine the change in the risk profile of a bank after a merger or an acquisition. For example *capital ratio* which is defined as equity to total assets indicates the capital strength of the bank and its ability to absorb credit and other losses. *Loan-loss provision to net interest revenue* provides an indication of the extent to which the bank has made provisions to cover credit losses. The higher the ratio, the larger is the amount of expected bad loans on the books, and the higher are the risks despite having been provisioned. Finally, the *liquidity ratio* defined as liquid assets to total deposits. The higher this ratio is, the stronger is a position of a bank to absorb liquidity shocks but as liquid assets tend to be low yielding, a higher ratio implies lower earnings.
- In addition to these ratios, a number of other variables are included to account for the balance sheet features of the banks involved in M&As. These include: *total loans to total assets* which shows the proportion of the balance sheet dedicated to lending. Moreover, an increase or a decrease in this ratio would likely result in an increase or a decrease in the expense ratios because of the high cost of establishing and maintaining loan portfolios relative to a portfolio of government securities. A second ratio which is *total deposits to total assets* indicates the change of bank financing. An increase or a decrease in this ratio would likely result in an increase or a decrease in non interest expenses and in an increase or a decrease in interest expenses. Finally, the ratio of *off-balance sheet items to total assets* is included to provide an indication of an organization's involvement in such activities which also an indicator of diversification.

2.2.1.2 Cost and profit efficiency scores analysis

Several techniques – parametric or non-parametric – have been proposed in the literature to measure efficiency using the frontier approaches. They mainly differ in the distributional assumptions used to disentangle inefficiency differences from random errors. The parametric Stochastic Frontier Approach (SFA) and the non-parametric Data Envelopment Analysis (DEA) are the most used tools to measure efficiency, taking into account that the literature considers both techniques as equally satisfactory⁵⁸. We choose the DEA approach as we consider it to be a more appropriate tool in our analysis since it does not require an assumption of a functional form for the frontier relating inputs and outputs, particularly when the sample used to evaluate efficiency before and after an M&A is composed of banks of different sizes, types and

⁵⁸ Weill (2004).

countries. Also, DEA does not assume any distributional form for the inefficiency term and it is easier to accommodate multiple input and output models. And finally, the banks are directly compared against a peer or combination of peers.

DEA approach was initially developed by Charnes, Cooper and Rhodes (1978) who proposed a model that measure technical efficiency scores under constant returns to scale (CRS). The CRS assumption has however a limited scope since it is only appropriate when operating at an optimal scale. Imperfect competition and constraints on finance may cause a Decision Making Unit (DMU) not to be operating at optimal scale. Banker, Charnes and Cooper (1984) described a revised model including variable returns to scale (VRS), thus allowing the computation of pure technical efficiency and scale efficiency. The VRS specification has been the most commonly used specification in the 1990's.

The DEA model is a linear programming based method for evaluating the relative efficiency of a set of Decision Making Units (DMUs). The DEA frontier is formed as the piecewise linear combination that connects the set of "best-practice observations" in the data set under analysis. As a consequence, the DEA efficiency score for a specific DMU is not defined by an absolute standard or "theoretical maximum", but it is defined relative to the other DMUs in the specific data set under consideration.

DEA suffers however, from its limitations since it does not consider the existence of an error term (or "noise") and it can not be used to conduct conventional statistical tests of hypotheses in particular when testing the presence of environmental variables. In that case, it seems preferable to use the Stochastic Frontier Analysis (SFA) rather than DEA.

In this paper, we use the non-parametric DEA approach⁵⁹ to estimate cost and profit efficiency scores⁶⁰. The frontier is obtained by means of linear combination of efficient firms contained in the sample. Although cost efficiency obtained by means of non-parametric techniques has been a widely used procedure, the estimation of profit efficiency by non-parametric techniques has rarely been done. The cost efficiency (respectively profit

⁵⁹ Berger and Mester (1997); Maudos and Pastor (2003)

⁶⁰ The efficiency of a firm consist of two components: *technical efficiency*, which reflects the ability of a firm to obtain maximal output from a given set of inputs, and *allocative efficiency*, which reflects the ability of a firm to use the inputs in optimal proportions, given their respective prices.

efficiency) measures the distance of each bank's cost (and respectively profit) and the "best practice" in the industry when producing the same bundle of outputs. Cost efficiency provides an indication on wastes in the production process and on the optimality of the chosen mix of inputs as a function of their respective prices. Profit efficiency, instead provides an indication on the optimality of the chosen mix of inputs and outputs. The comparison of cost and profit efficiency scores may give an indication on a likely market power effect.

The non-parametric DEA model uses linear programming to find the best practice bank in the sample ($i=1, \dots, N$) that reflects minimum costs in producing the observed output vector Q , $(y_i = y_{i1}, \dots, y_{iq}) \in \mathfrak{R}^{q++}$ that sell at prices $(r_i = r_{i1}, \dots, r_{iq}) \in \mathfrak{R}^{q++}$ given the a vector of P inputs $(x_i = x_{i1}, \dots, x_{ip}) \in \mathfrak{R}^{p++}$ for which they pay prices $(w_i = w_{i1}, \dots, w_{ip}) \in \mathfrak{R}^{p++}$.

The cost efficiency of each bank j can be obtained by solving the following problem of linear programming:

$$\begin{aligned} & \text{Min} \sum_p w_{pj} x_{pj} \\ \text{Subject to} & \sum_i \lambda_i = y_{iq} \geq y_{jq} \quad \forall q \\ & \sum_i \lambda_i = x_{ip} \leq x_{jp} \quad \forall p \\ & \sum_i \lambda_i = 1, \lambda_i \geq 0, i = 1, \dots, N \end{aligned}$$

The solution $(x_j^* = x_{j1}^*, \dots, x_{jp}^*)$ corresponds to the input demand vector that minimises the costs with the given process of inputs and is obtained from a linear combination of banks that produces at least as much of each of the inputs using the same or less amount of inputs and the cost will be $C_j^* = \sum w_{pj} x_{pj}^*$ which is by definition less than or equal to the cost of the bank j ($C_j = \sum w_{pj} x_{pj}$)

The cost efficiency⁶¹ for bank j (CE_j) can be calculated as follows:

$$CE_j = \frac{C_j^*}{C_j} = \frac{\sum_p w_{pj} x_{pj}^*}{\sum_p w_{pj} x_{pj}}$$

⁶¹ Radial cost efficiency, Banker, Charnes, and Cooper (1984).

Where $CE_j \leq 1$ represents the ratio between the minimum cost C_j^* associated with the use of the input vector x_j^* that minimises the costs and the observed costs C_j for bank.

Respectively, the alternative profit efficiency⁶² is empirically calculated with the following linear programming formally expressed:

$$Max R_j - \sum_p w_{pj} x_{pj}$$

Subject to

$$\begin{aligned} \sum_i \lambda_i R_i &\geq R_j \\ \sum_i \lambda_i y_{iq} &\geq y_{jq} \forall q \\ \sum_i \lambda_i x_{ip} &\leq x_{jp} \forall p \\ \sum_i \lambda_i &= 1; \lambda_i \geq 0; i = 1, \dots, N \end{aligned}$$

The solution of the linear programming corresponds to the revenue R_j^* and input demand $x_j^* = x_{j1}^*, \dots, x_{jp}^*$ which maximises profits given the prices of the inputs w . This solution is obtained from a linear combination of firms that produce at least as much of each of the outputs using a smaller or equal quantity of inputs and obtains at least as much revenues as bank j .

Alternative profit efficiency is then calculated as follows:

$$APE_j = \frac{P_j}{AP_j^*} = \frac{R_j - \sum_p w_{pj} x_{pj}}{R_j^* - \sum_p w_{pj} x_{pj}^*}$$

Where APE_j represents the ratio between the observed profits ($P_j = R_j - \sum_p w_{pj} x_{pj}$) and the maximum profits $AP_j^* = R_j^* - \sum_p w_{pj} x_{pj}^*$ associated with the maximum revenue and the input demand $x_j^* = x_{j1}^*, \dots, x_{jp}^*$ that maximises profit for bank j .

In applying DEA, we adopted the intermediation approach proposed by Sealey and Lindley (1977). It assumes that the bank collects deposits to transform them, using labour and capital, into loans as opposed to the production approach which views the bank as using labour and capital to

⁶² Berger and Mester (1997), Rogers (1998).

produce deposits and loans. According to the empirical literature⁶³, the choice of either approaches may have an impact on the level of efficiency scores but do not imply strong modifications in their rankings.

Two outputs are included, loans and investment assets⁶⁴. The inputs, whose prices are used to estimate cost and alternative profit frontier, include labour, physical capital and borrowed funds.

As data on the number of employees are not available, the price of labour is measured by the ratio of personnel expenses to total assets⁶⁵. The price of physical capital is defined as the ratio of other non interest expenses to fixed assets. The price of borrowed funds is measured by the ratio of paid interests to all funding. Total costs are interest costs and non-interest costs. To measure total profit, we use operating gross income⁶⁶ which does not include loan provisioning as provisioning rules differ from one country to another one in Europe.

2.2.2 The results of the exploratory analysis⁶⁷

2.2.2.1 Balance-sheet ratios Analysis

The results are based on eight individual case studies with different characteristics. The characteristics depend on the geographical criteria (domestic (same city and different cities) or cross-border) and on the initial specialisation of the bank (commercial banks (active in deposit, lending and other activities), investment banks (mostly active in investment activities), mortgage banks (mostly active in long term lending) and savings banks (mostly active in deposits and to a certain extent lending) before the transaction. It is important to mention that nowadays the distinction between commercial banks, mortgage banks, savings banks is not an easy task due to the historical trend towards universal banking concept.

The choice of the case studies is based on eight individual banking mergers and acquisitions⁶⁸ having distinct industrial strategies before completing the transaction.

⁶³ Wheelock and Wilson (1995), Berger, Leusner and Mingo (1997).

⁶⁴ This item includes the « other earning assets » in the Bankscope terminology, which are the earning assets other than loans.

⁶⁵ Dietsch and Weill (2001), Altunbas et al. (2001), Maudos et al. (2002).

⁶⁶ Which is profit before provisions and taxes.

⁶⁷ Annex 1.

⁶⁸ The analysis is extended to 120 mergers and acquisitions cases (broken down into domestic and cross border) in Ayadi (2005), forthcoming.

- *Transaction A*: a domestic merger between Banco Commercial Portugues headquartered in Porto and Banco Pinto & Sotto Mayor headquartered in Lisbon. The deal was announced and completed in 1999. Both banks had the profile of commercial banking (mainly supply of loans and collect of deposits). The industrial strategy behind the merger was to reinforce their respective activities in commercial banking in different cities in Portugal. The expected outcome of the merger is to cut costs and to increase revenues in the same activities by reaching customers in different cities.
- *Transaction B*: a domestic acquisition between Bankgesellschaft Berlin AG and Berliner Bank both headquartered in Berlin. The deal was announced and completed in 1998. The acquirer was operating as an investment bank, and the target was a pure commercial bank. The industrial strategy behind the acquisition was to diversify the sources of revenues by reinforcing the multi-specialized (commercial and investment activities) banking in the same city in Germany. The expected outcome of the acquisition is an increase the revenue via the complementarities of the respective activities of the two banks.
- *Transaction C*: a domestic merger between Realkredit Danmark and BG bank both headquartered in Copenhagen. The deal was announced and completed in 1999. The acquirer was operating in real estate and mortgage banking and the target was a commercial bank. The industrial strategy behind the merger was to diversify the sources of revenues by reinforcing the multi-specialized (commercial activities and mortgage lending) banking in the same city in Denmark. The expected outcome is an increase of revenue via the complementarities of activities of the two banks.
- *Transaction D*: a domestic merger between Banco de Valencia and Banco de Murcia, the first headquartered in Valencia and the second in Murcia. The deal was announced and completed in 1997. Both the acquirer and the target were operating in commercial banking and thus having the same profiles of the activities. The industrial strategy behind the merger was to reinforce the two banks' respective activities in commercial banking in different cities in Spain. The expected outcome of the merger is to cut costs and to increase revenues in the same activities by reaching customers in different cities. Transaction D is similar to transaction A in its characteristics.
- *Transaction E*: a cross-border merger between Nordbanken from Sweden and Merita PLC from Finland. The deal was announced and completed in 1997. Both the acquirer and the target were operating in commercial

banking and thus having the same profiles of the activities. The industrial strategy behind the merger was to reinforce the two banks' respective activities in commercial banking at a cross-border level. The expected outcome is to cut costs and expand the sources of revenues due to the expansion of the respective markets.

- *Transaction F*: a domestic merger between Banco Ambrosiano Veneto and Cariplo to form Banca Intesa SPA. The deal was announced and completed in 1997. The acquirer was operating in commercial banking and the target was a saving bank. Both banks were more or less undertaking the same activities. The industrial strategy behind the merger was to reinforce the two banks respective activities is commercial and savings banking in the city of Milan. The expected outcome is mainly some cost reductions.
- *Transaction G*: a domestic acquisition between Banque Nationale de Paris (BNP) and Paribas both headquartered in Paris. The deal was announced and completed around 1998. Both banks were active in commercial banking; Paribas was more inclined towards investment activities. The industrial strategy behind the acquisition was to consolidate the universal banking model in the Parisian region. The expected outcome is to increase revenue and to increase costs.
- *Transaction H*: a cross-border acquisition between Kredietbank SA Luxembourgeoise KBL from Luxembourg and Banco Uquijo from Spain. The deal was announced and completed around 1999. The acquirer was more inclined towards investment activities; whereas the target was more active in commercial activities including lending and savings. The industrial strategy behind the acquisition was to consolidate the universal banking model at a cross-border level. The expected outcome is to increase revenue thanks to complementarities.

The summary of some key performance results of each of the case studies appears in the annexes at the end of the paper in two tables: one for the acquirers and the other one for the targets. The tables report the results for the peer group.

The reported findings are related to efficiency, profitability, risk and activity results. The first set of ratios includes cost to income ratio, non interest expenses to total assets and interest expenses to total assets. The second set includes ROA, ROE, interest revenue from lending to total revenue, non interest revenue (including trading income, commission and fees) to total revenue and total revenue to total assets. The third set includes capital ratio

and loan loss provision to net interest revenue. Finally the activity ratios include loans to total assets, consumer deposits to total assets and off balance sheet to total assets.

The key findings are:

The majority of the case studies showed a clear cost cutting relative to peers. The particular cases A and D fully realised the expected cost cutting objective for the acquirers and for the targets. In these cases, cost savings were both associated to interest expenses and non interest expenses savings.

Generally, cost reductions were more associated with interest expenses savings than related to personnel and other administrative expenses. The decline of interest expenses is a natural evolution because of the declining interest rates. Indeed, in the majority of the studies (E, F, G, H), there was a clear shift from using core deposits to using purchased money to take advantages of low interest rates. Moreover, two other particularities in Europe may explain why cost reductions associated to personnel expenses and other administrative costs are not as expected. Firstly, labour market rigidities and the power of labour unions act positively to protect employees of banking institutions facing restructuring. Secondly, the branch network remains the most important distribution channel for many banks in this sample (See Annex 2).

The majority of the case studies showed a little improvement in profitability as measured by the ROA relative to peers. This improvement is more important for the acquired banks. This may be explained by the fact that the acquiring banks were more profitable prior to the merger or the acquisition. This is consistent with the hypothesis supposing a transfer of best practices from the acquirer to the target.

The evolution of some profitability indicators showed that depending on the transaction type, there is a shift in the activities of the banks involved in the merger or the acquisition. For example, in case studies D and G where both partners are commercial banks, the acquiring firm shifted its revenue from lending to other investment revenues, whereas, the shift of the revenue sources of the targets is ambiguous. In case study B and H where an investment bank acquired a commercial bank, the revenue shift for the acquiring bank is from non interest revenue to interest revenue and for the target the revenue shift is the opposite. This clearly shows the intention of the acquiring banks to diversify their revenue sources whatever their initial activities are.

The initial findings based on the sample above, show that there is a clear trend to diversify the sources of revenues and depending on the initial characteristics of the transaction, one can predict its immediate implications.

2.2.2.2 Cost and profit efficiency scores analysis

The efficiency measures are the results of the implementation of a variable returns to scale (VRS) model⁶⁹.

Precisely, we perform a dynamic efficiency analysis on a sample of 33 large bank-to-bank mergers (including 7 cross-border transactions) completed over the period 1997–2000⁷⁰. The period under scrutiny is of particular interest because it covers the period preceding and following the introduction of the euro.

In order to be included in the sample, the following criteria are retained: 1) The transactions are full mergers involving the combination of the consolidating partners (acquisitions are excluded from this analysis); 2) Mergers involve banks headquartered in one of the EU 15 countries; 3) Banks involved in the transactions are commercial, cooperative or savings banks (insurance and securities firms are excluded); 4) Subsidiaries and branches are kept out of the sample; 5) At least one year of pre- and post-merger data for the consolidating banks is available.

The distribution of the 33 deals over the sample period is as follows: number of transactions per year in parenthesis): 1997 (9), 1998 (7), 1999 (9), 2000 (8). The country coverage of the sample is as follows (with the number of acquiring banks and the number of acquired banks over the full period in parenthesis): Belgium (2,2), Denmark (2,3), Finland (2,1), France (3,2), Germany (2,3), Greece (1,1), Italy (9,9), Luxembourg (0,1), Norway (0,1), Portugal (0,1), Spain (5,5), Sweden (5,1), UK (4,3). Most of the cross-border deals involve banks in neighbouring countries, consistent with the rationale behind distance and cultural affinity as enabling factors. For example MeritaNordbanken-Christiania Bank-Unidanmark (Scandinavia) and SCH-Banca Totta & Açores (Iberian Peninsula) in 2000.

The construction of cost and profit frontiers was based on a large sample of approximately 600 European banks located in the same EU countries. These banks are mainly commercial, cooperative and savings banks. We excluded subsidiaries of foreign banks, specialised financial institutions and central banks.

⁶⁹ In our empirical analysis computer routines are carried out using DEAP 2.1 (Coelli, 1996).

⁷⁰ For more extended analysis, see Pujals (2005b forthcoming) and Ayadi (2005 forthcoming).

In addition, a peer group was constituted to provide a basis for comparing performance of the merged institutions to non merged ones that are similar in term of size, type and location. This group excludes the pre-specified sample of 33 bank-to-bank mergers and more generally all the banks that were involved in a takeover during the same year. It is particularly valuable as it permits an assessment of whether any observed changes in the combined bank simply reflects changes in the economic environment or instead were due to the merger. The period of observation is 1996–2003. We consider unconsolidated balance sheet data whenever possible.

All the data used in the empirical analysis are derived from *Bankscope*, a FitchRatings/Bureau Van Dijk international database which provides annual income and balance sheet data for banks.

Our efficiency results indicate that for the domestic transactions, the cost efficiency of consolidating banks improves following the merger. This improvement is more pronounced for the targets⁷¹ as they were much less efficient than the acquiring banks prior to the merger. This supports two hypotheses: the first is a transfer of the best practices of the acquiring bank to the target and the second, which is related to the first, is the existence of an efficient market for corporate control in European banks. These findings suggest that mergers should be more successful if targets were proved to be badly managed.

With respect to profit efficiency, we find a little improvement for consolidated banks. The differential in profit efficiency scores between the acquiring and acquired banks prior to the merger is almost insignificant, but the increase is slightly more important for the targets. This suggests that it is more difficult for European banks to realise revenue synergies than cost synergies following the merger. We could provide two explanations, either because the first priority of European banks is to cut cost as imposed by a highly competitive market; or because the universal banking model dominating the European banking industry has limited the opportunities for revenue synergies.

The results of cross-border transactions show a deterioration of cost efficiency for the acquiring bank and a slight improvement for the targets. It is interesting to mention that cost efficiency scores for the targets involved in a cross-border transactions are higher than the ones involved in domestic mergers. This may suggest that in a cross-border transaction, the potential

⁷¹ These results are consistent with Altunbas and Marques Ibanez (2004) for European banks.

targets are amongst those which are the better cost-managed. As for the acquiring banks, the higher costs engaged in cross-border transactions (including costs to control a more complex entity in a foreign country and the premium paid to foreign shareholders...) are the main reason not to make possible cost synergies.

As concerns profit efficiency, we find a negative, but not significant, variation for the acquiring banks, whereas a relatively strong improvement for the targets. Indeed, prior to the merger, it appears that the targets were experiencing revenue efficiency problems although they were relatively cost efficient. This suggests the potential revenue synergies that could be achieved by the consolidated bank through the transaction⁷². It is finally interesting to mention that the banks involved in a cross-border transaction were more efficient in terms of profit efficiency than the ones involved in domestic transactions.

Generally, the acquiring bank is more efficient than the peer group. In contrast, the target bank is less efficient than the peer group. This difference more pronounced in cross-border transactions.

2.2.3 Conclusions

The empirical evidence suggests that domestic banking mergers contribute to an improvement in the cost efficiency of the consolidated bank, whereas the impact on profit efficiency is not significant. This result suggests the domestic banking mergers in Europe reached the objective to reduce costs. The analysis of the case studies support that cost reduction is mainly realised through interest expenses savings than personnel and other administrative expenses savings. As for profit efficiency, the results suggest that the failure to achieve revenue synergies may be explained by the level of diversification already anchored in European banks due to the dominance of universal banking model. Cross-border mergers instead were not proved to cut costs, but they were more profit efficient through a better exploitation of potential revenue synergies. These results seem to confirm the motivations cited by practitioners for consolidation strategies, which are largely related to efficiency goal and improvements in management quality. Nevertheless, it is important to proceed with a complementary case by case analysis to ensure the relevance of these results.

⁷² These results are broadly consistent with Altunbas and Ibanez (2004) for European banks, Houston, James and Ryngaert (2001) for US banks and Focarelli and Panetta (2002) for Italian banks.

3 What prospects for the banking industry in the EU?

The diagnosis of the 1990s shows the importance of the domestic M&A wave in the European banking sector leading to an overall increase of the concentration levels. In the long term, the increase in cross-sector and cross-border operations will lead to the creation of several pan-European financial conglomerates regardless of the traditional boundaries. It is likely that cross-border transactions will accelerate in countries where domestic consolidation is advanced and/or where competition concerns have been voiced in specific market segments. In countries where cross-border and cross-sector consolidation has already been triggered, the formation of cross border conglomerates is inevitable. Nevertheless, the consolidation patterns in the individual European banking markets seem to be diverse and this is typically linked to the progress achieved in terms of restructuring. Therefore, one might wonder about the banking models that would ultimately emerge in the European banking scene.

3.1 What are the prospects for consolidation in the medium term?

The European banking market is considered to be still relatively fragmented:⁷³ regional leaders and national oligopolies still co-exist and very few European banking institutions operate as global players.⁷⁴ There is no doubt that the domestic consolidation wave experienced in most European countries has resulted in more or less concentrated domestic banking markets. In the most concentrated ones, where domestic growth opportunities have become scarce, bank managers will look at new growth opportunities in different geographical areas to benefit from the effects of geographical diversification. In contrast, in less concentrated markets, domestic consolidation is a preferred response to overcome domestic inefficiencies.

Accordingly, two potential future developments can be expected in the medium term: firstly, the completion of the domestic consolidation⁷⁵ taking

⁷³ ECB (2002).

⁷⁴ In contrast to retail banking, some banking institutions operate at EU level in investment or private banking and in a few specialised financial services, such as Deutsche Bank in investment banking and Cetelem (BNP Paribas) or Sofinco (Crédit Agricole) in consumer credit.

⁷⁵ According to Fitch Ratings (2001), “The national consolidation process will continue in the main countries of the European Union (Germany, Spain, France, Italy and the United Kingdom) as long as there will remain not more than three or four major banking groups in each country”.

place in EU countries where concentration levels are intermediate to low, and secondly, an acceleration of cross-border M&A operations,⁷⁶ particularly in countries where competition concerns have already been voiced from the authorities within the domestic market.

If bank mergers in the past have been hampered by significant regulatory obstacles, the 1992 Treaty on European Union, the 1998 Council directive on the liberation of capital movements, the creation of the euro in 1999 and the European Commission's progress towards the integration of EU financial markets through the Financial Services Action Plan (FSAP) constitute the Union's major achievements in removing the regulatory obstacles to an integrated financial services market. In addition to the unrestrained imperative to acquire an ever-greater market share and to maximise shareholder value, these regulatory changes will sooner or later lead numerous banking institutions to adopt this strategic option amongst others⁷⁷. In the meantime, cross-shareholdings and strategic alliances might proliferate between the major banks within the EU.⁷⁸

3.1.1 Concentration – Competition analysis

The consolidation wave of the 1990s resulted in an overall increase in concentration levels in almost all EU banking markets. Nevertheless, significant differences continue to exist across countries. In some countries, this increase has reached such proportions that concern has been voiced whether it would not lead to an abuse of market position. In others, particularly in countries where small- and medium-sized banks still prevail in the savings or co-operative sector, M&A activity is expected to continue for years to come.

It is important to interpret these concentration indicators with caution. Indeed, principal drawbacks of simple concentration ratios are that they tend to be very general and static. They do not take into account the non-financial institutions, for example. Also, because the data set consists of consolidated

⁷⁶ According to McKinsey (2003), "An important cross-border transaction is expected between two of the top 15 European banks in the two or three coming years. This might trigger further cross-border consolidation".

⁷⁷ Banking consolidation through mergers and acquisitions is not the only possible strategic option to restructuring. Indeed, alliances, joint venture and organic growth are some other possible strategic means offered by banking institutions to grow.

⁷⁸ As examples: the alliance announced in December 2001 by the French Banques Populaires Group and the German DZ Bank for the creation of a federative and powerful mutual network at a European scale and the recent one between Cr dit Mutuel-CIC and Banca Popolare di Milano.

figures, they do not distinguish between domestic and foreign operations. For these reasons, concentration index values for small countries with large international banks are overstated.

To assess concentration at the EU level and its impact on competition, the definition of the relevant market segments will certainly be a crucial issue in the years to come.⁷⁹ The reference market differs depending on the type of services considered (retail or wholesale activities) and also on the geographical dimension⁸⁰ (national, regional or European⁸¹). For retail banking, the local dimension of a market is relevant while the international dimension is relevant for investment banking.

Together with concentration analysis, a reference should be made to the level of contestability of the markets or sub markets under investigation especially in the case of new entries and the active role of Internet banking in some countries (Scandinavia and UK).

For the time being, however, the European supervisory authorities rely on simple concentration indicators such as the CR5 and the Herfindahl index. Hence, according to Table 6, three observations on concentration levels can be highlighted:

1. Concentration has reached relatively high levels in the Scandinavian and Benelux countries (around 70%); this might give rise to competition concerns for the national authorities in some relevant markets. Consequently, it seems that there is no further scope for domestic consolidation.
2. Despite the relatively advanced integration process of EU financial markets and the introduction of the euro, concentration indicators seems to remain highly dispersed between the EU countries, which illustrates the divergence of national banking structures.
3. With the exception of Ireland and Luxembourg, concentration levels appear to be higher in small countries. Thus, there is a direct relationship between the size of the economy and the concentration level derived from

⁷⁹ See De Bandt (2000).

⁸⁰ Two Competition Commission reports (July 2001 and March 2002) on banking in the UK argue that competition need to be considered even in narrower sub markets such as loans to SMEs.

⁸¹ The move towards an increasingly integrated European financial market will lead to the change of the reference market.

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the high dependency on the size of the country or the banking market.⁸² The speed (or the degree) of consolidation in a given market is then inversely proportional to the size of the country.

Table 6. Concentration indicators in European banking (in %)

	Total assets ^a				Total credits				Total deposits			
	1990		1999		1990		1999		1990		1999	
	CR5	HHI	CR5	HHI	CR5	HHI	CR5	HHI	CR5	HHI	CR5	HHI
Austria	34.67	0.036	50.39	0.102	33.9	0.032	43.3	0.073	33.12	0.028	39.6	0.054
Belgium	48	na	77.39	0.155	58.0	na	80.38	0.167	67.00	na	74.7	0.135
Denmark	76	na	77.00	0.136	82.0	na	79	0.154	82.00	na	79	0.150
Finland	41	na	74.33	0.191	49.7	na	68.02	0.174	46.08	na	63.4	0.190
France	42.5	na	42.70	0.051	44.7	na	46.4	0.067	58.70	na	69.2	0.133
Germany	14	na	18.95	0.014	13.5	na	15.75	0.012	11.57	na	15	0.009
Greece	83.7	0.25	76.62	0.151	87.2	0.248	74.53	0.129	86.78	0.276	81.7	0.183
Ireland	44.2	na	40.79	0.048	42.9	na	48.22	0.061	43.70	na	51	0.070
Italy	19	0.014	26.00	0.060	28.9	0.015	47.57	0.059	30.64	0.013	46.1	0.058
Luxembourg	na	na	26.09	0.024	na	na	34.32	0.042	na	na	28.1	0.028
Netherlands	73.39	0.117	82.25	0.170	76.7	0.129	81.5	0.160	79.50	0.166	83.4	0.188
Portugal	58	0.096	72.60	0.123	57.0	0.101	72.9	0.130	62.00	0.119	79.6	0.164
Spain	35	0.035	51.90	0.072	31.5	0.033	47.9	0.059	36.28	0.037	45.3	0.054
Sweden	82.68	0.225	88.21	0.195	81.3	0.191	85.3	0.177	90.55	0.234	83.5	0.160
UK	na	0.019	29.07	0.026	na	0.034	30.28	0.036	na	0.024	32.4	0.028

^a Calculated on a unconsolidated basis, which implies that only domestic banking assets are included.

Source: ECB (2000)

Table 7 provides a classification of the concentration levels (total assets, credits and deposits, respectively) by group of countries in 1999.

Table 7. Classification of the countries by concentrations levels in 1999

Type of assets	CR5>60%	40%<CR5<60%	CR5<40%
Assets	Belgium, Denmark, Finland, Greece, the Netherlands, Portugal, Sweden	Austria, France, Ireland, Spain	Germany, Italy, Luxembourg ⁸³ , United Kingdom
Credits	Belgium, Denmark, Finland, Greece, the Netherlands, Portugal, Sweden	Austria, France, Ireland, Italy, Spain	Germany, Luxembourg, United Kingdom
Deposits	Belgium, Denmark, Finland, France, Greece, the Netherlands, Portugal, Sweden	Ireland, Italy, Spain	Austria, Germany, Luxembourg, United Kingdom
Concentration levels	<i>High</i>	<i>Intermediate</i>	<i>Low</i>

⁸² Scherer and Ross (1990) and Sander and Kleimeier (2001).

⁸³ The positioning of UK and Luxembourg has to be looked at with care as total assets, total credits and deposits are distorted by the large number of banks represented by international business.

Belgium, Denmark, Finland, Greece, the Netherlands, Portugal and Sweden show *high* concentration ratios in assets, credits and deposits. In these countries, opportunities for domestic consolidation are rare. In this respect, competition authorities would probably object to any domestic merger between large players⁸⁴ to preserve fair competition.

Let us give the example of retail banking in the Netherlands⁸⁵ which deserves a close examination by the competition authorities given its very tight oligopolistic structure. This market is dominated by five main players (ABN Amro, Rabobank, ING, SNS and Fortis), with an estimated combined market share of 93% for payment services and also high percentages for other market segments. Besides that, reputation constitutes the most important entry barrier to new entrants. Indeed, building up a brand name requires substantial advertisement and public relations costs, which cannot be recovered in the event the company must exit the market for payment services. These sunk costs constitute an additional entry and also an exit barrier to the market, which decreases the contestability of the market and harms fair competition.

In Austria, France, Ireland, Italy and Spain, concentration ratios are *intermediate*. In these countries where savings and cooperative banks dominate the banking sector, there might be scope for further domestic consolidation. In France, the deposit market (unlike the credit market) has the distinction of being highly concentrated. This situation is partly due to *l'épargne réglementée* which forms a large part of the deposits distributed through networks such as Crédit Mutuel (Livret bleu) and Groupe Caisses d'Épargne (Livret A).

Finally, in Germany, Luxembourg and the United Kingdom, concentration ratios are *low*. In Germany, this low ratio is due to the highly fragmented character of the banking market and the dual presence of the savings banks (*Sparkassen*) and *Landesbanken* which together maintain a market share of almost 35.5%, compared to 27.3% for commercial banks.⁸⁶ At the end of 1999, the market share of the big four (Deutsche Bank, HypoVereinsbank, Dresdner Bank and Commerzbank) was only 15.3%.

⁸⁴ The planned merger in Sweden between Skandinaviska Enskilda Banken (SEB) and Foreningssparbanken (Swedbank) was not pursued because of competition concerns.

⁸⁵ Canoy and Onderstal (2003).

⁸⁶ Deutsche Bundesbank, Activity Report for 2000.

In Luxembourg and the UK, the high foreign penetration could explain their low degree of market concentration. According to the Bank of England, 306 foreign banks were established in the UK in 2000, owning 55% of the total assets. Hence, to correctly portray the British banking market, it is more appropriate to look at the total assets in sterling owned by more than 70% of British institutions, and then to differentiate between wholesale and retail markets. Foreign banks are more active in the wholesale market accounting for 40% of credits to corporate clients, and are almost absent in the retail market where the main British banking institutions share almost 60% of deposits and credits to individual customers.

Despite the 'low' concentration of the banking market in the UK, a Treasury-sponsored study (Cruickshank, 2000) concluded that competition problems existed in the markets for money transmission, services to personnel customers and services to SMEs. For services to personal customers, it found that the supply of current accounts was dominated by a few large firms. For banking services to SMEs, the levels of concentration were even higher. This market structure resulted in high prices, in particular for money transmission services, and high bank profits.⁸⁷ The conclusions of the report were sufficiently alarming to cause the bid to be blocked in 2001 by Lloyds TSB for Abbey National⁸⁸.

3.1.2 Country analyses: Different patterns of consolidation in the future

In a majority of European countries, domestic operations have been characterised by an increasing average transaction value since 1998. This has led to the creation of banking 'giants' at the domestic scale. This observation – which seems to reinforce the idea of the maturity of the national consolidation process in numerous countries – foresees the strengthening of the cross-border consolidation phase and the emergence of a few cross-border European 'leaders' in the medium term⁸⁹.

As previously noted, the underlying hypotheses suggest that the swing towards cross-border operations could take place when the concentration threshold admitted by the competition authorities is reached in the national relevant market. Although none of the principal European countries has

⁸⁷ An over-profit was estimated between £3 to £5 billion per year by the Cruickshank report.

⁸⁸ Competition Commission (2001).

⁸⁹ See Ayadi and Pujals (2004) and Pujals (2005a).

reached the threshold considered critical, in general the majority of the countries have tended to reach it, but at different degrees.

Indeed, in 2001, two major M&A operations were aborted due to a risk of dominant position at the national level: the failures of the bid for Abbey National by Lloyds TSB due to the veto of national competition authorities in the UK and of the proposed merger between SEB and Swedbank in Sweden due to the opposition by competition services in the European Commission.

These regulatory interventions clearly indicate that as long as domestic consolidation advances, external domestic growth opportunities will become limited due to competitive concerns. Therefore, cross-border consolidation might be the right alternative for fulfilling a targeted strategic external development via geographical diversification and enhancing competition in a domestic market.

This does not exclude the possibility that specific scaled M&A operations could take place in a majority of the European countries (see Table 8). In France, domestic consolidation is likely to continue but to a limited extent. The last example to date⁹⁰ is the acquisition of Crédit Lyonnais by Crédit Agricole. It is nevertheless worth mentioning the case of Société Générale, which might be a perfect target for a larger international bank.⁹¹

In Spain, an important consolidation wave is expected within savings banks in order to fulfil the objective of reducing local retail excess capacity and in the private sector, where its healthy commercial banks (e.g. Banco Popular and Banco Sabadell) seem to offer an ideal target to international institutions ready to benefit from the geographical redeployment.⁹²

Finally, there might be opportunities for the major British players in some specific product areas. For instance, the HSBC and the Royal Bank of Scotland Group will probably make acquisitions in the area of mortgages, since their market shares related to this segment are relatively low.⁹³ Amongst the principal targets in mortgage, Alliance & Leicester, Bradford & Bingley or Northern Rock could be on the list.

⁹⁰ In December 2002, Crédit Agricole launched a friendly takeover bid of Crédit Lyonnais. This transaction was approved by the shareholders in June 2003.

⁹¹ See Jeffers et al. (2005)

⁹² The last example to date is the merger between Barclays and Banco Zaragozano (May 2003), creating the sixth largest bank in Spain.

⁹³ FitchRatings (2002).

Germany and Italy, however, still seem to have a fragmented banking market leading many to predict the occurrence of national and scaled M&A operations in those countries in the near term.

Table 8. The status of national consolidation in the European banking sector (as of 2001)

<i>Country</i>	<i>Status</i>
Germany	Consolidation starting as obstructive tax legislation and public sector banking system are being tackled
Italy	Consolidation gaining speed thanks to reforms in the banking sector
France	Consolidation to be finalised
Spain	Consolidation of savings banks
UK	Consolidation to be completed – looking at smaller deals
Portugal	Substantially completed
Ireland/Greece	Substantially completed
Austria/Switzerland	Substantially completed
Nordic countries	Substantially completed
Benelux	Substantially completed

Source: Van Dijke (2002)

In Germany, the banking sector is considered as one of the least concentrated, given its complex structure divided between savings, cooperative and commercial banks. Owing to this fragmented structure, a high wave of concentration is expected in the coming years. Nevertheless, the restructuring process will suffer from the ownership complex structures of some banks as they can not be bought in the open market⁹⁴.

As regards the private sector, a continuing consolidation process would make Commerzbank an ideal target among major German commercial banks. The situation is more alarming for the public sector – savings and cooperative⁹⁵ banks – for two reasons.

First, the institutions that fall into this category will effectively lose the state support mechanisms by 2005⁹⁶, following the agreement reached by the

⁹⁴ In May 2005, the Financial Services Commissioner Charlie McCreevy mentioned the EU intention to review the German banking industry as part of a broader drive to open the blocked financial markets to cross border takeovers.

⁹⁵ The cooperative banking association has accordingly undertaken to speed up the reduction of banking institutions over the next few years from 1,800 at the end of 2001 to 800 institutions.

⁹⁶ As from 19 July 2005, the Landesbanken and the Sparkassen will no longer benefit from the state guarantees accorded them by the German regions and municipalities. According to the European Commission, the German system of state guarantees for public law credit institutions is incompatible with the state aid rules of the EC treaty. Indeed, the German state guarantee suggests two separate support mechanisms. The first one, called '*Anstaltslast*' or maintenance obligation, →

European Commission and the German authorities. Consequently, the cost of funding will increase and this will force these institutions to pay more attention to the quality of their loan books. Hence, many institutions will become more fragile than others. This situation may increase the potential targets among the German savings banks, in particular within the regional public banks (*Landesbanken*) and the local savings banks (*Sparkassen*).

Secondly, the current situation of the German banking sector seems to be worrying. Indeed, the weak profitability experienced due to excess capacity and high costs, the pressures to adapt to the new competitive environment without government guarantees and the relatively weak interest margins will pressure public German banking institutions to undertake significant and necessary structural changes⁹⁷ in the coming years. Nevertheless, the particular status of the public banks – being under federal state and municipal ownership – might slow down the process of restructuring.

In Italy, the banking sector has experienced a strong domestic consolidation wave. Some second-ranked private banking institutions seem to have been particularly exposed to the ongoing domestic consolidation movement (Capitalia, Banca Nazionale del Lavoro and Banca Monte dei Paschi di Siena). Similarly, the popular banks (*Banca popolare*) and the regional savings banks (*Cassa di risparmio*), which hold considerable local market shares, have experienced strong consolidation activity in recent years.

To confirm this diagnosis, the Italian Minister of Finance announced in December 2001 the adoption of a broad reform of the ‘banking foundations’⁹⁸ which hold significant participation in the Italian banking sector. Its principal

requires the founding entity (a public law entity) to make a capital injection or to provide liquidity support. In this case, the public law bank cannot be subject to insolvency. The second mechanism, called ‘*Gewahrtragerhaftung*’ or guarantee obligation, is a formal unlimited guarantee for the banks’ obligations provided by the founding entity. It is an external guarantee and therefore gives creditors a direct claim on the public sector owners of the bank. Hence, thanks to these guarantees, these banks would receive a higher credit rating which would then allow them to have access to funding on preferential conditions.

⁹⁷ The trend has slowly begun to emerge since 1999, with the merger between SudwestLB, Landesgirokasse and Landeskreditbank Baden-Württemberg to create Landesbank Baden-Württemberg in 1999, between SGZ Bank and GZB Bank to form GZ Bank in 2000 and finally between DG Bank and GZ Bank to create DZ Bank in 2001.

⁹⁸ New stricter measures have been introduced for application to the foundations. These rules require the transformation into non-profit-making organisations within a 3-month time frame, in order to separate their mission from that of the banking sector and to compel them to sell their stakes to independent savings management companies. According to the Italian authorities, the purpose of excluding the foundations from the banking sector is “to enable banks to compete at European and international levels in the realms of privatisation and development”.

objective is to accelerate the disengagement of the Italian foundations from the capital of the banking institutions, which will lead to a dispersion of the ownership of a significant proportion of Italian banks. This should certainly contribute to the acceleration of the restructuring process. Nevertheless, the latest developments have put a question mark on the future developments of the restructuring process in the Italian banking market. Indeed, the recent ABN Amro and BBVA attempts to take over Banca Antonveneta and BNL, despite the protectionist behaviour of the Bank of Italy have put a real pressure on Italian banks to consolidate domestically. Moreover, the European Commission has formally stated its intention to investigate the reasons of the still fragmentation of the European banking market and to act upon that to foster cross-border banking consolidation⁹⁹.

The national consolidation process, having reached its mature phase in most of the European banking sectors, has gradually encouraged interest in cross-border operations. Therefore, until today, the majority of the cross-border M&As at the EU level have been confined to geographical areas with strong historical and cultural links.¹⁰⁰

However, the acquisition of CCF by HSBC in 2000, the one of Banco Zaragozano by Barclays in 2003, and more recently the acquisition of Abbey National by SCH in July 2004 or the deals in progress between ABN Amro/Banca Antonveneta, UniCredit/HVB and BBVA/BNL seem to sustain the idea of a growing interest for cross-border operations in the European banking community. The aborted merger between Dexia and SanPaolo IMI in November 2004 and the permanent rumours of probable transactions involving the major European banking institutions (such as RBoS/ABN Amro, BNP Paribas/Fortis...) strengthen this opinion too.

Moreover, a study carried out by AT Kearney (2005) concluded that four cross-border deals emerge as top promising deals, by value increase, in

⁹⁹ The lack of cross border consolidation between European banks has been discussed in the informal meeting of Economic and Finance Ministers held in Scheveningen on 10 – 11 September 2004. Ministers asked the European Commission to study possible obstacles to cross border mergers and acquisitions in the financial sector arising not only from differing supervisory practices but also from other broader factors. The European Commission will simultaneously pursue ongoing work on the review of the sections in the European Banking Directive (200/12/EC) that allow Member States to block mergers and acquisitions on prudential grounds.

¹⁰⁰ Scandinavian countries (Nordea = MeritaNordbanken-Unidanmark-Christiania Bank), Germany/Austria (HVB-Bank Austria), England/Scotland (Natwest-RBoS), Belgium/France (Dexia), Belgium/Netherlands (Générale de Banque-Fortis) and Spain/Portugal (SCH-Banco Totta & Açores).

European banking industry (see Table 9) despite the existing disparities between countries, which not only increase the risk of failure but also limit the expected synergies of such operations, particularly in retail banking¹⁰¹.

Table 9. Top promising deals by value increase in the European banking industry

Ranking	Top promising deals	Price to Book (P/B) ratio Increase
1	Barclays + LloydsTSB (UK)	35
2	BNP Paribas + Société Générale (FR)	31
3	Barclays + HBoS (UK)	28
4	BNP Paribas (FR) + Deutsche Bank (DE)	22
5	UBS (CH) + Capitalia (IT)	21
6	Deutsche Bank (DE) + Société Générale (FR)	20
7	BMPS + Capitalia (IT)	18
8	Crédit Agricole SA (FR) + UBS (CH)	17
9	HSBC + HBoS (UK)	14
10	Intesa + BMPS (IT)	12

Source: AT Kearney (2005)

Finally, a McKinsey report (2002) concluded that the opportunities of mergers between equals seem to be rare in the European banking sector. Indeed, only 22 opportunities of cross-border mergers between equals are likely to happen out of a total of 60 cross-border operations. According to this report, two large operations might drop the number of opportunities from 22 to 10. As a consequence, only a few large-scale transactions at EU level may play an important role in triggering a cross-border consolidation process through a chain reaction involving the major banking institutions in Europe.

3.1.3 Regulatory changes and remaining obstacles to full European banking integration

Many actions have been undertaken since the establishment of the Treaty of Rome in 1957 to create a single European market. Almost 20 years of deregulatory measures (1957–77) have facilitated the right of establishment and the co-ordination of legislation for banking institutions. In 1973, the Council adopted a directive on the abolition of restrictions on freedom of establishment and freedom to provide services for self-employed activities of banks and other financial institutions.¹⁰²

¹⁰¹ As observed by Michel Pébereau, CEO of BNP Paribas, in April 2003: “There will be certainly a large cross-border consolidation in the near future. Nevertheless, owing to the lack of harmonisation of European regulations particularly in the fields of savings taxation and consumer protection, it is difficult today to fulfil the objective of synergies creation, especially in retail banking in Europe”.

¹⁰² Directive 73/183/EEC.

In 1977, the adoption of the first banking directive on the co-ordination of laws, regulations and administrative provisions relating to the taking up and pursuit of credit institutions¹⁰³ was the first step to harmonise the regulations by the establishment of the principle of home country control. In 1989, further principles including a single banking licence, home country control and mutual recognition were legally incorporated in the Second Banking Directive,¹⁰⁴ under which all credit institutions authorised in an EU country would be able to establish branches or supply cross-border financial services in the other countries of the EU without further authorisation, provided that the bank was authorised to provide such services in the home state.

These regulatory developments were complemented by the creation of the single currency in 1999 and the Financial Services Action Plan (FSAP), which consists of a long series of regulatory initiatives taken to ensure the full integration of banking and capital markets. Six years later, almost all the measures in the FSAP have been agreed upon and EU decision making and regulatory structures have become more flexible and this thanks to the adoption of the Lamfalussy process in the area of capital markets, banking and insurance¹⁰⁵.

Some of the measures under the FSAP which may have a direct impact on the cross-border and cross sectoral mergers and acquisitions activity in the European financial services sector include: the adoption of the Financial Conglomerate Directive in November 2002, which aims to enhance the prudential soundness and effective supervision of large financial groups in Europe, and the approval of the Investment Services Directive (ISD) were the major European regulatory achievements in the field of financial services. In addition, it is important to mention the progress made by the European Commission services as regards the new Capital Adequacy Directive (CAD3) which will apply to credit institutions and investment firms and is expected to enter into force in 2007. This new directive will certainly create a new competitive environment for European banks and investment firms.

Also, other measures have been taken as regards the European Community merger regulation to better harmonise the merger control procedure,¹⁰⁶ to

¹⁰³ Directive 77/780/EEC.

¹⁰⁴ Directive 89/646/EEC.

¹⁰⁵ This procedure has been put forward under a committee set up to design and implement common regulations to enhance the reactivity of regulations to constant market developments.

¹⁰⁶ The proposal for review of merger regulation was adopted by the Competitiveness Council in November 2003, and already entered into force in May 2004.

reduce the burden of the European merger review and to achieve better co-ordination between the EU and the US.

Finally, to achieve a complete integration of the European financial markets, the EU commission has expressed its intention to revise the sections of the banking Directive that allow Members States to block mergers and acquisitions¹⁰⁷.

Besides adding flexibility to the current regulatory system, these developments will create a new regulatory and competitive environment for banks and other financial services providers. On the one hand, they will facilitate any cross-border growth opportunities without the attendant high transaction costs thanks to the decreased regulatory burden associated with this type of transaction and on the other hand will enhance competitive pressures by encouraging new entrants and thus increasing the contestability of the market. To respond to the competitive pressures due to the relaxation of regulatory barriers, banking institutions would have to operate strategically in order to maintain or increase their profitability. Cross-border consolidation could be an adequate response to diversify revenues by acquiring new foreign market shares without incurring any regulatory burden.

Nevertheless, many of the regulatory obstacles already identified in the FSAP are not yet removed and important challenges have to be addressed to fulfil the objective of a fully integrated European financial services market.¹⁰⁸

One example that has created a great debate is the takeover Directive. Indeed, and despite the long 14-year period of negotiations aiming to harmonise takeover regulations across the EU, the compromise¹⁰⁹ reached by the European Council and the European Parliament on the Commission's proposal on takeovers bids in November 2003 has emptied this proposal from its substance. Yet, many obstacles and controversies to resolve before

¹⁰⁷ Speech by F. Bolkestein (September 2004).

¹⁰⁸ [The European Commission has launched a new initiative to promote the integration of retail financial markets. Its main objectives are summarised in the Green Paper published in April 2005](#)

¹⁰⁹ The compromise reached by the Council in November 2003 under the Italian Presidency tabled on the introduction of optional arrangements for the application of provisions concerning defensive measures used by the target company and obligations of its board as well as the so-called breakthrough provisions: Article 9 (which aims at ensuring shareholders can vote on which defensive measures to take after a bid has been publicised) and Article 11 (which neutralises measures that could be interpreted as pre-bid defences, including voting right restrictions). The Commission was dismayed by the compromise reached, saying that it had emptied the original proposal of its substance.

a system of fair common rules for takeovers bids will have been achieved in the EU for all interested parties. Hence, the lack of minimum harmonised rules on takeovers continues to act as an obstacle to the cross-border consolidation process.

Also, according to the current national regulations on mergers, Member States can still act individually to protect certain domestic interests from foreign competition. National competition authorities may indeed favour domestic consolidation and discourage acquisitions by foreign banks.¹¹⁰

Last but not least, divergent taxation rules for savings remain an important issue that needs to be tackled in order to achieve full integration in financial services markets. In addition, the process of establishing harmonisation in consumer information and procedures for solving disputes with financial services providers is still on track. The result is that it is difficult to acquire services abroad, and banks need to develop products separately for different local markets.

Consequently, these remaining barriers, which are scheduled to be removed under the Green Paper published by the EU Commission Services in May 2005, act as a temporary brake to the current cross-border consolidation process.

3.2 Towards which banking model(s) in Europe?

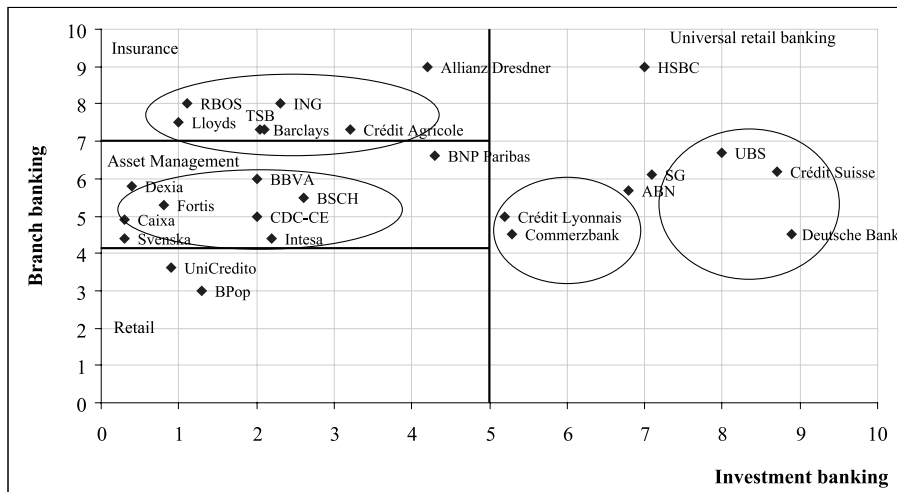
Together with the consolidation wave of the 1990s and the regulatory developments undertaken since the mid-1970s, the boundaries between financial activities – which were clear cut in the past – began to blur. This contributed to the enlargement of the range of activities proposed by the major European banks (see diagram in Annex 3). Hence, operating under the universal banking model became more popular than operating in one specific financial activity. In Europe, the integration of the financial markets and the ongoing regulatory changes, including the new Basel Capital Accord, have intensified this trend.

¹¹⁰ This situation prevailed until recently (the bid of Antonveneta by ABN Amro) where the Governor of Banca d'Italia, Antonio Fazio, discouraged foreign acquisitions in the Italian banking market aiming to support the creation of national banking leaders in Italy before opening up the sector up to international competition.

3.2.1 Which banking business model(s) will prevail in Europe?

Whereas a common integrated universal banking model in Europe has prevailed in the past few years, two big trends¹¹¹ seem to have emerged following the recent consolidation wave (see Figure 9).

Figure 9. Current business strategies in the European banking sector (end 2001)



Source: Crédit Agricole SA (2002).

On the one hand, there is *global investment banking*, which is highly concentrated on a worldwide scale and specialised in a few activities – M&A advisory, capital market activities (equities, fixed income, forex, interest rate, derivatives...), corporate or specialised financing (export, real estate...) – for international corporate clients. Deutsche Bank, Credit Suisse Group and UBS are the only European banking institutions to have reached a critical size in investment banking comparable to the American ‘bulge bracket’.

Reaching a certain size is necessary in the investment banking segment owing to the high fixed costs inherent in these activities and the importance of having distribution channels around the world. Nevertheless, the economic downturn experienced in 2001–2002 confirmed the high cyclicality of investment banking activities. Consequently, during the past few years, many European banking institutions (such as the British Barclays and Natwest, the Dutch ING and ABN Amro and the French BNP Paribas and Société

¹¹¹ Contamin and Melone (2002).

Générale) have progressively reallocated their capital into other less cyclical banking activities, i.e. essentially retail and asset management.

On the other hand, the multi-specialised banking institutions or ‘universal retail banking’,¹¹² which are heavily involved in retail activities, are considered as the dominant model in Europe. Today, these banks are highly diversified. Their logic is not to merge networks but to associate specialised subsidiaries with a branch network oriented to retail businesses, e.g. private customers, SMEs and corporates, and to offer complementary financial services, such as insurance, asset management, private banking and corporate and investment activities.

For the past few years, the asset management business has been one of the most important activities for banking institutions in Europe owing to the favourable retirement schemes for savings and the likely synergies between the production subsidiaries and their distribution networks. Also, international retail banking, specialised financial services and private banking offered banks new growth opportunities. It is important to note that this strategic redeployment has been accompanied by asset and capital reallocation towards these new activities and probably at the expense of traditional ones.

3.2.1.1 Are specialised banks condemned to disappear?

Recent developments in national, European and American banking legislation seem to encourage a greater diversification of banking activities, with reference to the ‘universal banking’ model. In the US since the late 1990s, wide-ranging deregulatory measures have been introduced partly through liberalising the legislation contained in the Gramm-Leach-Bliley Act and partly through a more liberal interpretation of the Bank Holding Company Act. Similar regulatory developments in Europe have aimed at the creation of integrated financial markets. The financial conglomerates, including banking, insurance and securities, have represented the most completed form of the diversification strategies.

Beyond the purely regulatory factors, the development of universal banking is justified by economic reasons related to the advantages of diversification with respect to economies of scope, the satisfaction of specific customer demand and risk reduction. Banks might find it profitable to diversify in order to benefit from these range savings and thus to lower their production costs.

¹¹² See Blanqué (2002).

If economies of scale do not always exist, scope economies resulting from diversification are more frequent.

Also a diversified supply that corresponds to the characteristics of the demand could be the right means to develop customers' trust in the context of intensified competition. Finally, diversification (functional and/or geographical) could reduce risks.¹¹³ Theoretically, a diversified portfolio involves lower risks than its respective individual components, since bad results recorded for one activity could be compensated for by the good results obtained in another.

Nowadays, universal banking can follow a specialisation strategy through an efficiency aim. This dual requirement – diversification versus specialisation – could be satisfied through an internal reorganisation, which leads to a creation of banking groups structured in two levels. At the lower level, banks are organised into specialised productive units benefiting from management autonomy. At the higher level, the activities benefiting from range savings are gathered into broader entities.¹¹⁴

Nevertheless, universal banking is not the only possible business model in Europe. Indeed, the specialised banking model is also viable, although it is subject to certain conditions (size, activity segments...). Specialisation takes on multiple dimensions. Firstly, it can be functional while covering an individual activity and/or customer segment, for example, in private banking or custody. In this respect, it appears that the strategic segments concerned will have to offer a high-growth potential in a reasonably competitive environment. Moreover, specialisation could be geographical: the knowledge of a specific geographical area would be a decisive comparative advantage in the future.

It is difficult to choose between the alternatives of diversification and specialisation. Banking institutions will have to approach this strategic choice with flexibility and pragmatism. Universal and specialised banking institutions will continue to co-exist in Europe, each one having its specific

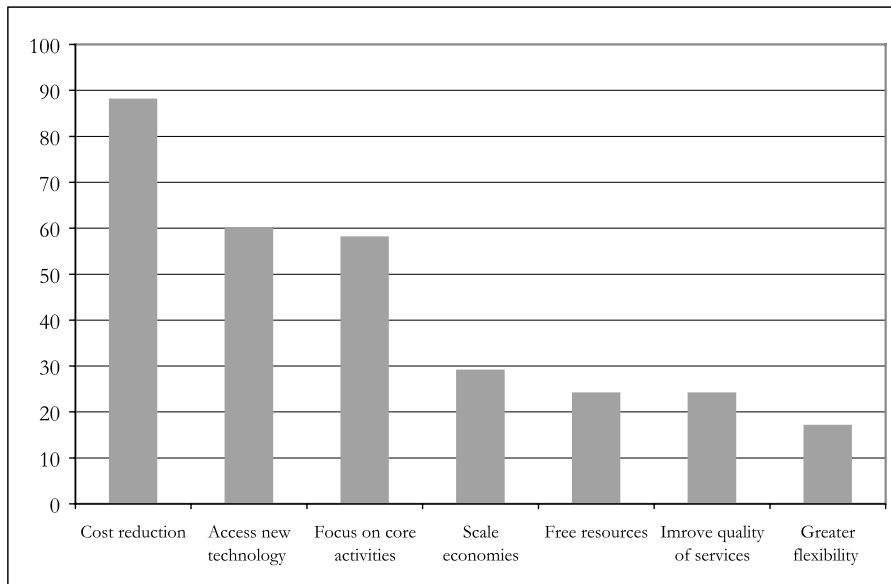
¹¹³ Banks face three distinct types of risk. The first is related to interest rates and derives from the fact that asset investments have a different period of maturity than savings and consequently, different interest rates. The second type is the risk of solvency, derived from credits granted by banks. The third is liquidity risks which exist because of the possibility of immediate withdrawals which in turn would require the cancellation of asset investments. For the two fundamental theories involving the advantages of diversification, see Markowitz (1952, 1959), which was made more sophisticated by Sharpe (1963, 1964), and Lintner (1965).

¹¹⁴ Plihon (2000).

characteristics and responding to individual needs. One of the major objectives of banking consolidation is precisely to reconcile the advantages of diversification, specific to the universal and/or multi-specialised banks, with the search for better specialisation (taking the form of a centring strategy towards the core business).

In this context, it is worth mentioning that European banking institutions are expected to seek recourse in outsourcing¹¹⁵ and/or offshore¹¹⁶ strategies for non-core activities to optimise the utilisation of their inputs – efficiency objective – and to reduce their costs (see Figure 10).

Figure 10. EU bank’s motives for undertaking outsourcing (in %)



Source: ECB (2004).

¹¹⁵ According to Roland Berger Strategy Consultants (2004), outsourcing in Western Europe’s financial industry will grow by 15% per year up to 2006.

¹¹⁶ According to a survey by Deloitte Consulting (2003), the world’s 100 largest financial services companies indicate they expect to transfer an estimated value of \$356 billion of their operations and 2 million jobs offshore over the next five years in order to reduce their costs. This survey found that financial institutions expect to reduce costs by nearly \$1.4 billion each by 2008 by sending work to lowcost centres such as India from developed economies.

3.2.1.2 Optimum size: A controversial question...

The recent banking consolidation wave, characterised by relatively large-scaled M&As, might give the impression that the so-called 'optimum size' of banking institutions is getting larger (as in the 'big is beautiful' principle) and thus the small and/or medium-sized banking institutions might gradually disappear as the consolidation process advances.

Theoretically, a larger size could lead to economies of scale and economies of scope. With respect to the former, a larger scale would permit better absorption of fixed costs. In fact, the importance of technology investment in the banking cost function reinforces this concept. This is particularly true when the need for software is growing. More precisely, given a certain size, a bank operates with economies of scale when the average cost per unit decreases as output grows.

Conversely, up to a certain size, diseconomies of scale occur when operating costs increase more proportionately than the production volume. Size could also be a source of scope economies when it is possible to generate cost savings from delivering multiple goods and services jointly through the same organisation rather than through different specialised providers.

Empirical research undertaken in the US and in Europe in the 1990s on the relationship between size and profitability in the banking sector was more conclusive than studies done in the 1980s. Whereas the evidence in the earlier studies on the existence of economies of scale was very weak and exclusively observed up to a rather modest size – only about \$10 billion¹¹⁷ – research in the 1990s found unexploited scale economies even for fairly large banks in both the US¹¹⁸ and in Europe.¹¹⁹

With regard to scope economies, the evidence was more oriented towards diseconomies of scope.¹²⁰ Nevertheless, the variety of banking activities suggests that each business follows its own model. Thus, the concept of critical size is different depending upon the type of banking involved. Whereas retail banking could remain domestic, investment banking requires expansion to a continental and even a global level. Consequently, the analysis

¹¹⁷ Mester (1987a & b) and Vander Vennet (1994).

¹¹⁸ Berger & Mester (1997) and Berger & Humphrey (1997).

¹¹⁹ Allen & Rai (1996), Molyneux et al. (1996) and Vander Vennet (2002a).

¹²⁰ Mitchell & Onvural (1996).

of size benefits should not be done crudely, but rather at the level of each type of banking activity.

Besides scale and scope economies, banks might want to get larger in order to gain market power. This situation is more prevalent in very concentrated industries with high entry barriers, such as reputation. Also a larger scale could be justified by the benefits of diversification. The significant regulatory progress made towards the integration of the financial markets in Europe has made it easier for banks to operate in other activities, such as asset management and/or insurance.

Finally, thanks to financial globalisation and technological innovation, the recent reconfiguration of the banking environment strengthened the competitive advantage of scale. Size could also be an essential factor in enhancing a bank's image and reputation. Given the necessity to take risks in any banking activity, the customers need to be reassured of the soundness of their bank. Hence, credibility can help to attract or maintain customers.

Despite the advantages of 'big is beautiful', it is far from certain that attaining a larger size is a synonym of higher profitability. Indeed, the race to a larger scale might increase the risks of bureaucratisation, customer remoteness and therefore, inefficiency. Also, it is not certain that small and medium-sized banking institutions are condemned to disappear.¹²¹ Under some conditions, small-sized banking institutions can constitute a genuine comparative advantage. Today, the existence of niche activities, including the majority of services involving a high consulting dimension, such as private banking, could offer an important source of growth well adapted to provide product differentiation and service personalisation demanded by customers. Besides, small banks can benefit from outsourcing, which represents a process of buying in economies of scale that can not be achieved them internally¹²².

In the future, although many banking activities will be increasingly dependent on a larger size, it seems that institutions with variable dimensions will co-exist. It is more the product mix and finally, the targeted customer that will determine the optimum bank size.

¹²¹ According to Olivier Pastré (2001), "The principles to the survival and the development of small-sized banking institutions are the following: 1) not to work in strong economies of scale businesses, 2) to be specialised, 3) to be flexible, 4) not to take too many risks, 5) to develop cooperation and 6) never sacrifice margins."

¹²² For a more detailed theoretical discussion on economies of scale, reference is made to Llewellyn (1999).

Based on previous developments, it does not seem that there is an ultimate reference model for banking institutions that will prevail in Europe in the coming years. Until today, there is no standard and/or single strategic rule to guarantee the success of one or another banking model at the beginning of the 21st century. The only certainty is that customer satisfaction, shareholder value and compliance with the new capital requirements will be the core objectives of any opportunity or strategic action to come.

3.3 Is there any 'best' banking development strategy: Mergers or partnerships?

Consolidation through mergers or acquisitions is not the only external growth strategy available in the European banking sector. Indeed, trade agreements, joint ventures, strategic alliances, cross-shareholdings... could *a priori* be considered as alternative vehicles for consolidation in Europe. Therefore none of these alternatives is considered to be as an ultimate reference. Many concerns have been raised particularly on the possible definition of an optimum threshold of cooperation. But the only consensus reached is that the smaller the bank, the greater is the need for cooperation.

According to the Group of Ten (BIS (2001)), alliances and cross-shareholdings have relatively comparable experiences to those of M&As over the past few years. Unlike mergers, however, the alliances in the financial services sector have been mostly established at a European scale rather than at a national scale (see Annex 4). As a result, the emergence of pan-European networks involving the major banking institutions might be a first step towards pan-European mergers or acquisitions.

In practice, cross-shareholdings are very popular in continental Europe¹²³. German and Italian banks have been the most active in recent years in building a finely spun network of cross participation. German financial groups represented 30% of the cross-shareholdings, followed by Italy with 21% and France with 14%. Conversely, such arrangements seem to be unpopular with financial groups in the UK, Benelux and Nordic countries, where very few agreements have been reached. It is important to note that the more fragmented the banking sector; the more the cross-shareholdings strategy is developed.

¹²³ UBS (2003)

The rationale for such a strategy is mainly to establish oneself in new markets without acquiring a banking license and/or board representation, which can be a useful way to influence a partner's behaviour and to prepare for a future strategic acquisition or consolidation scenario.

In the short term, being more flexible, partnerships are supposed to guarantee the advantages of a merger,¹²⁴ i.e. access to new markets or diversifying services offered to customers, without having to support the normal costs (such as financial or human costs...) and risks associated with cultural integration.

However, in the long term, the constitution of a broad network of partners in Europe may not guarantee the synergistic advantages (rationalisation of the productive chain and the unity of the decisions) of a merger or an acquisition.¹²⁵ Moreover, partnerships are complex to manage and constitute an unstable equilibrium which can be modified constantly. Thus, pan-European partnership strategies that have succeeded¹²⁶ are rare. Indeed, according to a study by Bearing Point (2002), it seems that only few partnership projects are successful, such as that between SCH and RBoS in retail banking and between ABN Amro and Rothschild in investment banking.

To conclude, partnerships or alliances between European banking institutions should be seen more as a temporary solution with the aim of achieving external growth, but they should not be considered as a permanent situation.

3.4 Strategic impacts for European banks after the new Basel Capital Accord (Basel II)

At the European level, the new capital Accord will be implemented as a European Capital Adequacy Directive 3 (CAD3), taking into account the main characteristics of the European banking industry. This directive along with its annexes will be applied to credit institutions and investment firms by the end of 2006. Undoubtedly, these new regulatory rules will strongly impact the structure of the European banking industry. This is true for at least three reasons.

¹²⁴ See Bailly & David (1999).

¹²⁵ In October 2002, BNP Paribas signed a 'friendly' accord with Dresdner Bank to put an end to their cooperation agreement, which had existed since 1996, as a result of profound differences in their respective development strategies.

¹²⁶ In October 2001, the Spanish banking group SCH decided to reorganise its participation portfolio, keeping only the partnership concluded with the British Royal Bank of Scotland (RBoS), which had positive economic repercussions.

Firstly, the new rules-setting will entail capital reallocation in banking portfolios (or ‘strategic reorientation’) by introducing significantly different capital requirements across most activities/segments depending upon the approach adopted (standardised, IRB foundation or IRB advanced). More precisely, banks would have to hold higher capital charges for higher-risk segments, such as low-rated SMEs, low-rated sovereigns, and also investment, asset management or custody activities, which had had no capital charges assigned to them under the current Accord. On the other hand, capital charges for retail, consumer credit, mortgage or leasing activities might decrease depending on the approach used. Hence, to enhance their solvency, many banks would be confronted with the choice either of re-capitalisation or withdrawal from riskier activities. Not being able to match the requirement of the universal banking model, these banks might trigger a trend towards a specialisation or re-specialisation strategy.¹²⁷

Secondly, the new Accord may be a driver of M&A activity (see Table 10). Indeed, banking M&As have traditionally been motivated by ‘synergies’, typically opportunities to reduce costs or increase cross-sales of products. The new Accord raises the prospect of capital synergies as a driving factor. Banks that use the most sophisticated and costly¹²⁸ IRB approaches can potentially liberate capital to acquire less sophisticated banks.

Table 10. Summary of Basel II impacts on M&As

M&A factors	Basel II impacts
Capital release	Acquirers release capital through IRB compliance to help fund purchase Unsophisticated banks facing increase in capital requirements under standardised approach could be acquired
Portfolio mixes	Business line profitability shifts prompt shake-outs. Retail banks benefit from increased balance sheet flexibility
Targets identification	Enhanced disclosure via Pillar 3 on risk and capital position aids screening of targets and due diligence
Regional focus for expansion	Regulatory capital changes will differ by country/region, yielding a concentration of possible targets
National barriers	Basel II and IAS reduce international regulatory and accounting differences

Source: Mercer Oliver Wyman (2003)

¹²⁷ According to Christian de Boissieu (2001), “We should assist in the coming years to ‘re-specialisation’ of certain European banking institutions which will not be able to match, in the long run, the requirements of the ‘universal banking’ model. This phenomenon could be designated under the ‘overshooting’ terminology”.

¹²⁸ According to a report carried out by Mercer Oliver Wyman (2003), banking institutions are spending an average of 5 basis points of assets on compliance, with the largest players typically investing between \$100 and \$200 million over the next five years.

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This capital could be reallocated more efficiently either internally by streamlining the portfolio to less risky activities or to acquire unsophisticated banks having a strong potential to unlock capital. Conversely, smaller banks that cannot adopt sophisticated and efficient risk models will probably face an increase in capital requirements and a decrease in the quality of their balance sheet, thereby becoming easy targets for high performers' institutions. As larger institutions will benefit from adopting credit risk models to efficiently assess their portfolios and release capital, the motivation to reach a larger size will be a comparative advantage in the future, thus in all likelihood accelerating the consolidation wave.

Finally, the new capital Accord will also foster the emergence of new competitors. Indeed, the developments of new regulatory models will encourage non-banking specialists to enter financial services or to expand their portfolios. These firms will avoid the cost of compliance and be able to anticipate and adapt more quickly to the post-compliance world and in many cases hold less capital against the same business portfolio.

Hence, Basel II will give the banking industry one of the biggest structural shocks it has experienced in decades. In the future, advances in risk and balance sheet management will be a clear signal of potential success. Since both strategic and tactical decisions to address the post-Basel II era need to be made, the winners and losers in Europe will become increasingly identifiable as the date for Basel II implementation approaches.

4 General Conclusions

The diagnosis of the banking industry of Europe in the 1990s showed an intensification of M&A activity. This has led not only to the emergence of large banking groups at the domestic level, ready to deploy out of their national market if competition concerns were to be raised by the national authorities, but has also contributed to the consolidation process in countries where a fragmented banking market still prevails. This trend has been accelerating owing to the continuously changing regulatory and competitive environment which creates pressures for change in order to remain competitive and to benefit fully from the dynamic character of the financial market.

Nevertheless, one can observe a strong contradiction in the recent M&A wave in banking. On the one hand, banking markets have been hit hard by this phenomenon, which has been steadily growing for over a decade. On the other, economic studies aimed at assessing the real effects of banking consolidation on profitability and efficiency were usually inconclusive. Our assessment analysis of banking mergers in the 90s seems consistent with the trend of the empirical literature that found positive effects on performance. These results should be looked at with caution as it highly depends on the transactions included in the sample and on the initial characteristics of the banks involved in a merger or in an acquisition.

One striking result emerges is that domestic banking mergers are more inclined to cut costs, especially when no competitive concerns were raised; whereas, cross-border mergers are more prone to revenue enhancement objectives, without necessarily having adverse effects on consumers. The diversity of European banking markets' structure may suggest that different consolidation patterns are expected. In markets where the priority is to reduce over-capacity at domestic scale, further consolidation is required (in Germany and Italy). In markets where concentration threshold is reached, managers should look carefully at cross-border opportunities. In this context, the European authorities seem favourable to encourage this trend.

Another observation that emerges from the case studies is the reinforcement of the universal banking model or a multi-specialised banking model which combines retail and investment activities, and in some cases insurance

activities. This model does not seem however, to realise fully the expected revenue enhancement that lies behind a merger or an acquisition. Hence, wisdom suggests that universal and specialised banking institutions will continue to co-exist in Europe, each one having its specific characteristics and responding to individual needs. And although many banking activities will be increasingly dependent on a larger size, it is fundamental to note that 'big is beautiful' is not an absolute criterion of efficiency and profitability. It is more the product mix and finally, the selected consumer target that will determine the optimum size of a bank.

M&As in not the only the consolidation strategy offered to banking institutions, alliances, cross shareholdings etc, could offer an alternative strategic response to expand geographically and across sectors. These alternative strategic responses could however lead to question about the optimal level of cooperation that allows banking institutions to benefit from their advantages.

Finally, the new Basel II Accord will certainly contribute to the redefinition of the rules of the game for banking institutions in Europe. Today, it is rather premature to provide an extensive and definitive assessment of the future developments in European banking in this respect. This will constitute a passionate research area to be investigated.

References

- Akhavein, J.D., A.N. Berger and D.B. Humphrey (1997), “The effects of megamergers on efficiency and prices: Evidence from a bank profit function”, *Review of Industrial Organization*, No. 12(1), pp. 95–139.
- Allen, L. and A. Rai (1996), “Operational efficiency in banking: An international comparison”, *Journal of Banking and Finance*, No. 20(4), pp. 655–672.
- Altunbas, Y., P. Molyneux and J. Thornton (1997), “Big-bank mergers in Europe: An analysis of the cost implications”, *Economica*, No. 64(254), pp. 317–329.
- Altunbas, Y., E.P.M. Gardener, P. Molyneux and B. Moore (2001), “Efficiency in European banking”, *European Economic Review*, No. 45(10), pp. 1931–1955.
- Altunbas, Y. and D. Marquez Ibanez (2004), “mergers and acquisitions and bank performance in Europe: the role of strategic similarities”, ECB, Working paper series no 398, October.
- Amel, D., C. Barnes, F. Panetta and C. Salleo (2002), “Consolidation and efficiency in the financial sector: A review of the international evidence”, *Temi di discussione*, Banca d’Italia, No. 464, December.
- Ayadi, R. (2001), “Etude du mouvement de Fusions et acquisitions bancaires en Europe sur la période 1994–2000”, *Journées AFSE, Economie des intermédiaires financiers*, 17–18 May.
- Ayadi, R. (2005), “Mergers and acquisitions in European banking: A new conceptual approach to assess profitability and efficiency – A study of 120 cases”, *Paper extracted from PhD thesis (forthcoming in CEPS Research Paper in Banking and Finance)*.
- Ayadi, R., and G. Pujals (2004), “Banking consolidation in the EU: Overview and prospects”, *Research Report in Banking and Finance*, No 34, April, Centre for European Policy Studies, Brussels.
- Bailly, F. and A. David (1999), “Des partenariats aux fusions: le choix du mode de rapprochement”, *Banque & Stratégie*, December.
- Banker, R., A. Charnes and W. Cooper (1984), “Some models for estimating technical and scale inefficiencies in DEA”, *Management Science*, No. 30(9), pp. 1078–1092.
- Baumol, W.J., J.C. Panzar and R.D. Willig (1982), *Contestable Markets and the Theory of Industry Structure*, New York: Harcourt Brace Jovanovich.
- Bearing Point (2002), “Alliances et partenariats dans les services financiers de détail en France: Une nouvelle compétence stratégique”, *Etudes Services Financier*, December.
- Becher, D.A. (2000), “The valuation effects of bank mergers”, *Journal of Corporate Finance*, No. 6, pp. 189–214.
- Beitel, P. and D. Schiereck (2001), “Value creation at the ongoing consolidation of the European banking market” *Institute for Mergers and Acquisitions Working papers*.
- Berger, A.N. (1998), “The efficiency effects of bank mergers and acquisitions: A preliminary look at the 1990s data”, in Y. Amihud and G. Miller (eds.), *Bank Mergers and Acquisitions*, Boston: Kluwer Academic, pp. 79–111.

- Berger, A.N. (2000), "The integration of the financial services industry: Where are the efficiencies?", *North American Actuarial Journal*, No. 4.
- Berger, A.N. (2003), "The efficiency effects of a single market for financial services in Europe", *European Journal of Operational Research*, No. 150.
- Berger, A.N., and T.H. Hannan (1989), "The price-concentration relationship in banking", *Review of Economics and Statistics*, No. 71, pp. 291–299.
- Berger, A.N., and T.H. Hannan (1997), "Using measures of firm efficiency to distinguish among alternative explanations of the structure-performance relationship", *Managerial Finance*, No. 23, pp.6–31.
- Berger, A.N., and T.H. Hannan (1998), "The efficiency cost of market power in the banking industry: A test of 'quiet life' and related hypotheses", *Review of Economics and Statistics*, No. 80(3), pp. 154–165.
- Berger, A.N. and D.B. Humphrey (1992), "The megamergers in banking and the use of cost efficiency as an antitrust device", *Journal of Financial Economics*, No. 50, pp. 187–229.
- Berger, A.N. and D.B. Humphrey (1997), "Efficiency of financial institutions: International survey and directions for future research", *European Journal of Operational Research*, No. 98.
- Berger, A.N. and L.J. Mester (1997), "Inside the black box: What explains the differences in the efficiencies of financial institutions?", *Journal of Banking and Finance*, No. 21, pp. 895–947.
- Berger, A.N., J. Leusner and J. Mingo (1997), "The efficiency of bank branches", *Journal of Monetary Economics*, No. 40 (1), pp. 141–162.
- Berger, A.N., D. Hancock and D.B. Humphrey (1993), "Bank efficiency derived from the profit function", *Journal of Banking and Finance*, No. 17, pp. 317–347.
- Berger, A.N., D.B. Humphrey and L.B. Pulley (1996), "Do consumers pay for one-stop banking? Evidence from an alternative revenue function", *Journal of Banking and Finance*, No. 20(9), pp. 1601–1621.
- Berger, A.N., A. Saunders, J.M. Scalise and G.J. Udell (1998), "The effects of bank mergers and acquisitions on small business lending", *Journal of Financial Economics*, No. 50, pp. 187–229.
- Berger, A.N., R.S. Demsetz and P.E. Strahan (1999), "Consolidation of the Financial Services Industry: Causes, Consequences and Implications for the Future", *Journal of Banking and Finance*, No. 23.
- Berger, A.N., W.C. Hunter and S.G. Timme (1993), "The efficiency of financial institutions: the review and preview of research past, present and future", *Journal of Banking and Finance*, 17, pp. 221–249.
- BIS (Bank for International Settlements) (2001), "Report on Consolidation in the Financial Sector", *Group of Ten*, January.
- Blanqué, P. (2002), "Où va l'Europe bancaire?", *Horizons bancaires*, Crédit Agricole SA, No. 312.
- Burger, Y. (2001), "European Banking consolidation: Time out?", *Standard & Poor's*, October.

- Calomiris, C.W. and J. Karceski (1999), "Is the bank merger wave of the 1990s efficient? Lessons from nine case studies", in S.N. Kaplan (ed.), *Mergers and Productivity*, Chicago: University of Chicago Press/NBER, pp. 93–178.
- Canoy, M. and S. Onderstal (2003), "Tight oligopolies: In search of proportionate remedies", *CPB Document*, No. 29, Central Planning Bureau, The Hague.
- Charnes, A, W.W. Cooper and E. Rhodes (1978), "Measuring the efficiency of Decision-Making-Units", *European Journal of Operational Research*, No. 2, pp.429–444.
- Clark, J.A. and T.F. Siems (1997), "Rethinking bank efficiency and regulation: How off-balance sheet activities make a difference", *Financial Industry Studies*, December, pp. 1–12.
- Coelli, T.J. (1996), "A guide to DEAP Version 2.1. : A Data Envelopment Analysis (Computer) Program", *CEPA Working Paper*, Centre for Efficiency and Productivity Analysis, University of New England, Armidale, Australia.
- Competition Commission (2001), "Lloyds TSB group Plc and Abbey National Plc: A report on the proposed merger", July
- Competition Commission (2002), "The supply of banking services by clearing banks to SMEs", March
- Contamin, R., and H.P. Melone (2002), "Les fusions et acquisitions en Europe: Un enjeu de taille", *Flash Eco*, Crédit Agricole SA, No. 15.
- Cornett, M.M., and H. Tehranian (1992), "Changes in corporate performance associated with bank acquisitions", *Journal of Financial Economics*, No. 31(2), pp. 211–234.
- Cruickshank, D. (2000), *The Banking Review* (a UK Treasury-sponsored study), March.
- Cummins, J.D., L.T. Sharon and M.A. Weiss (1999), "Consolidation and efficiency in the US life insurance industry", *Journal of Banking and Finance*, No. 23, pp. 325–357.
- Cybo-Ottone, A. and M. Murgia (2000), "Mergers and shareholder wealth in European banking", *Journal of Banking and Finance*, 24(6), pp. 831–859.
- De Bandt, O. (2000), "EMU and the structure of the European banking system", paper published in *The Euro: Challenge and opportunity for financial markets*, Routledge International Studies in Money and Banking 10, pp. 92–122
- De Boissieu, C. (2001), "Banking consolidation in Europe: Some remarks", paper presented at the 3rd Conference of Centre Saint-Gobain for Economic Research, 8–9 November, Paris.
- Deloitte Consulting (2003), "The cusp of a revolution: How offshoring will transform the financial services industry", *Deloitte Research Financial Services Industry*, June.
- De Long, G.L., (1999), "Domestic and international bank mergers shareholder gains from focusing versus diversifying", *Baruch College*.
- De Long, G.L., (2001), "Stockholder gains from focusing versus diversifying bank mergers", *Journal of Financial Economics*, 59(2), pp. 221–252.
- De Long, G. and R. De Young (2004) "*Learning by observing: information spillovers in the execution and valuation of commercial bank M&As*", WP 2004/17 Federal Reserve Bank of Chicago
- Deutsche Bundesbank (2000), Activity Report.

- Dietsch, M., and L. Weill (2001), "The evolution of cost and profit efficiency in European banking", in *Research in Banking and Finance (Eds: I.Hassan and W. Hunter)*, Vol.1, Elsevier.
- Dietsch, M., and V. Oung (2001), "L'efficacité économique des restructurations bancaires en France au cours des années 1990", *Bulletin de la Commission Bancaire*, No. 24, April.
- ECB (European Central Bank) (2000), "Mergers and acquisitions involved in the EU banking industry. Facts and implications", ECB Working Paper Series, December.
- ECB (European Central Bank) (2002), "Structural Analysis of the EU Banking Sector", ECB Working Paper Series, November.
- ECB (European Central Bank) (2004), "Report on EU Banking Structure 2004", November.
- Fitch Ratings (2001), "The European co-operative banking sector", *Financial institutions special report*.
- Fitch Ratings (2002), "M&A activity in the European banking sector", *Financial institutions special report*.
- Fitch Ratings (2004), "Report on EU banking structure 2004", November
- Focarelli, D., F. Panetta and C. Salleo (2002), "Why do banks merge?", *Journal of Money, Credit and Banking*, No. 34(4), November, pp. 1047–1066.
- Focarelli, D., and F. Panetta (2002), "Are mergers beneficial to consumers? Evidence from the market for bank deposits", *Tem di discussione*, Banca d'Italia, No. 448, July.
- Fried, H.O., C.A.K. Lovell and S. Yaisawarng (1999), "The impact of mergers on credit union service provision", *Journal of Banking and Finance*, No. 23, pp. 367–386.
- Gorton, G., and R. Rosen (1995), "Corporate control, portfolio choice and the decline of banking", *Journal of Finance* 50, pp. 1377–1420.
- Hannan, T.H., (1991), "Bank commercial loans markets and the role of market structure: Evidence from surveys of commercial lending", *Journal of Banking and Finance*, No. 15.
- Hannan, T.H., (1997), "Market share inequality, the number of competitors, and HHI: An examination of bank pricing", *Review of Industrial Organisation*, No. 12.
- Hannan, T.H., and J.D. Wolken (1989), "Returns to bidders and targets in the acquisition process: Evidence from the banking industry", *Journal of Financial Services Research*, No. 3(1), pp. 5–16.
- Haynes, M., and S. Thompson (1999), "The productivity effects of bank mergers: Evidence from the UK building societies", *Journal of Banking and Finance*, No. 23(5), pp. 825–846.
- Houston, J.F., and M.D. Ryngaert (1994), "The overall gains from large bank mergers", *Journal of Banking and Finance*, No. 18 (6), pp. 1155–1176.
- Houston, J.F. and M.D. Ryngaert (1997), "Equity issuance and adverse selection: A direct test using conditional stock offers", *Journal of Finance*, No. 52(1), pp. 197–219.
- Houston, J.F., C.M. James and M.D. Ryngaert (1999), "Why are value enhancing mergers in banking so hard to find?", A discussion of "Is the bank merger wave of the 90's efficient? Lessons from nine case studies", in S.N. Kaplan (ed.), *Mergers and Productivity*, Chicago: University of Chicago Press/NBER.

- Houston, J.F., C.M. James and M.D. Ryngaert (2001), “Where do merger gains come from? Bank mergers from the perspective of insiders and outsiders”, *Journal of Financial Economics*, No. 60, pp. 285–331.
- Huizinga, H.P., J.H.M. Nelissen and R. Vander Venet (2001), “Efficiency effects of bank mergers and acquisitions in Europe”, *Discussion Paper*, Ti-2001 088/3, Tinbergen Institute.
- ILO (International Labour Organisation) (2001), “L’incidence sur l’emploi des fusions-acquisitions dans le secteur des services bancaires et financiers”, Geneva.
- Jeffers, E., O. Pastré, I. Chtourou, A. Doulazmi and K. Gecheva (2005) “Les restructurations bancaires Européennes”, Rapport commissioned by CDC Institute, March
- Kohers, T., M. Huang and N. Kohers (2000), “Market perception of efficiency in bank holding company mergers: The roles of the DEA and SFA models in capturing merger potential”, *Review of Financial Economics*, No. 9, pp. 101–120.
- Kwan, S.H., and R.A. Eisenbeis (1999), “Mergers of publicly traded banking organisations revisited” Federal Reserve Bank of Atlanta, *Economic Review*, 84/4, Pp., 26–37.
- Leibenstein, H., (1966), “Allocation efficiency and X-efficiency”, *American Economic Review*, No. 56.
- Lintner, J., (1965), “Security prices, risk and maximal gains from diversification”, *Journal of Finance*, Vol. 20, No. 4, December.
- Llewellyn, D.T., (1999), “The new Economics of Banking”, *SUERF Studies 5*, SUERF, Amsterdam.
- Markowitz, H.M., (1952), “Portfolio selection”, *Journal of Finance*, 7 (1) March pp. 77–91.
- Markowitz, H.M., (1959), *Portfolio selection: Efficient diversification of investments*, Yale University Press, 197, Second Edition, Basis Blackwell, 1991.
- Maudos, J., and J.M Pastor (2003), “Cost and profit efficiency in the Spanish banking sector 1985–1996: a non parametric approach”, *Applied Financial Economics*, No. 13, pp. 1–12
- Maudos, J., J.M. Pastor, F. Perez and J. Quesada (2002), “Cost and profit efficiency in European banks”, *Journal of International Financial Markets, Institutions and Money*, No. 12 (1), pp. 33–58.
- Méon, P.G., and L. Weill (2001), “Can mergers in Europe help banks hedge against macroeconomic risk?”, *Communications aux journées de l’AFSE*, 17–18 May, Orléans.
- Mercer Oliver Wyman (2003), “The new rules of the game: Implications of the New Basel Capital Accord for the European banking industries”, consultancy report, June.
- Mester, L.J., (1987a), “Efficient production of financial services: Scale and scope”, *Business Review*, Federal Reserve Bank of Philadelphia, January/February.
- Mester, L.J., (1987b), “A multi-product cost study of saving and loans”, *Journal of Finance*, No. 42.
- Mitchell, K., and N.M. Onvural (1996), “Economies of scale and scope at large commercial banks: Evidence from the Fourier flexible functional form”, *Journal of Money, Credit and Banking*, Vol. 28.

- Molyneux, P., Y. Altunbas and E. Gardener (1996), *Efficiency in European Banking*, Chichester: John Wiley.
- Palia, D. (1993), "Recent evidence on bank mergers", *Financial Markets, Institutions, and Instruments*, December, pp. 36–59.
- Pastré, O. (2001), "Industrie bancaire: les espoirs des Davids face aux Goliaths", *Revue d'Economie Financière*, No. 61.
- Peristiani, S. (1997), "Do mergers improve the X-efficiency and scale efficiency of US banks? Evidence from the 80s", *Journal of Money, Credit and Banking*, No. 29(3), pp. 326–337.
- Pilloff, S.J. (1996), "Performance changes and shareholder wealth creation associated with mergers of publicly traded banking institutions", *Journal of Money, Credit and Banking*, No. 28(3), pp. 59–78.
- Pilloff, S.J. and A.M. Santomero (1997), *The Value Effect of Bank Mergers and Acquisitions*, Working Paper, No. 97 (7), The Wharton Financial Institutions Centre, October.
- Plihon, D. (2000), *Les banques: nouveaux enjeux, nouvelles stratégies*, La Documentation française.
- Pujals, G. (2005a), "L'Europe Bancaire en Mouvement", *Revue d'Economie Financière*, Association d'Economie Financière, No. 78, pp. 19–46.
- Pujals, G. (2005b), "Transformations in the European Banking Industry and Banks Efficiency", *PhD thesis*, forthcoming, Sciences Po, Paris.
- Radecki, L.J. (1998), "Small expanding geographic reach of retail banking markets", *Federal Reserve Bank of New York Policy Review*, No. 4.
- Resti, A. (1998), "Regulation can foster mergers: Can mergers foster efficiency?", *Journal of Economics and Business*, 50(2), pp. 157-169.
- Rhoades, S.A. (1994), "A summary of merger performance studies in banking, 1980–93, and an assessment of the operating performance and event study methodologies", *Federal Reserve Board Staff Study*, No. 167.
- Rhoades, S.A. (1998), "The Efficiency Effects of Bank Mergers: An Overview of Case Studies of 9 Mergers", *Journal of Banking and Finance*, 22(3), pp. 273–291.
- Rogers, K.E. (1998), "Non-traditional activities and the efficiency of US commercial banks", *Journal of Banking and Finance*, 22, 467-482
- Ryan, S.J. (1999), "Finding value in bank mergers", in the *Proceedings of the 35th Annual Conference on Bank Structure and Competition*, Federal Reserve Board of Chicago, pp. 548–552.
- Sander, H., and S. Kleimeier (2001), "Towards a single retail banking market? New evidence from Euroland", *Life Working Paper 01–002*, Limburg Institute of Financial Economics.
- Scherer, F.M., and D. Ross (1990), *Industrial market structure and economic performance*, 3rd Edition, Boston: Houghton Mifflin Company
- Sealey, C.W., and J. T. Lindley (1977), "Inputs, outputs and theory of production and cost at depository financial institutions", *Journal of Finance*, 32, 4, pp.1251–1266.

- Shaffer, S., (1993), "Can mega-mergers improve bank efficiency?", *Journal of Banking and Finance*, No. 17.
- Sharpe, W.F., (1963), "A simplified model for portfolio analysis", *Management Science*, Vol. 9, pp. 277-293.
- Sharpe, W.F., (1964), "Capital asset prices: A theory of market equilibrium under conditions of risk", *Journal of Finance* 19(4), pp. 425-442.
- Srinivasan, A., (1992), "Are there cost savings from bank mergers?", *Economic Review*, Federal Reserve Bank of Atlanta, No. 77(2), pp. 17-28.
- UBS Warburg (2003), "Cross-shareholdings: Opportunity or risk?", January.
- Van Beek, L., and A.T. Rad (1997), "Market valuation of bank mergers in Europe", *Financial Services*, Amsterdam.
- Vander Vennet, R. (1994), "Economies of scale and scope in EC banking institutions", *Cahiers Economiques de Bruxelles*, No. 144, pp. 507-548.
- Vander Vennet, R. (1996), "The effects of mergers and acquisitions on the efficiency and profitability of EC credit institutions", *Journal of Banking and Finance*, No. 20, pp. 1531-1558.
- Vander Vennet, R. (2002a), "Cost and profit efficiency of financial conglomerates and universal banking in Europe", *Journal of Money, Credit and Banking*, No. 34(1), pp. 254-282, February.
- Vander Vennet, R. (2002b), "Cross-border mergers in European banking and bank efficiency", *University of Ghent, Working paper series, N 152*.
- Van Dijke, P. (2002), "European financial cross-border consolidation", *Revue Bancaire et Financière*, Brussels, December.
- Weill, L., (2004), "The evolution of efficiency in European banking during the 1990s", *Communications at GDR* (Groupement de recherche 'Economie monétaire et financière') 10-11 June 2004, Nice.
- Wheelock, D. and P. Wilson (1995), "Evaluating the efficiency of commercial banks: Does our view of what banks do matter?", *Review of Federal Reserve Bank of Saint-Louis*; No. 77(4), pp. 39-52.
- Zhang, H. (1995), "Wealth effects of US bank takeovers", *Applied Financial Economics*, No. 5(5), pp. 329-336.

Annexes

Annex 1. Complete results of balance-sheet and efficiency analysis

Acquiring banks

Caracteristics	Cost ratios				Profitability ratios				Risk ratios				activity ratios			
	Cost to income ratio	Non interest expenses/total assets	Non interest interest expenses/total assets	ROA	ROE	Interest revenue from lending/total revenue	Non interest revenue/total revenue	Capital ratio	Risk provision /net interest revenue	Total loans/total assets	total deposits/total assets	Off balance sheet/total assets	liquidity ratio			
DM (different cities)	65.25%	1.99%	4.26%	0.61%	7.85%	69.33%	30.67%	7.56%	7.70%	34.48%	27.66%	35.36%	38.70%	57.21%		
consolidation of commercial banking 1999	65.25%	1.91%	3.46%	1.14%	18.15%	71.53%	28.47%	7.04%	6.92%	19.87%	55.91%	38.53%	35.34%	31.10%		
Difference (2>1)	0.00%	-0.08%	-0.80%	0.53%	10.27%	2.19%	-2.19%	-0.52%	-0.76%	-14.61%	-28.25%	5.17%	-3.36%	-26.11%		
DA (same city)	4.67%	0.08%	-0.46%	-0.13%	-2.44%	-6.11%	6.11%	-0.59%	-0.05%	3.39%	-3.75%	-3.16%	2.49%	-0.03%		
consolidation of universal banking 1999	155.29%	0.72%	3.14%	0.40%	4.12%	46.44%	53.56%	3.89%	8.56%	33.08%	5.68%	4.57%	2.71%	54.41%		
Difference (2>1)	114.94%	1.03%	3.65%	-0.38%	-17.21%	55.85%	44.15%	4.92%	3.34%	32.23%	22.48%	16.71%	14.67%	55.67%		
DM (different cities)	-40.35%	0.31%	0.71%	-0.77%	-21.33%	9.41%	-9.41%	1.04%	-5.24%	-0.65%	16.80%	12.15%	11.98%	1.26%		
consolidation of commercial banking 1999	3.05%	0.02%	-0.41%	-0.02%	0.02%	-5.79%	5.79%	-0.53%	-0.12%	0.14%	-4.48%	-2.88%	1.65%	0.30%		
Difference (2>1)	76.64%	0.12%	6.11%	0.59%	13.63%	86.07%	13.93%	6.91%	4.36	-1.12%	86.00%	0.00%	0.95%	5.45%		
DA (same city)	88.58%	0.24%	4.38%	0.42%	10.53%	86.88%	13.12%	5.04%	3.97	-1.91%	74.82%	0.00%	0.10%	4.76%		
consolidation of universal banking 1999	11.94%	0.13%	-1.73%	-0.18%	-3.10%	0.81%	-0.81%	-1.88%	-0.39	-0.79%	-11.18%	0.00%	-0.85%	-0.70%		
Difference (2>1)	4.67%	0.08%	-0.46%	-0.13%	-2.44%	-6.11%	6.11%	-0.59%	-0.05%	3.39%	-3.75%	-3.16%	2.49%	-0.03%		
DM (different cities)	53.22%	3.77%	4.27%	1.70%	19.90%	88.44%	11.56%	9.75%	8.54%	10.61%	54.16%	0.00%	3.90%	16.12%		
consolidation of commercial banking 1997	50.66%	2.27%	1.85%	1.78%	21.85%	0.00%	26.59%	5.98%	8.13%	7.09%	71.44%	68.82%	10.91%	6.27%		
Difference (2>1)	-2.56%	-1.50%	-2.42%	0.08%	1.95%	-88.44%	15.03%	-3.76%	-0.41%	-3.52%	17.28%	68.82%	7.00%	-11.85%		
DA (same city)	61.92%	2.01%	3.94%	1.73%	33.74%	53.05%	38.36%	7.76%	2.19%	12.96%	46.28%	58.89%	19.47%	41.30%		
consolidation of commercial banking 1997	68.59%	1.52%	2.87%	0.96%	43.61%	0.00%	31.84%	5.09%	5.16%	-1.77%	36.69%	44.29%	365.07%	30.13%		
Difference (2>1)	6.67%	-0.49%	-1.07%	-0.77%	9.67%	-53.05%	-6.52%	-2.67%	2.97%	-14.73%	-9.59%	-14.60%	345.60%	-11.17%		
DM (different cities)	0.99%	-0.10%	-0.46%	0.05%	1.31%	-5.30%	5.30%	-0.63%	-0.16%	0.27%	-4.24%	-2.40%	0.40%	1.57%		
consolidation of commercial banking 1997	66.23%	3.28%	5.45%	0.69%	14.69%	68.24%	31.76%	9.86%	4.74%	16.47%	50.69%	56.06%	19.87%	21.46%		
Difference (2>1)	66.32%	2.67%	3.05%	1.08%	25.55%	0.00%	36.37%	7.08%	4.77%	11.63%	56.43%	41.87%	14.98%	24.42%		
DA (same city)	2.09%	-0.62%	-2.39%	0.40%	10.87%	-68.24%	4.61%	-2.77%	0.03%	-4.83%	5.74%	-14.19%	-4.89%	2.96%		
consolidation of sav & com banking 1997	0.99%	-0.10%	-0.46%	0.05%	1.31%	-5.30%	5.30%	-0.63%	-0.16%	0.27%	-4.24%	-2.40%	0.40%	1.57%		
Difference (2>1)	71.60%	1.67%	4.79%	0.09%	2.96%	78.62%	21.38%	6.89%	3.02%	17.54%	41.58%	44.96%	36.59%	11.53%		
DM (different cities)	70.33%	1.09%	4.29%	0.49%	13.12%	77.76%	22.24%	4.90%	4.77%	20.74%	30.78%	32.50%	44.44%	5.94%		
consolidation of universal banking 1998	-1.27%	-0.58%	-0.50%	0.40%	10.17%	-0.86%	0.86%	-1.98%	1.75%	3.21%	-10.80%	-12.46%	5.85%	-5.68%		
Difference (2>1)	3.05%	0.02%	-0.41%	-0.02%	0.02%	-5.79%	5.79%	-0.12%	0.14%	-4.88%	-2.88%	1.65%	0.30%	-26.11%		
DA (same city)	46.77%	6.57%	7.48%	1.01%	24.55%	61.49%	38.51%	9.42%	4.15%	5.33%	7.03%	36.51%	8.16%	71.09%		
consolidation of universal banking 1999	48.12%	3.09%	7.48%	1.01%	24.55%	61.49%	38.51%	9.42%	4.15%	5.33%	7.03%	36.51%	8.16%	71.09%		
Difference (2>1)	1.35%	-3.48%	0.92%	0.10%	-5.65%	5.43%	-5.43%	1.31%	1.17%	8.92%	0.04%	-15.06%	-4.10%	6.68%		
DM (different cities)	4.67%	0.08%	-0.46%	-0.13%	-2.44%	-6.11%	6.11%	-0.59%	-0.05%	3.39%	-3.75%	-3.16%	2.49%	-0.03%		

Cost Efficiency Scores (CE) / Domestic Mergers

	Acquiring firm (1)	Target firm (2)	Average (1, 2)	Peer group (3)	Diff. (Avg (1,2) – (3))
3 YB	0.74	0.65		0.71	
2 YB	0.76	0.63		0.72	
1 YB	0.78	0.60		0.75	
Average (4)	0.76	0.63	0.70	0.73	-0.03
1 YA		0.79		0.76	
2 YA		0.81		0.77	
3 YA		0.83		0.77	
Average (5)		0.81		0.77	+0.04
Diff. (Avg (5) – Avg (4))	+0.05	+0.18	+0.11		

Profit Efficiency Scores (PE) / Domestic Mergers

	Acquiring firm (1)	Target firm (2)	Average (1, 2)	Peer group (3)	Diff. (Avg (1,2) – (3))
3 YB	0.55	0.53		0.62	
2 YB	0.56	0.54		0.65	
1 YB	0.55	0.53		0.63	
Average (4)	0.55	0.53	0.54	0.63	-0.09
1 YA		0.55		0.65	
2 YA		0.56		0.65	
3 YA		0.59		0.64	
Average (5)		0.57		0.65	-0.08
Diff. (Avg (5) – Avg (4))	+0.02	+0.04	+0.03		

Cost Efficiency Scores (CE) / Cross-border Mergers

	Acquiring firm (1)	Target firm (2)	Average (1,2)	Peer group (3)	Diff. (Avg (1,2) – (3))
3 YB	0.76	0.70		0.71	
2 YB	0.77	0.71		0.72	
1 YB	0.75	0.69		0.75	
Average (4)	0.76	0.70	0.73	0.73	+/-0.00
1 YA		0.72		0.76	
2 YA		0.74		0.77	
3 YA		0.73		0.77	
Average (5)		0.73		0.77	-0.04
Diff. (Avg (5) – Avg (4))	-0.03	+0.03	+/-0.00		

Profit Efficiency Scores (PE) / Cross-border Mergers

	Acquiring firm (1)	Target firm (2)	Average (1,2)	Peer group (3)	Diff. (Avg (1,2) – (3))
3 YB	0.65	0.51		0.62	
2 YB	0.67	0.53		0.65	
1 YB	0.65	0.52		0.63	
Average (4)	0.65	0.52	0.59	0.63	-0.04
1 YA		0.61		0.65	
2 YA		0.61		0.65	
3 YA		0.62		0.64	
Average (5)		0.61		0.65	-0.04
Diff. (Avg (5) – Avg (4))	-0.04	+0.09	+0.02		

Annex 2. Capacity analysis

In addition to a decrease in the number of credit institutions, banking consolidation in the EU appears to have been closely associated with capacity reductions through job cuts¹²⁹ and branch closures, even though other factors have contributed to this trend, such as technological developments or the decline in the volume of business. This statement is confirmed in Table 10. Indeed, the number of credit institutions, branches and employment in the EU has registered an overall decline of 36%,¹³⁰ 2% and 8%, respectively.

Branches and employment variation in European banking during the 1990s

	% of change in the number of credit institutions				% of change in branches				% of change in employment			
	90-95	95-99	99-01	90-01	90-95	95-99	99-01	90-01	90-95	95-99	99-01	90-01
Belgium	-8	-19	-4	-29	-16	-11	-12	-33	-5	-1	-1	-7
Germany	-20	-21	-16	-46	-6	20	-7	5	-16	6	-1	12
Greece	36	8	7	56	21	13	8	47	10	9	2	23
Spain	-27	-24	-5	-47	12	6	-2	17	2	2	0	5
France	-28	-21	-9	-48	-2	-2	2	-2	-8	0	na	-7
Ireland	17	45	9	83	7	0	-10	-4	28	-4	na	23
Italy	-16	-8	-5	-27	32	15	9	65	5	-5	1	1
Luxembourg*	24	-4	-8	10	9	-16	-4	-13	7	8	11	30
Netherlands	-8	na	-9	-12	-19	na	-15	-39	-9	na	2	1
Austria	-14	-16	-4	-31	0	-2	-2	-3	-1	-7	1	-7
Portugal	-10	-4	-5	-18	75	51	30	245	-2	-1	-9	-12
Finland	-28	-9	7	-30	-34	-37	-4	-60	-38	-26	4	-52
Euro Area	-19	-11	-9	-35	0	9	na	9	-8	0	na	-8
Denmark	-2	72	-3	64	-28	2	2	-24	-16	1	1	-14
Sweden	-65	-41	1	-79	-21	-20	na	-37	-8	-1	na	-8
UK**	-10	-12	-9	-28	-6	-21	-8	-31	-11	1	-8	-17
EU	-21	-11	-9	-36	0	6	-8	-2	-8	0	na	-8
US	-20	-15	-6	-36	3	1	na	4	-4	7	na	3

*Includes local and foreign branches (EU and non-EU)

** Includes major UK banking groups and building societies.

Source: ECB, US Federal Reserve Board, OECD and authors' own calculations.

¹²⁹ According to careful estimations, at least 130,000 jobs were likely to have been suppressed in the European financial services sector following the M&A wave over the last decade; the same estimations predict another 300,000 jobs lost in the years following for the same reasons (ILO, 2001).

¹³⁰ The overall decrease has been divided into -21% between 1990 and 1995, -11% between 1995 and 1999 and -9% between 1999 and 2001. Likewise, over the same period, the number of credit institutions in the United States has fallen by 36%. Nevertheless, an increase has been →

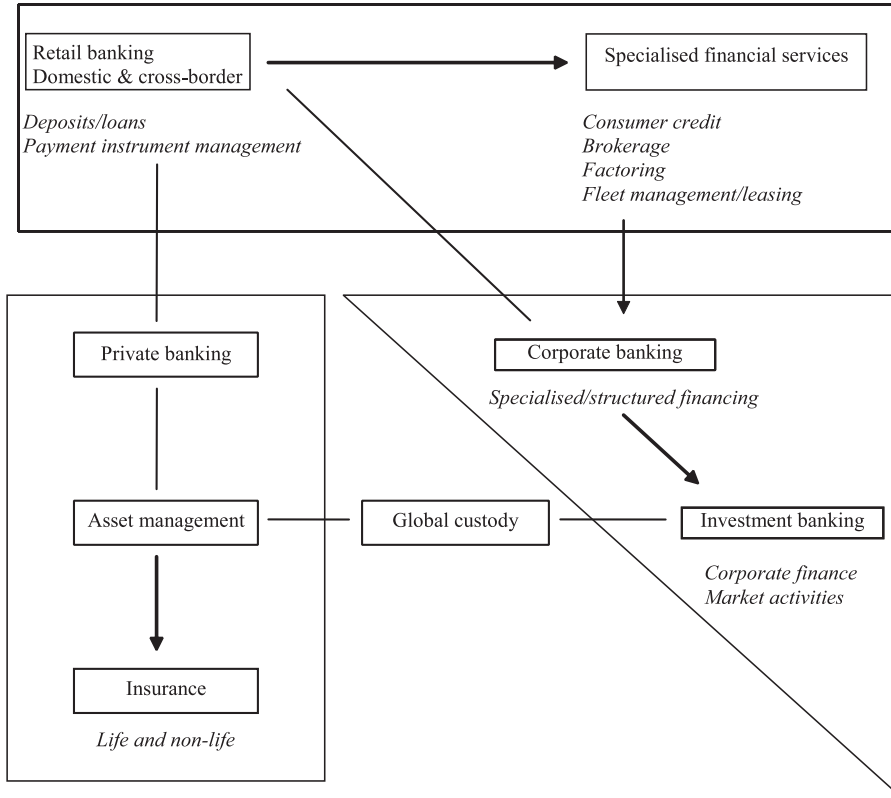
Undoubtedly, banking M&As could fully explain the reduction in the number of credit institutions as few banking closures were reported in the 1990s. One could expect a significant rationalisation of banking branch networks as well as a substantial reduction in employees. Therefore, according to these figures, this trend has not been fully verified by the facts. Why? It seems that the overall effect of M&As on employment and branching is not straightforward. While they might contribute to massive job losses due to downsizing programmes,¹³¹ they could also generate job creation through the growing banking segments such as investment/corporate banking in the decade of the 1990s, or asset management/private banking and other specialised financial services today.

Moreover, two other particularities in Europe may explain this trend. Firstly, labour market rigidities and the power of labour unions serve to protect employees of banking institutions facing restructuring. Secondly, the branch network remains the most important distribution channel for many banks and customers. So, European banks seem to prefer a multi-channel strategy combining large traditional branching with new distribution channels (mainly e-banking and call centres).

registered exceptionally in Ireland due to the entry of foreign banks, in Greece owing to a catch-up effect in its banking infrastructure and in Luxembourg owing to the benefits of taxation. At the end of 2002, the EU banking industry, consisting of some 7,968 institutions including cooperatives and saving banks, could be considered as unusually fragmented, although it has been consolidating at the domestic level for some time.

¹³¹ A report (see Rhodes, 1998) summarising nine case studies of banking mergers in the United States reported that all nine mergers resulted in significant cost-cutting in line with pre-merger projections. The largest volume of cost reduction was associated with staff reductions and data processing systems and operations.

Annex 3. Main Financial Activities in the EU Banking Sector



Annex 4. Cross-Shareholding Structures of Major European Financial Companies, end 2002 (in %)

Who owns them		Who do they own	
Asson 6.25	Fortis 6.15	ING 1.6	Prineas Bank 3.0
	Swiss Re 1.1	Fortis 6.2	
	ING 1.6	Capitalia 6.6	Banco Comercial Portugues (BCP) 5.0
	BNP Paribas 3.9	Credit Lyonnais 5.3	Societe Generale 1.0
	AXA 5.3	Credit Lyonnais 16.3	BNP Paribas 5.3
	Aviva 3.0	SCH 2.9	Credit Lyonnais 3.9
		InsaBICI 15.0	Banco Espirito Santo 4.0
		Crédit Agricole	Credit Lyonnais 17.4
Allianz 10.3	BNP Paribas 16.3	Crédit Lyonnais	Commercial Bank of Greece 7.0
BPSA 3.6	InsaBICI 3.7	Crédit Lyonnais	
	Munich Re 25.7	HYB Group	
	Allianz 4.2	Deutsche Bank	Allianz 4.6
	La Caixa 4.0	Allianz	Munich Re 13.3
	Deutsche Bank 3.2	HYB Group	EPG Eurobank Ergasias 9.3
	HYB Group 4.6	Allianz	AMB 9.5
	Allianz 24.5	Munich Re	AGF 8.6
		HYB Group	BPS/SGPS Munich Re 55.4
		SCH	Deutsche Bank 10.1
		Mediobanca 1.6	Commerzbank 10.4
		Generali 9.9	Deutsche Bank 1.8
		InsaBICI 2.0	Erste Bank 1.0
		SCH 6.4	InsaBICI 4.2
		KBC 0.9	Generali 1.4
			Mediobanca 1.7
		San Paolo-IMI	SCH 2.9

	Aviva 2.0	Generali <2.0	Mediobanca 10.4	UniCredit	
	Commerzbank 1.4	Mediobanca 13.8	Commerzbank 9.9 Mediobanca 2.0	Generali	BNL 7.1 AMB 64.0 IntesaBCI 5.0
BCP 2.0	Commerzbank 4.2	Crédit Agricole 15.0	Commerzbank 2.0	IntesaBCI	Crédit Lyonnais 3.7 BCP 7.4
		ABN AMRO 6.6	Mediobanca 8.6	Capitalia	
	Generali 7.1	BBVA 14.8		BNL	
RAS 2.0	Generali 2.0	Capitalia 8.5	Generali 13.8	Mediobanca	Commerzbank 1.6
RBoS Group 2.9	Commerzbank 1.9	San Paolo IMI 6.4	RBoS Group 5.1	SCH	Commerzbank 3.7 San Paolo IMI 5.2
			BNL 14.8	BBVA	Crédit Lyonnais 3.6
Caixa General de Depositos 8.4	Banco Sabadell 3.4	IntesaBCI 7.4	IntesaBCI 2.0	BCP	Banco Sabadell 8.5 Eureko 4.0
		Swiss Re 5.0	Swiss Life 6.0	Crédit Suisse Group	
		SCH 5.1	SCH 2.9	RBoS Group	UniCredit <2.0 Munich Re 3.6 RBoS Group 3.2
			Société Générale 5.0	Aviva	

Source: UBS Warburg (2003).
Note: Non-financial stakes and stakes outside Europe are not included.

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