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Fakulta sociálních věd

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Rigorózní práce

2008 **Hana Stárová**

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RIGORÓZNÍ PRÁCE

European Bank Mergers and Acquisitions: Do They Create Value for Shareholders?

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Prohlášení

Prohlašuji, že jsem rigorózní práci vypracovala samostatně a použila pouze uvedené prameny a literaturu

V Praze dne 15. 9. 2008 Hana Stárová

Poděkování

Na tomto místě bych ráda poděkovala PhDr. Petrovi Teplému, vedoucímu této práce, za konzultace a cenné připomínky. Dále děkuji všem svým blízkým za podporu a trpělivost.

Abstract

The European banking industry has experienced profound change in regulation, technology and market structure over the last two decades. Since the late 1990s, a strong wave of mergers and acquisitions (M&A) and market consolidation process have been induced by changing external environment. The aim of this thesis is to find out whether M&A transactions in the European banking sector can be justified by creating value for involved banks' shareholders. For this purpose we first discuss theoretical motives, which indicate the potential sources of value creation. Furthermore, we conduct an *event study* examining value implications of 59 M&A transactions of listed European banks carried out between 1998 and 2007. Our findings suggest large value creation for the targets' shareholders. On contrary, significant value destruction is found for shareholders of the bidding banks. The net wealth effect for combined entities of targets and bidders is still significantly positive; therefore, we conclude that banking M&As have been successful. Moreover, we present results for several sub-samples analysing differences in terms of value creation between domestic and cross-border deals, cash and equity-financed deals and transactions of different sizes.

Abstrakt

Evropský bankovní sektor prošel za poslední dvě desetiletí významnými změnami v oblasti regulace, technologie a tržní struktury. Změny ve vnějším prostředí vyvolaly od konce devadesátých let silnou vlnu fúzí a akvizic a spustily konsolidaci trhu. Cílem této práce je zjistit, zda jsou evropské bankovní fúze a akvizice opodstatněny tvorbou hodnoty pro akcionáře zúčastněných bank. Za tímto účelem nejprve probereme teoretické motivy k fúzím a akvizicím, které naznačují možné zdroje tvorby hodnoty. Dále provedeme tzv. *event study* zkoumající důsledky 59 fúzí a akvizic listovaných evropských bank z let 1998 až 2007 na hodnotu pro akcionáře. Naše výsledky dokazují, že fúze a akvizice přinesly značnou hodnotu pro akcionáře akvizičních cílů. Akcionáři akvizitérů naopak hodnotu signifikantně ztrácejí. Čistý efekt pro akcionáře obou zúčastněných bank je signifikantně kladný, z čehož usuzujeme, že bankovní fúze a akvizice byly úspěšné. Navíc ukazujeme výsledky pro několik menších vzorků analyzující rozdíly v tvorbě hodnoty mezi domácími a přeshraničními transakcemi, transakcemi financovanými penězi a akciemi a transakcemi různých velikostí.

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List of Abbreviations

AR	Abnormal return
ADR	American Depositary Receipt
CAGR	Compound annual growth rate
CAR	Cumulative abnormal return
CEE	Central and Eastern Europe
CIS	Commonwealth of Independent States
ECB	European Central Bank
EMU	European Monetary Union
JV	Joint venture
M&A	Mergers and acquisitions
P/BV	Price to book value ratio
P/E	Price to earnings ratio
ROE	Return on equity
SWF	Sovereign wealth fund

1 Introduction

The European banking sector has experienced unprecedented levels of mergers and acquisitions (M&A) since the late 1990s. The M&A wave contributed to a consolidation process, which has transformed the once fragmented European banking industry into a system of national oligopolies with even a few pan-European players. Further consolidation efforts are expected. The rise of M&A activity was forerun by fundamental changes in external environment, such as deregulation, introduction of euro, technological progress and changing customer demand. These external factors undoubtedly induced the M&A wave, as they increased the potential profitability of merging and acquiring.

In our thesis, we intend to find out whether the increased M&A activity in the European banking sector was indeed profitable for the banks. Therefore, our main aim is to evaluate the past M&A transactions in terms of value creation for shareholders. For this purpose, we apply the *event study* methodology, which is based on observing the *abnormal returns* to shareholders around the day of an M&A deal announcement. The event study results represent the shareholders' expectations regarding the value creation (or destruction), which we believe are the best and most direct measures of M&A profitability (as supported by e.g. Cybo-Ottone and Murgia, 2000; Beitel and Schiereck, 2001; and Lensink and Maslennikova, 2008).

We formulate six working hypotheses concerning the value effects of M&A announcement based on results of the existing event studies. First of all, we test the overall average wealth effect of M&A announcement. The value effects are analyzed separately for shareholders of targets, bidders, and (theoretically) combined entities. Moreover, we test whether there is any difference in terms of value creation between deals with different geographic focus, form of financing and size. As far as we know, the broad scope of our analysis is only comparable with two existing event studies focused on European banking. Compared to these studies, we base our analysis on a more recent transaction sample. Therefore, we believe our event study contributes to the existing research on banking M&A in Europe.

In addition to our main goal, the thesis aims at providing understanding of the motives behind mergers and acquisitions. By discussing the theoretical motives for M&As, we want to indicate the sources of value creation. As general theoretical motives for M&A have been described and discussed many times in the past, we try to focus here on the banking sector specifics.

Our thesis is structured in the following way. The following Chapter 2 provides a comprehensive description of European banking sector development since the 1990's. In the very beginning of the chapter, we discuss changing regulatory and economic environment and outline changing structure of banking industry. We then continue with an overview of European banking M&A activity. We describe the M&A dynamics over time, show what types of deals prevail, and point out the differences between individual European countries. In the end of the second chapter, we discuss some banking sector prospects and latest trends – namely those related to cross-border banking, recent financial turmoil and sovereign wealth funds.

The third chapter focuses on the theoretical background for value creation in mergers and acquisitions. After briefly introducing M&A classification and related terminology, the sources of value creation for shareholders are discussed. We present both economic motives creating value and fallacious motives, which may even destroy the value. Last but not least, we point out the cost of M&A to be confronted with the benefits.

In the fourth chapter, we finally come to an empirical analysis of value creation in European banking M&A. First of all, we review the existing literature with focus on past event studies. Further, we try to assess the methodology of event studies. In the third section, we present hypotheses, data sample, methodology and results of our own event study. In the very end, a supplementary analysis of acquisition premiums and transaction and trading multiples is presented.

2 Recent EU Banking Sector Development

2.1 Regulatory and Economic Environment

The structure of European banking system has changed substantially since the 1990s, when the process of bank market consolidation fully started. The banking sector has been converging from a highly fragmented one, with many national banks and not much foreign competition, into a more consolidated sector with strong national and even a few pan-European banks. Changes in regulation, introduction of the euro, ongoing globalization, technological progress and changing demand were important external factors, which accelerated the M&A activity and consolidation process in European banking industry.

2.1.1 Deregulation

Integration of the European financial markets is believed to improve the allocation of capital and therefore long-run economic performance of the EU. The idea of financial market integration in Europe dates back to 1957, the time of the Rome Treaties. However, actual efforts did not appear until late 1970s, when the first directive concerning credit institutions was adopted[1]. Throughout the 1980s, the plan of the single European market was shaping up[2]. The plan had two levels: (1) free movement of capital was to be ensured, and (2) single market in financial services was to be implemented.

Free capital movement is an essential condition for financial services companies to operate freely across the borders. The full liberalization of capital movements came into effect for most Member States already in 1990. Three years later, a single market for capital was further enhanced by the Maastricht Treaty, which prohibited any restrictions on capital movements and payments between the Member States (and between the Member States and third countries as well). The principle of freedom of

[1] Directive 77/780/EEC on The Coordination of Laws, Regulations and Administrative Provisions Relating to the Taking Up and Pursuit of Credit Institutions.
[2] White Paper in 1983, White Paper in 1985, Single European Act in 1986, Directive 88/361/EEC.

circulation of goods, services, people and capital was formalised by the completion of the European Single Market in 1993. Since then all financial institutions in the EU can establish branches and offer services also across borders of their home country, where they have been authorised to do so. One licence is sufficient and banks do not have to apply for a new licence in each country, where they want to operate.

In 1999, the Commission made a significant step towards the harmonization of financial market legislation by releasing its Financial Services Action Plan (FSAP)[3]. European financial services policy was developed further in the Commission's White Paper on Financial Services Policy 2005-2010 published in December 2005. The Commission had completed all the necessary legislative work by 2005 and now it seeks to deepen financial integration. The White Paper sets up the following Commission's objectives: dynamic consolidation, removing any remaining barriers, implementing and enforcing legislation, enhancing supervisory cooperation and convergence, and strengthening European position in the global financial marketplace (Commission, 2005).

Furthermore, the Basel II Accord valid since 2008 set out new regulatory capital requirements in order to strengthen the financial system resistance to economic turbulences. International convergence of capital measurement and standards is being encouraged. Figueira, Nellis and Schoenberg (2007) argue that new capital standards under Basel II may promote banking mergers, as the involved entities will attempt to strengthen their capital adequacy through M&A. According to the authors Basel II rewards banks for diversifying their capital bases.

2.1.2 Effects of the European Monetary Union

Introduction of the single European currency in 1999 removed the biggest apparent barrier to cross-border consolidation. Banks could start to enter foreign markets more easily, as there was no more difference between them and domestic banks with respect to the currency risk or monetary policy knowledge. Crucial provisions for banks, which allowed banks to operate with a single license anywhere in the EU and adopted so called "home country control" principle, came into force already in 1993.

[3] The full title is "Financial Services: Implementing the framework for financial markets: Action Plan" (see Commission, 1999).

These provisions made it even easier for banks to start their operations in another euro area state.

The single currency and beginning of cross-border consolidation intensified the level of competition in the euro area banking market. Stronger competition led to harmonization of prices in the banking industry, i.e. the interest margins and fees and commissions for various banking services. The EMU increased competition especially in retail banking, as the difference between national and cross-border retail payment in the euro area has been vanishing with the realization of the Single Euro Payments Area (SEPA)[4].

2.1.3 Development of Product Range

Although the classical banking products, such as loans and deposits, are still very popular in Europe compared to the United States, even the Europeans have been shifting their interest towards other competitive products. Different kinds of share funds, life or pension insurance, investments in securities, consumer loans, leasing and factoring have been on rise. The non-banking part of the financial sector has imposed a great competitive pressure on banks in the last two decades. The current trend of withdrawing funds from banks and investing it in instruments yielding higher returns instead is referred to as "disintermediation".

European banking has traditionally adhered to the universal banking model. Unlike in the United States, no strict separation of commercial banking and investment banking activities was required. Therefore, banks could react to the changing climate by enhancing their product portfolios with investment banking products such as issuing securities, securities trading, asset management, etc.

Moreover, a unique financial architecture model was developed in Europe combining bank and insurance company. This extension of the universal banking model is referred to as the "bancasurrance" model. ING and Fortis can serve as examples. Only recently this model has been adopted by U.S. financial firms and research results suggest, that *"bancassurance firms are viable entities that may play an important role in the future evolution of the U.S. financial system"* (Fields, Fraser and Kolari, 2007, p.777).

[4] The economic impact of the SEPA is examined in Schmiedel (2007).

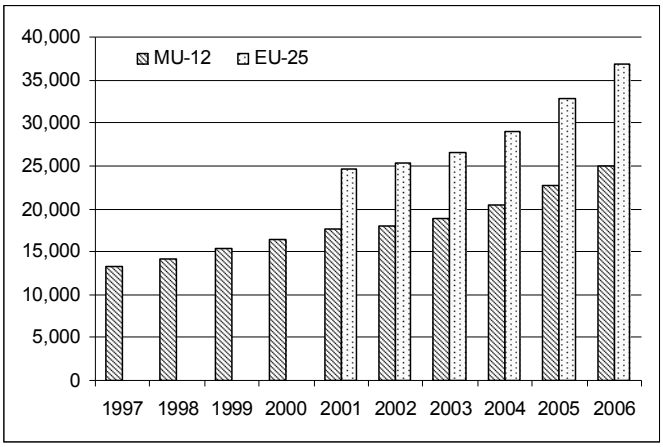
During the last 15 years, development of the banking product structure has been highly affected by the unprecedented technological progress. All banks had to deal with the fast advancement of information and communication technology. In reaction to that, direct banking, a new revolutionary product was introduced (i.e. internet banking, telephone banking, GSM banking, or e-mail banking). These new distribution channels are cost-saving. On the other hand, the technologically innovative environment of the last decade or more has contributed to even tougher competitors fight.

2.1.4 Industry Activity

Despite a lowering demand for the traditional banking products and increasing popularity of non-banking financial services in the last two decades, the activity of banks in Europe has not declined. Empirical data suggest the activity has only been shifted in different fields, but it has actually grown.

The aggregate assets of the EU banks have steadily grown over the last two decades and the growth has been accelerating lately (see Figure 1). In the period between 2001 and 2006, the total assets of credit institutions grew by a compound annual growth rate (CAGR) of 7.3% in the euro area and by 8.3% in the EU-25 countries. Nevertheless, there was a slight decline in the number of employees and the total number of branches both in MU-12 and EU-25 countries confirming the trend of replacing personal approach with different forms of direct banking.

Figure 1: Total assets of credit institutions (EUR bn)



Source: ECB (2004); ECB (2006); ECB (2007b)

Changing product range is clearly visible from banks' financial accounts. Firstly, the off-balance sheet activities have been growing remarkably mainly thanks to the booming derivative activities. Secondly, the income structure has been changing with

non-interest income gaining relatively more importance. Increasing competition from non-banking institutions lowered the banks' intermediation margins. In response to disintermediation and lowering margins, banks have been offsetting lowering interest income by increasing their activities yielding fees and commissions or other non-interest income.[5]

From the global perspective, banking became the industry with the highest level of absolute profits. According to Dietz, Reibestein and Walter (2008), the after-tax profits of global banking industry soared from USD 372bn in 2000 to USD 788bn in 2006 exceeding even the oil, gas and coal sector's total profits. The world banking revenues reached USD 2.8 trillion in 2006. While Western European banks generated 13% of the total banking revenues, their contribution to the absolute banking revenue growth between 2000 and 2006 was only 4%. On the other hand, Eastern European banking generated 2% of the total revenue in 2006, but was responsible for 5% of the total absolute revenue growth. In Europe, the main driver of the revenue growth was strengthening euro, and also increasing capitalized returns[6] and new savings; however, these factors were substantially offset by margin decline.

2.1.5 Consolidation and Concentration

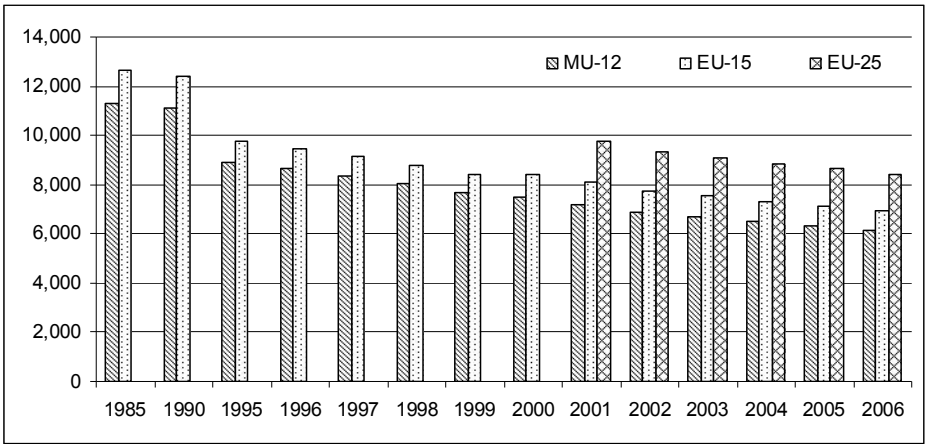
The European Union has experienced an unprecedented process of financial consolidation since the early 1990s. The number of banks has been on decline as presented in the Figure 2. In the MU-12 countries, the number of credit institutions was decreasing by the CAGR of -3.7% in the sixteen-year period prior to 2006. Consolidation has proceeded faster in the euro area than in the new EU member countries; the respective CAGRs stood at -3.2% and -2.6%, respectively, in the period between 2001 and 2006.

The consolidation process came in line with deregulation and liberalisation efforts discussed above in this chapter. Furthermore, technological progress was an important factor catalyzing the consolidation. The improvements in information processing and telecommunications allowed banks to manage larger information flows and manage risks at lower cost regardless the geographical distances.

[5] For more see ECB (2000a): *EU Banks' Income Structure.*
[6] Weighted average of deposit returns and capital markets investments.

On the top of the decrease in the number of banking institutions and the increase in their aggregate assets, concentration in the sector has grown[7]. It means the ratio of the assets of large banks to the total banking assets has risen. In Figure 3, we show the development of the weighted average of the Herfindahl index, which measures the concentration.[8]

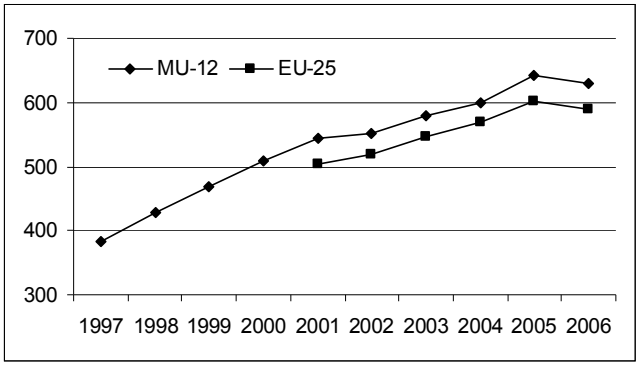
Figure 2: Number of credit institutions



Source: ECB (2000b); ECB (2004); ECB (2006); ECB (2007b)

However, it is important to mention that the concentration differs notably across Europe. While in some large western economies such as Germany, Italy and the United Kingdom the concentration is very low and has been growing (Herfindahl index being at the level of 200-300), in small new member countries such as Estonia, Lithuania or the Czech Republic, the concentration is very high and it has been actually declining (Herfindahl index being at the level of 1,000-4,000).

Figure 3: Herfindahl index for credit institutions' total assets (weighted average)



Source: ECB (2004); ECB (2006); ECB (2007b)

[7] Concentration can be defined as the market share of several largest companies in certain industry.
[8] Herfindahl index is calculated as the sum of squares of all the credit institutions' market shares, according to total assets. It may range from 0 to 10,000.

In the last two decades, the pressure of enhanced competition, changing customer demand and technological development led to structural rationalisation in the banking industry. Reduction in barriers to competition and an increased level of innovation forced banks to seek higher effectiveness and improve their competitive strengths. One of the possible ways to improve banks' position was to pursue synergy gains from mergers and acquisitions. As discussed further in the chapter 3, mergers and acquisitions are believed to bring economies of scale or scope, gains from risk diversification, and other benefits in case the target or the merging entity is a good fit. Therefore, the wave of banking M&A came as a response to the environmental and structural changes in the banking industry.

There is an interesting parallel between the European and the U.S. banking consolidation. In the United States, legislative changes (eroding regulations on interstate banking) and general economic conditions (improving communications and technology) in the 1980s resembled very much the situation in Europe in 1990s. In both cases, changing environment led to deep structural changes and a strong wave of M&A in the banking sector.[9]

However, the level of concentration in global banking is still relatively low compared to other key industries; the world's largest 20 banks account for less than 40% of the global banking market capitalization, compared with an average of 67% in other large industries (Dietz, Reibestein and Walter, 2008).

2.2 M&A Activity in European Banking Sector

This section looks at the pattern of recent M&A wave in the EU banking sector. We do not aim at providing a comprehensive overview of bank M&As, we only want to give a basic understanding of the main characteristics. The theme is covered by a wide range of research publications (ECB, 2000b; Group of Ten, 2001; IMF, 2001; Ayadi and Pujals, 2005; Figueira, Nellis and Schoenberg, 2007). We draw on their results and present here the following main features of the European banking M&A development:

- Acceleration of M&A activity since 1996;
- Prevalence of domestic transactions;
- Prevalence of M&As within an industry;

[9] For more on the U.S. banking consolidation and its drivers in the 1980s see Rhoades (1996): *Bank Mergers and Industrywide Structure, 1980-94*, the publication of the Board of Governors of the FED.

- Striking differences among countries.

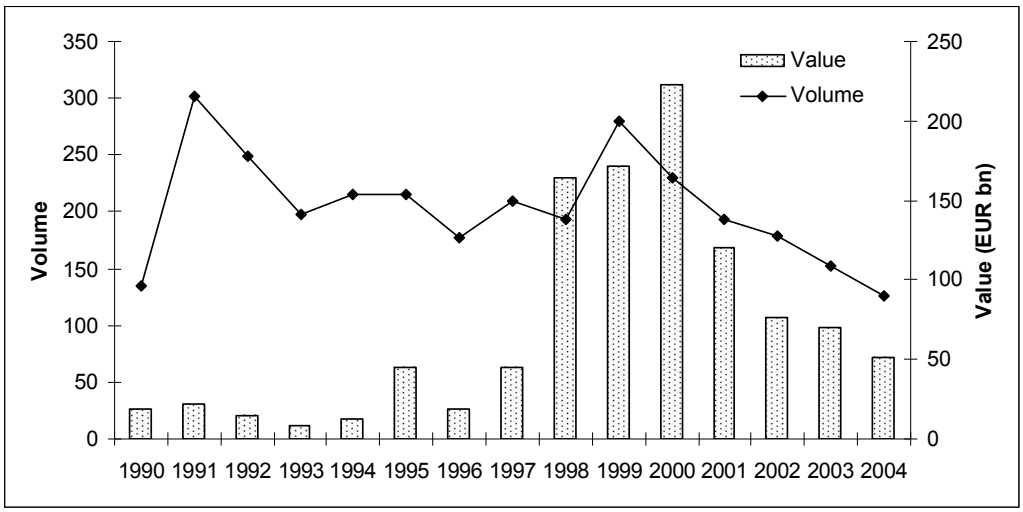
The M&A statistics differ significantly among the research papers depending on the source of data and the way of presenting it. We chose several data sources to show the main patterns of bank M&A activity. Although the data presented in the charts below are not compatible altogether, we believe that for our purposes it is sufficient.

2.2.1 Development of Volume and Value of Bank M&A Transactions

The M&A activity in banking industry followed a similar pattern as the overall M&A development. The M&A deal values, as well as the average deal value, increased sharply since 1997. The wave peaked in 2000 and slowed down since then with deceleration of overall economic activity.

There were two key moments in respect of regulation, which gave impetus to M&A activity. Firstly, the single market initiatives in early 1990s and especially the introduction of unified banking licence and completion of the agreement on the free movement of capital in 1993 opened the gate towards a liberalised single banking market. Secondly, the introduction of single European currency and releasing FSAP in 1999 had strong impact on deepening the financial service market integration.

Figure 4: Volume and value of M&A in banking in EU-15, 1990-2004



Source: Ayadi (2007) - Data from Thomson Financial SDC
Note: Deal value is missing for number of deals.

Figure 4 documents the development in bank M&A activity in the EU-15 countries in reaction to the changing environment; it shows the number of deals completed and the total value of the deals where the price was disclosed. In early

nineties, there were many transactions carried out, but these were typically rather small in size. More importantly, the activity intensified and the average deal size increased in 1994 and 1995.

A real boom in bank M&A started since 1996; not particularly the number of completed transactions, but primarily their total value shot up. The acceleration with its peak in 1999-2000 was provoked by expectations and preparations for the upcoming third phase of the EMU.

In Figure 4, it is visible, that the number of transactions exhibits less volatility than the value of M&As. The average transaction value has increased significantly since 1996, peaked in 2000 and remained relatively high until today. Ayadi and Pujals (2005, pp. 13-16) provide empirical evidence of changing pattern in M&A distribution in terms of deal size over the period of 1994-2000. Their results confirm an overall shift of the M&A transaction distribution towards higher transaction values. Figueira, Nellis, and Schoenberg (2007, p. 31) give the following explanation: *"The contrast between the number and value of M&As may be due to one or more reasons – reflecting, perhaps, the desire by acquirers to take over larger financial institutions, or the decline in the availability of smaller targets."*

Table 1: The largest recent banking deals (in value over USD 10bn)

Year	Bidder company	Target company	Origin of bidder/target	Deal value (USD bn)
1998	Fortis	Generale Bank	Benelux/Benelux	14.15
1999	Santander Central Hispano	Banco Central Hispanoamericano	Spain/Spain	11.80
1999	Banque Nationale de Paris	Paribas	France/France	19.60
1999	Banca Intesa	Banca Commerciale Italiana	Italy/Italy	15.45
1999	Royal Bank of Scotland	National Westminster Bank	UK/UK	53.73
1999	Banco Bilbao Vizcaya	Argentaria	Spain/Spain	11.25
2004	Santander Central Hispano	Abbey National	Spain/UK	15.26
2004	KBC Bank & Verzekering	Almanij	Belgium/Belgium	21.07
2005	UniCredito Italiano	HypoVerainsbank	Italy/Germany	18.63
2006	Le Groupe Banque Populaire; La Caisse Nationale des Caisses d'Epargne	Natixis	France/France	12.83
2006	Banca Intesa	Sanpaolo IMI	Italy/Italy	37.76
2007	UniCredit Group	Capitalia	Italy/Italy	29.90
2007	Royal Bank of Scotland Group; Fortis; Banco Santander	ABN AMRO	UK+Benelux+ Spain/Netherlands	95.64

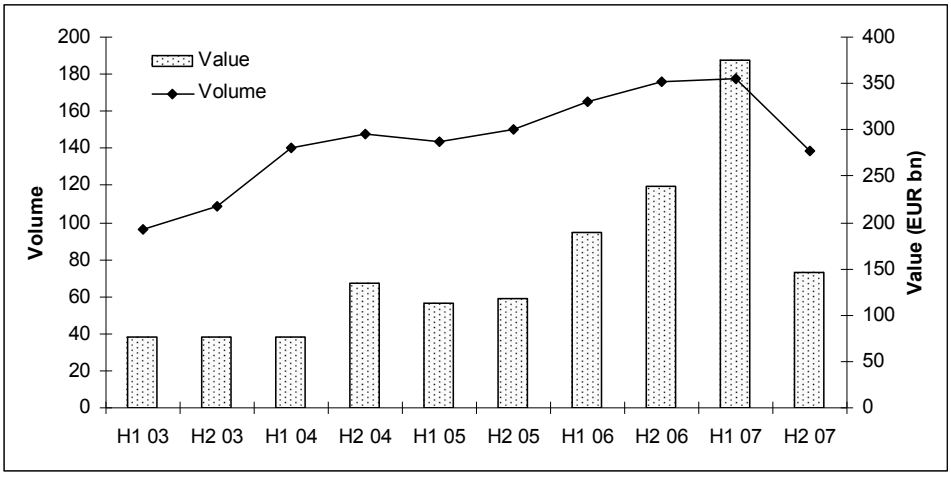
Source: mergermarket

There were several large deals carried out in the late nineties (see Table 1), which led to emergence of "mega banks". However at this point, the large banking

groups were being formed purely at national level (e.g. BNP Paribas in France, SCH and BBVA in Spain, Intesa and UniCredit in Italy, RBS in UK and HVB in Germany). As we show in the following section, cross-border consolidation lagged behind the domestic one. A few cross-border mergers giving birth to pan-European "mega banks" took place only recently (e.g. UniCredit – HVB – Bank Austria Creditanstalt and RBS – ABN AMRO).

A notable decline in M&A activity since 2001 was in line with an overall economic recession. Since 2004, the number and value of banking transactions has been on rise again. Figure 5 presents half-yearly data concerning the deals in European financial sector recorded by mergermarket. The recent development in bank M&A activity has not reached the magnitude of the late 1990s; however, several very large deals occurred increasing the average deal value. Above all, the largest deal in banking history was announced in May 2007, i.e. the acquisition of Dutch ABN AMRO by a consortium led by The Royal Bank of Scotland Group worth EUR 71bn.

Figure 5: Half-year volumes and values of M&A in financial sector in Europe, 2003-2007



Source: mergermarket (2008)

Note: Data contain all deals announced, excluding those that lapsed or were withdrawn, in the whole financial sector, where the dominant location of the target is in Europe.

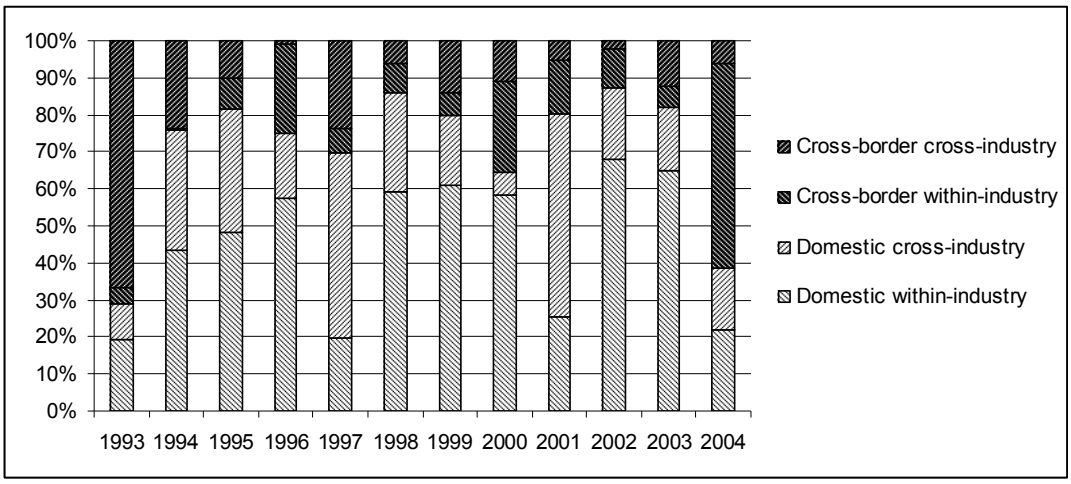
2.2.2 Domestic versus Cross-Border M&A

Figure 6 shows the classification of financial sector M&A activity between 1993 and 2004 into four categories according to the characteristics of the target and bidder companies. According to the country of origin of the parties involved, we speak about either *domestic* or *cross-border* M&A. According to the line of business, transactions can be divided into *within-industry* and *cross-industry*. This section deals with the

development of domestic against cross-border M&A, the next section adds the industry dimension.

Except from 1993 and 2004, majority of the M&A transactions were carried out within the same country each year. According to Abraham and Van Dijcke (2002) domestic transactions accounted for more than two-thirds of both the value and the number of M&As. The data suggest that the liberalization and deregulation efforts aiming at the creation of a single market for financial services paradoxically triggered a strong domestic consolidation at first, while cross-border transactions were quite scarce.

Figure 6: The profile of banking M&A activity in the EU-15 (based on deal value)



Source: Figueira, Nellis and Schoenberg (2007)

Those cross-border M&As that occurred mainly in late 1990s and in the earlier part of the current decade tended to involve major banking groups. Interestingly, they were more often carried out outside the European Union than within. The targeted regions were the Central and Eastern Europe, Latin America, Southeast Asia or the United States. Banks were establishing their "second home market" or "emerging home market" there (Abraham, Van Dijcke, 2002). The outward transactions were mainly driven by a search for higher margins and larger growth potential[10] (Ayadi, Pujals, 2005; Abraham, Van Dijcke, 2002).

The Central and Eastern Europe was the most natural second home region for many banks, especially those from Austria, Italy, France and the Benelux countries (see Box 1 and Table 2). Nowadays, as there is already a strong foreign participation in the

[10] Indeed, the growth rate in the emerging markets exceeded largely that in Western Europe. According to The McKinsey Quarterly (2008), during the period of 2000-2006, banking business exhibited the after-tax profit CAGR of 43.7% in Latin America, 31.5% in Eastern Europe, 16.1% in Asia, and only 12.3% in Western Europe.

CEE markets, banks are starting to look for targets further eastwards in Russia, Ukraine and other countries of the Commonwealth of Independent States (CIS).

Box 1: Banking consolidation in the CEE

Consolidation of the CEE banking sector is referred to as an "externally driven consolidation process" (Abraham, Van Dijcke, 2002). A few EU banks entered the emerging markets mainly through privatisation programmes. The foreign banks largely from Austria, but also France, Belgium and Italy established strong presence in multiple CEE markets. Nowadays, the CEE countries have the most open banking system in the world. In almost all core CEE markets foreign banking groups hold at least 70% market share, and in many markets the share is much closer to 100% (mergermarket, 2006). On contrary, some intra-regional banks such as Hungarian OTP have been able to build up their position as important regional players.

Although the privatisation programmes were nearly completed in the first years of the new millennium, consolidation process continued throughout the past few years. The M&A activity was particularly significant in the years prior to and after the accession of the CEE countries to the EU in 2004. Currently, there are fewer and fewer banking private targets available for acquisitions in the region. According to the mergermarket report (2006, p. 4), *"the scene in the CEE region looks set for an endgame of gradual consolidation between major players and the remaining smaller domestic banks"*. Mergermarket also points out, that there is a notable absence of the UK and American banks in the region and that the entry of large global banking groups from Anglo-Saxon countries can be expected in next few years.

Table 2: Big spenders in the CEE and CIS region (1998-2006)

Buyer	Deal value (EUR bn)	Deal volume	Nationality	Range
Erste Bank	5.98	5	Austria	1999-2005
UniCredito Italiano	3.03	5	Italy	1999-2005
Bank Przemyslowo Handlowy	2.96	2	Poland	1999-2001
Societe Generale	2.83	5	France	2001-2006
KBC Bank	2.12	4	Belgium	1999-2006
Banca Intesa	1.86	3	Italy	2001-2006
OTP	1.79	6	Hungary	2003-2006
Eureko	1.72	3	Netherlands	1999-2004
Raiffeisen International Beteiligung	1.43	3	Austria	2005-2006

Source: mergermarket (2006)

The cross-border mergers and acquisitions surprisingly did not come in a larger scale even after the introduction of the euro. Low level of cross-border consolidation is often explained by the persistence of regulatory impediments, the common belief that a strong home market is necessary for a bank before moving abroad (Abraham, Van Dijcke, 2002) and by the apprehension that financial institutions should stay in domestic

hands and should not be controlled by foreigners (Boot, 1999). Group of Ten (2001) argues the important factors discouraging consolidation are on one hand diverse domestic regulatory regimes, and on the other hand, non-legislative barriers such as corporate and national cultural differences (including different consumer preferences). Others argue that these problems are not that severe and they should not get the blame (McKinsey, 2005).

Table 3: Recent cross-border bank M&A deals

Year	Bidder company	Target company	Origin of bidder/target	Deal value (EUR bn)
2004	Royal Bank of Scotland	Charter One	UK/USA	8.75
2004	Santander Central Hispano	Abbey National	Spain/UK	12.60
2005	Barclays	ABSA Bank (60%)	UK/South Africa	4.28
2005	UniCredito Italiano	HypoVerainsbank	Italy/Germany	15.37
2006	UniCredito Italiano	Bank Austria Creditanstalt	Italy/Austria	2.70
2005	ABN AMRO	Banca Antoveneta (77%)	Netherlands/Italy	6.27
2005	Erste Bank	BCR	Austria/Romania	3.75
2006	BNP Paribas	Banca Nazionale del Lavoro	France/Italy	9.03
2006	National Bank of Greece	Finansbank	Greece/Turkey	4.16
2006	Credit Agricole	Cassa di Risparmio di Parma e Piacenza	France/Italy	3.80
2006	Danske Bank	Sampo Bank	Denmark/Finland	4.05
2007	BBVA	Compass Bank	Spain/USA	7.41
2007	Royal Bank of Scotland Group; Fortis; Banco Santander	ABN AMRO	UK+Benelux+ Spain/Netherlands	71.12

Source: Mergermarket

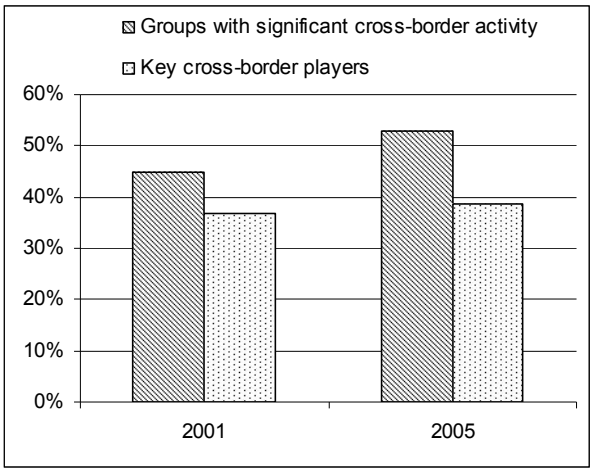
There has been an increasing value of cross-border deals carried out in last three years and even a few large ones appeared (see Table 3). According to ECB (2007a), cross-border M&A deals accounted on average for only 14% of the total value of euro area M&As between 2000 and 2004, whereas the percentage rose to 38% in the period of 2005-2006. Unlike the deal value, the number of cross-border deals is declining.

It seems cross-border consolidation is picking up very recently. According to the findings of the Banking Supervision Committee presented by ECB (2007a), there were 33 EU banking groups with significant cross-border activity in 2005 operating 53% of total euro area banking assets. Moreover, 16 out of these 33 groups were active in at least half of the euro area countries and together held nearly 39% of the euro area assets. The Figure 7 shows that both percentages increased compared to the year 2001.

A high portion of the cross-border transactions have been carried out outwards the EU (ECB, 2007b), meaning the European banks have an appetite for non-EU targets. According to Ayadi and Pujals *"it seems that the recent M&A wave aims to*

finalise the domestic banking consolidation and is triggering cross-border consolidation" (2005, p. 20). However, the reality does not meet the great expectations yet.

Figure 7: Market share of large euro area banking groups



Source: ECB (2007a)

2.2.3 Cross-Industry versus Within-Industry M&A

In terms of the business activities of the merging entities (banking, insurance, investment services such as asset management, brokerage, collective investment, or other), there is a clear pattern of predominance of transactions within the same industry both in domestic and cross-border transactions. According to the data for 1990-1999 provided by the Group of Ten (2001), the most of the European M&As, 81% in terms of value, were carried out within the same industry. Cross-industry deals were rare; 14% of the M&A transactions were domestic cross-industry deals and only less than 5% of the deals were carried out both across borders and industries. Figure 6 in the previous section also confirms the patterns.

Furthermore, the Group of Ten gives evidence that bank-bank transactions were strongly prevailing in the domestic M&A activity (63% of deal value), while insurance-insurance deals were most frequent in cross-border M&A (37% of deal value). Interestingly, as far as banking cross-border deals are concerned, acquisitions of non-banking (insurance or investment services) institutions prevailed over bank-bank deals in terms of value (not so in terms of number of deals).

The presented results confirm that the predominant trends driving bank mergers and acquisitions in the 1990s were: (1) consolidation of commercial banking at the national level and (2) constitution of *financial conglomerates* – universal banking

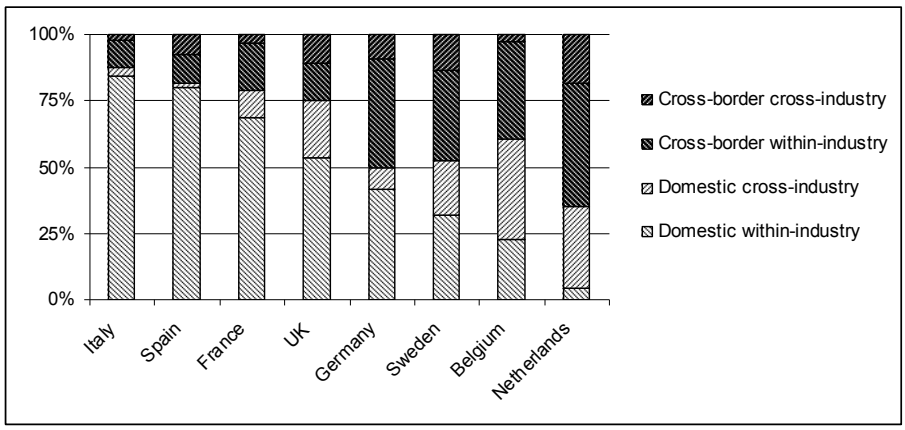
groups combining banking with insurance or investment services – both domestically and, to a smaller extent, at international level. Obviously, cross-border commercial banking consolidation somewhat drags behind.

Unlike in retail banking, a few banks operating across Europe appeared in other segments of financial sector such as investment or private banking and specialty finance; for example Deutsche Bank in investment banking and Cetelem (BNP Paribas) and Sofinco (Crédit Agricole) in consumer credit. Another significant pattern in the M&A activity is the relative importance of cross-industry deals in the insurance field. In the spirit of bancassurance model, a few conglomerates that pair banking and insurance activities emerged (Fortis and KBC in Belgium and ING in the Netherlands).

2.2.4 Differences among European Countries

Consolidation has proceeded with different pace and it is in a different stage across European countries depending on the initial conditions and country-specific factors. Figure 8 illustrates the striking differences that existed among countries in terms of the character of M&A activity during the 1990s. In Italy and Spain domestic within-industry M&A predominated substantially, whereas in Germany, Sweden, Belgium and the Netherlands cross-border M&A made up about half of the total transactions. Moreover, a notable cross-industry consolidation took place in Belgium and the Netherlands.

Figure 8: The profile of banking M&A activity by country (1990-99)



Source: Group of Ten (2001)
Note: Based on the value of deals and the acquiring firm's country.

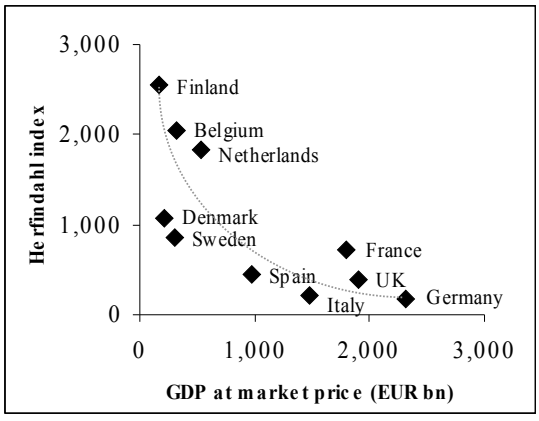
There has been a similar development in the Benelux and the Nordic countries. A wave of domestic consolidation proceeded here already in the early 1990s. In

Scandinavia, a banking crisis triggered the process. The Benelux and Scandinavian small and saturated markets soon became highly concentrated. Thereby, the domestic within-industry M&A activity has been relatively low lately in these regions, especially in the Netherlands, Belgium and Sweden. The concentration is so high here, that the local anti-trust authorities would object to any larger domestic merger. Due to that fact, the ambitious banks had to pursue expansion either across industry (mainly by combining banking and insurance) or across borders. In the first stage, the "domestic" market was extended to comprise the whole Benelux or Scandinavia for such banks as Nordea, Dexia and Fortis. In the next stage, M&As also beyond the borders of these regions have been carried out.

Besides these two groups of countries, Austria, Ireland and Greece can be considered as other smaller economies, in which domestic consolidation has been substantially completed. Among large countries, in which the consolidation process has gone relatively far, we can include Spain, Portugal, United Kingdom and France.

In sharp contrast to Benelux and Scandinavia, very low concentration remains in Germany and Italy. According to McKinsey (2005), there is still room for a large-scale domestic consolidation in Germany and to a lesser extent in Italy. In Italy, the consolidation has been gaining speed lately. However, German domestic consolidation has been proceeding surprisingly slowly. Possible explanation of lagging consolidation is the traditionally high level of public-sector and co-operative banking in both countries (Abraham, Van Dijcke, 2002).

Figure 9: Concentration in bank industry measured by Herfindahl index versus GDP (2006)



Source: ECB (2007b)

As far as concentration is concerned, a negative relationship can be found between the size of the economy and the concentration level (see Figure 9). With a few

exceptions (Ireland and Luxembourg), the small economies tend to have higher concentration levels. Also according to Ayadi and Pujals' findings *"[t]he speed (or the degree) of consolidation in a given market is then inversely proportional to the size of the country"* (2005, p. 50).

2.2.5 Alternatives to Mergers and Acquisitions

Mergers or acquisitions are not the only options for a bank, which attempts to restructure itself and grow. In cases where banks wish to pull together with another organization, but M&A would be complicated, *joint ventures or strategic alliances*[11] come into question. It is problematic to study and assess these transactions in banking because of the lack of data and research. According to the Group of Ten report (see table 4), 823 JVs or strategic alliances took place in Europe[12] between 1990 and 1999. Cross-border transactions outweighed those within border and their number is even comparable to the volume on cross-border M&A.

Table 4: Number of M&A versus joint ventures & strategic alliances in Europe (1990-1999)

	Mergers & Acquisitions	JVs & strategic alliances
Domestic	1,958	336
Cross-border	778	487
Total	**2,736**	**823**

Source: Group of Ten (2001)

Note: M&A data based on the acquiring firm's country.

Abraham and Van Dijcke (2002) point out an observation, that domestic M&A transactions took mostly the form of a merger, whereas cross-border deals, no matter if within or cross-industry, were in the majority of cases completed through acquisitions. It suggests mergers may be difficult and perhaps unsuitable in case of cross-border deals. The scarce data on joint ventures or strategic alliances moreover suggest that there are many cases, when even an acquisition is not feasible and banks rather opt for joint ventures and strategic alliances.

The advantages of JVs and strategic alliances compared to M&A are straightforward. Joint ventures do not have to involve the entire business system of the

[11] In the Group of Ten report (2001) defined as agreements where two or more entities combined resources to form a new, mutually advantageous business arrangement to achieve predetermined objectives. While in JV the parties create a new entity contributing equity in it, in strategic alliances no equity stakes are involved.

[12] Europe includes Germany, France, Italy, Spain, Belgium, Netherlands, UK, Sweden and Switzerland.

participating companies, as the participants can choose to what extent they want to co-operate – whether on the level of marketing, sales, production or development – and such partnerships may be put in place for a finite period of time as they are generally easier to dissolve (Copeland et al., 2000).

Figueira, Nellis and Schoenberg (2007) mention a special case of strategic alliances between banks and non-traditional credit providers such as retail chains (e.g. RBS with Tesco, BNP Paribas with Carrefour, and Bank of Scotland with Sainsbury's). Strategic alliances between banks and complementary industries have become an important route to revenue growth and profitability improvement.

Apart from M&A, JVs and strategic alliances, there is a "natural" strategic route to development, the *organic growth*. Restructuring and expansion can be achieved through internal developments within a bank, focused mainly on the cost side. It is upon each bank's decision whether it wants to expand within its current markets or pursue expansion to new geographical or product markets. And each bank must also decide whether it will try to reach its goals either by growing organically or taking a "shortcut" via M&A, JV or strategic alliance.

Last but not least, *cross-shareholding* has developed between European banks as an alternative way to cooperation. It is widely spread mainly in Germany, Italy and France. It seems that the more consolidated the banking market, the less the cross-shareholdings strategy is used. Opposite to the fragmented banking sectors in Germany and Italy, cross-shareholdings activity is rather rare in the UK, Benelux and Nordic countries.

2.3 Prospects for the European Banking Industry

2.3.1 Cross-Border Banking Prospects

The recent literature on the European banking consolidation agrees that the level of domestic consolidation is quite advanced in most of the EU countries. The only exceptions are Germany and Italy, but even they have been catching up lately. Nevertheless, cross-border M&A remain the main concern of the theoretical and empirical research, as they are still rather infrequent. Several papers deal with cross-border banking, e.g. *"Cross-border bank mergers: What lures the rare animal?"* (Buch, DeLong, 2002), *"European financial cross-border consolidation: At the crossroads in*

Europe? By exception, evolution or revolution?" (Abraham, Van Dijcke, 2002), and *"Travel abroad or stay at home?"* (Figueira, Nellis, Schoenberg, 2007).

Despite all the efforts that have been made in the quest for the completion of the EU financial market integration and despite the fact that consolidation across more distant and more different types of financial institutions has become technologically possible, the development in cross-border consolidation since the beginning of the millennium has not met the expectations. The most of the European banks are still heavily dependent on their home market revenues.

When Abraham and Van Dijcke assessed the European banking consolidation up to 2001, they predicted the forthcoming *"second round of consolidation will have a more prominent cross-border dimension"*. The temporary pause in M&A activity at the millennium turn was to be discontinued by "the Big One" re-igniting the process. Abraham and Van Dijcke expected cross-border M&A would remain complementary and subordinated to the banks' domestic market activity. However, cross-border deals would be on rise, as large banks would start to feel the limitations of their home markets. The national champions would gradually enlarge their home market across Europe. A fragmented landscape of national banks would remain, but with growing interdependence through competition. Moreover, *"globalisation of banking is certainly not limited to the European market place"* (Abraham and Van Dijcke, 2002, p. 94).

Three years later Ayadi and Pujals (2005) gave similar prospects for the banking industry. In the long run, they predict emergence of several pan-European financial conglomerates regardless of the boundaries. In the medium term, they expect: firstly, the completion of the domestic consolidation in the countries with lower concentration levels, and secondly, an acceleration of cross-border M&A operations, particularly in countries where the anti-trust authorities already voiced concerns. Universal and specialised banking models will continue to co-exist in Europe, each one having its advantages and disadvantages. The banking institutions are expected to incline more to outsourcing and offshore strategies for non-core activities in search for greater efficiency.

The prominent international consulting companies share an optimistic view regarding the cross-border banking M&A activity in the future. In December 2005, Delloite anticipated a handful of pan-European retail financial services institutions will operate across Europe by 2010 (Delloite, 2005). PwC report published in April 2006 states that the recent large cross-border deals *"may or may not signal the beginning of a*

major consolidation wave" (PwC, 2006); nevertheless, PwC argue that European cross-border bank M&A activity is likely to increase in the next couple of years. The reasons for increased M&A are presented as follows: (1) domestic consolidation opportunities are limited in certain markets, (2) the emerging markets, especially the CIS region, allure European banks for their high growth rates, (3) European banks shall generate substantial surplus capital over the next years, and (4) a number of banks have already indicated their willingness to pursue cross-border M&A transactions.

Furthermore, the European Central Bank in its research report published in March 2007 expressed the expectation that cross-border M&As may thrive in the euro area in coming years. ECB gives a very similar reasoning as that of PwC above adding: high competitive pressures, increasing economic and regulatory incentives for risk diversification, the improved transparency and comparability of the relevant financial information, and continued technological progress.

In 2007, DLA Piper conducted a survey questioning over 240 senior M&A decision-makers from leading European companies and private equity firms. The survey discovered that managers mostly expect increased acquisition activity in Europe in the coming years, with the financial services being the hottest sector for M&A deals.

On the contrary to the letter commentators, Allen N. Berger, the member of the Board of Governors of the Federal Reserve System, is less optimistic regarding the future development of cross-border banking in Europe. He argues that *"cross-border efficiency barriers may prevent the single market from becoming a reality"* (Berger, 2003, p. 466). Berger's research results presented in Berger *et al.* (2003) suggest limits to the degree of future bank globalization. The research is based on data on cash management services provided to foreign affiliates of large multinational corporations, which represent important potential market for large global banks. Berger et al. assume that examinating this market segment can determine the extent to which the banking industry will become globalized. They find that two-thirds of the multinational companies' affiliates opt for a bank headquartered in the host nation, where they operate, and only less than 20% choose a bank from their home nation. The sample companies clearly prefer *"banks that know the local market, culture, language, and regulatory conditions rather than banks that are more familiar with the conditions in the corporation's home market, or have direct ties to the corporation in the home nation"* (Berger *et al.*, 2003, p. 412). Moreover, when companies select a host market bank, they tend to use a local or regional bank rather than a global bank, and they do so

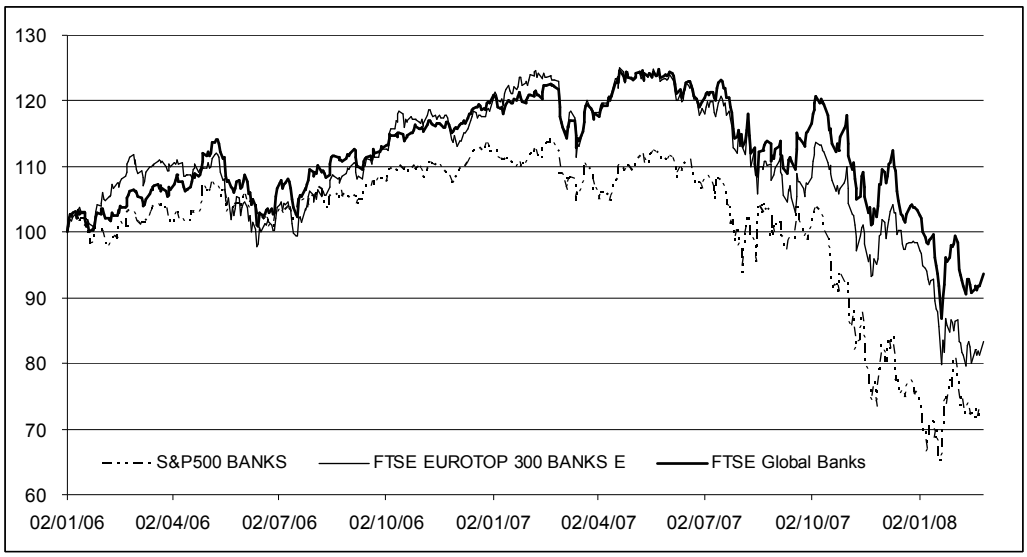
even for their further international expansion. These findings that multinational corporations rely preferably on host market banks with limited reach suggest, according to the authors, that the globalization extent may remain limited.

We incline to the opinion of ECB (2007a) that further development in cross-border banking will depend strongly on the results of the recently executed large cross-border M&A deals. Before other such transactions occur, the potential M&A players will definitely want to understand and evaluate, whether cross-border transactions brought the economic benefits for the institutions concerned in the past. Our thesis aims at answering this question, among others. We present empirical evidence on value creation (or destruction) of cross-border deals in the chapter 4.

2.3.2 Prospects after the Financial Turmoil of 2007-2008

The prospects of accelerating European cross-border banking, as well as finalizing domestic consolidation, were set back after global banking was severely hit by the U.S. subprime mortgage crisis, which led to a global financial turmoil in summer 2007. Due to innovations in securitization, large volumes of the rights to the mortgage payments and related credit risk were passed to third parties (also to European financial institutions) in form of mortgage-backed securities and collaterized debt obligations. The holders of these securities suffered significant losses as the value of the underlying mortgage assets declined and payment defaults occurred.

Figure 10: Banks equity indices



Source: Thomson, FTSE

The total losses and write-downs of the financial sector are estimated to reach hundreds of billions of dollars. Due to the interconnection of the U.S. markets with the rest of the world, the situation led to a global credit crunch. Banks lowered their lending activity and tightened up the risk management. The banks' share prices slumped. The U.S. banks index S&P500 Banks fell to its five-year minimum and the index of European banks FTSE Eurotop 300 Banks E was down at a three-year minimum in January 2008 (Figure 10).

Table 5: Write-downs of European financial institutions from subprime exposures as of March, 15 2008 (USD bn)

Name	Country	Write-downs
UBS	Switzerland	18.1
HSBC	UK	3.0
IKB Deutsche	Germany	8.9
Credit Agricole	France	6.5
Credit Suisse	Switzerland	4.9
Société Générale	France	3.8
Barclays	UK	3.3
RBoS	UK	3.2
BayernLB	Germany	3.0
SachsenLB	Germany	2.8
Dresdner	Germany	2.7
Deutsche Bank	Germany	2.4
ABN AMRO	Netherlands	2.4
Fortis	Belgium	2.3
Natixis	France	1.9
HSH Nordbank	Germany	1.7
BNP Paribas	France	1.0
DZ Bank	Germany	1.5
Caisse d'Epargne	France	1.2
Other European banks		7.7
Total		**82.3**

Source: Moody's (2008)

European banks had seemed to do relatively well compared to their U.S. counterparts until the beginning of 2008. However, even several European banks recorded large write-downs linked to subprime-mortgage securities (see Table 5) and a few banks experienced serious troubles (e.g. German IKB Deutsche Industriebank and British Northern Rock). Moreover, the global credit crunch is expected to negatively influence European economic growth. According to a February press release of the European Commission, the economic growth is expected to slow down to 2% in 2008 in the EU and 1.8% in the euro area[13]. The views of European banks for 2008 were not

[13] http://ec.europa.eu/economy_finance/thematic_articles/article12054_en.htm.

very optimistic as of January 2008. *"As the global credit crunch begins to take a bite out of economic growth, they now expect many months of financial pain as they struggle to keep ahead of mortgage losses and rising defaults on loans to various types of clients, according to bankers and analysts."*[14]

On contrary, the prospects for global banking published by the McKinsey Quarterly in January 2008 (Dietz, Reibestein and Walter, 2008) are quite promising. Despite the current "major cyclical correction", they expect global banking to grow faster than GDP in next 10 years. As a result, the industry's revenues and profits shall double by 2016 to reach USD 5.7 trillion in revenues and USD 1.8 trillion in after-tax profits. North America shall contribute to the total growth between 2006 and 2016 by 25%, Western Europe by 20%, and emerging markets shall be responsible for about half of the growth. The main determinants are demographic trends, wealth accumulation patterns, financial innovation, the rapid development of energy markets, and globalization. The patterns of growth will however remain diverse and uneven, according to the McKinsey Quarterly, varying within regions, countries, sub-sectors and product groups. Furthermore, the authors expect a new wave of consolidation will come over the next five years, which will create "superbanks" with market capitalization over USD 500 billion.

The development of the global M&A activity in first months of 2008 indicates that the new consolidation wave will take its time. On 28 March 2008 the Financial Times reported that the value of announced M&A deals in the first quarter was down 40 percent year-on-year hitting the lowest level in the last four years. *"The figures underline how the end of the credit boom and wild swings in the stock market have made M&A deals harder to finance and harder to value."*[15] The liquidity constrains made credit more expensive and put a red light to higher leveraged deals. Due to turbulent stock markets and gloomy predictions concerning a global recession, it is difficult to evaluate an acquisition.

Nowadays, it is not the best time to undertake mergers and acquisitions either in banking industry. What is more, in many banks there is not much excess equity capital left for acquisitions. On the other hand, weaker banks can easily become an acquisition target. To give a recent example, Société Générale announced large loss mainly due to

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[14] The Wall Street Journal Asia, 17 January 2008, Carrick Mollenkamp: *Credit Crunch: Europe's lenders expect more pain.*

[15] The Financial Times, 28 March 2008, p. 15: *M&A deals hit four-year low*

the fraudulent activities of one of its brokers and also connected to the financial crisis. The announcement spurred a wave of speculations; gradually, BNP Paribas, Crédit Agricole, Barclays or Intesa Sanpaolo were rumoured to have appetite to acquire the banking group. Clearly, it is difficult to predict the future development in M&A activity in banking sector. We come back to this topic once more in the end of the thesis in the section 4.3.5.

2.3.3 Sovereign Wealth Funds

Looking at the latest trends in banking M&A, we have to at least briefly mention the increasing role of *sovereign wealth funds* (SWF). These state-controlled funds manage foreign exchange assets of more than twenty nations with massive trade surplus exporting oil and gas or other materials and products. The far largest are the funds of Abu Dhabi, Singapore, Norway, Kuwait, China, Russia and Qatar. The SWF have become important players in the financial markets. In total, they are estimated to hold assets worth USD 3 trillion. Simon Johnson, the IMF research director, reckons SWF's assets could swell to amount USD 10 trillion by 2012.

Table 6: Sovereign wealth funds' investments in banking sector (2007-2008)

Bank	Investor	Share	Investment (USD bn)
Citigroup	Adia (Abu Dhabi)	4.9%	7.5
	Government of Singapore Investment Corp. (Singapore)	n.a.	6.9
	Sandy Weill (U.S.), Valid bin Talál (Saudi Arabia), and Korea Investment Corp. (South Korea)	n.a.	7.6
UBS	Government of Singapore Investment Corp. (Singapore), and an unnamed Middle East investor	n.a.	12.25
Morgan Stanley	China Investment Corp. (China)	9.9%	5.0
Merril Lynch	Temasek Holdings (Singapore)	9.4%	4.4
	Kuwait Investment Authority (Kuwait), Mizuiho Financial (Japan), Korea Investment Corp. (South Korea)	n.a.	6.6
Barclays	China Development Bank (China)	3.1%	2.98
	Temasek Holdings (Singapore)	2.1%	2.00
Credit Suisse	Qatar Investment Authority (Qatar)	1-2%	approx. 0.5
Total			**55.73**

Source: Factiva, mergermarket

During the financial crisis starting in mid 2007, the SWF provided the much-needed liquidity and helped to improve the balance sheets of several major banking institutions (see Table 6). The funds from Saudi Arabia, the Middle East, Singapore and China became minority shareholders in the Western banks. This special kind of

acquisition firstly started in the U.S., but has occurred also in Europe. For example the Qatar Investment Authority stated in February 2008 that its focus shifted towards European banks. After acquiring a stake in Crédit Suisse, rumours have spread about its planned investment into the Royal Bank of Scotland.

Opinions differ on the matter if the investments of SWF shall be seen as a relief or a threat for Western economies. Some argue that there might be a political agenda behind the funds' investments. Particularly pronounced is the lack of transparency, as most of the funds do not disclose their investment portfolios or investment strategies. The European Commission has also voiced concerns and it plans to set down a code of conduct, rules on transparency and standards of governance, for the investment activities of SWF[16]. On contrary, others find SWF "heroes of the day" and condemn the protectionism raised against them. Moreover, such capital investments might ease the Western banks their operations on new markets.

[16] Europolitics, 28 February 2008, *Financial Services: EU to Set Transparency Rules for Sovereign Wealth Funds.*

3 Theoretical Background for Value Creation

We have shown that deregulation and other external changes induced fast consolidation of the European banking industry. The strong M&A wave was interrupted once by the economic slowdown of 2001 and again recently by the world-wide financial turmoil of mid-2007. Nevertheless, consolidation process is expected to continue. The rest of this thesis is devoted to answering whether the banking M&A wave in Europe can be justified by value creation for shareholders. First, we discuss the theoretical motives, which lead to value creation (or destruction). In the last chapter, we present empirical evidence of past studies and results of our own empirical analysis.

The aim of this chapter is to provide the theoretical base for our hypothesis that mergers and acquisitions create value. The first part briefly outlines different ways to classify mergers and acquisitions and introduces the related terminology. In the second part, we discuss thoroughly different motives for mergers, that lead to increasing shareholders' value. We focus here on banking sector specifics. Fallacious motives are also presented, which do not lead to value creation. More on the contrary, they can destroy value for shareholders. The third part concludes this chapter by pointing out the costs of mergers, which have to be confronted with the benefits.

3.1 M&A Classification Outline

The term *mergers and acquisitions*, or simply *M&A*, as we use it in this thesis, denotes a broad range of formally distinct transactions. An *acquisition* is defined as a transaction, when a company (*acquirer*) gains ownership control over another company (*target*), but both remain legally independent entities. On contrary, after a *merger*, one or both merging entities legally cease to exist; the shareholders of the merged companies obtain agreed stakes in a single successor entity.

There are many ways how to classify M&A transactions. In the previous chapter, we mentioned two of them. According to geographical locations, we have distinguished *domestic* and *cross-border* deals. According to the line of business, we spoke about *within-industry* and *cross-industry* deals. Generally, textbooks define the following types: *horizontal mergers* as the mergers of firms in the same line of business, *vertical*

mergers involving firms at different stages of production, *conglomerate mergers* involving firms from entirely unrelated industries, and sometimes also *congeneric mergers*, mergers between firms in the same general industry but not exactly the same line of business and having no mutual buyer-seller relationship.

Specifically in financial services sector, horizontal mergers refer to bank-bank or insurance-insurance type of deals (within-industry deals). Vertical M&A are quite scarce in banking, as the trend of outsourcing opposes the vertical consolidation. Banks acquiring e.g. insurance, asset management or leasing companies (cross-industry deals) could be examples of congeneric mergers.

Furthermore, M&A transactions range from the case of a firm simply acquiring another firm (*share purchase*), or a firm purchasing only certain assets of another firm (*asset purchase*), to management or employees buying stocks from shareholders creating a private firm (*management buy-out, MBO*, and *employee buy-out, EBO,* respectively), or to a private company taking over a public company to become listed without a need of an IPO (*reverse take-over*).

Merger with a *strategic investor*, who is going to merge the target in its corporate structure and plans to keep it for good, differ substantially from an acquisition made by a *financial investor*, who aims to exit, when its investment has yield its fruit. For some, M&A is their line of business; e.g. private equity funds typically invest capital in companies, restructure them and exit after a short time period.

As regards the structure of the sale process, there are negotiated deals arranged solely between two parties, as well as organized standard one or two-stage tenders with several competing bidders. In order to take over a publicly traded company, a *tender offer* can be launched (e.g. announced in newspapers), in which the acquirer invites the stockholders to sell their stocks for a specified price (above the market price) during a specified time.

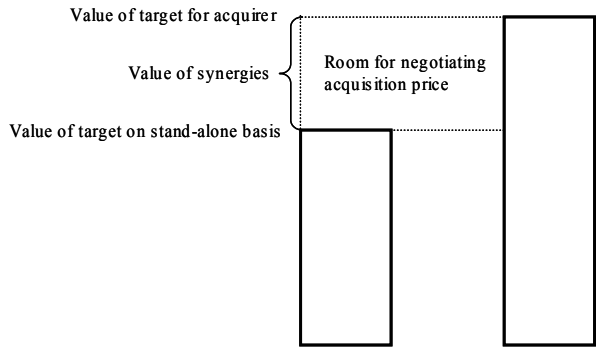
As regards the forms of M&A financing, the consideration structure can consist of pure cash, pure equity (stocks of the acquirer), a combination of both, or other types of financing such as convertibles and ADRs.[17] Acquiring a company using a high portion of borrowed money is referred to as a *leveraged buyout*.

[17] American Depository Receipt (ADR) is a negotiable certificate issued by a U.S. bank that represents ownership of the securities of a non-U.S. resident company.
(OECD definition: http://stats.oecd.org/glossary/detail.asp?ID=6049)

3.2 Motives for M&A

As the M&A deals differ one from another, so does the motivation driving the transactions. Typically there are multiple motives leading managers to their decision. Ideally, firms merge because combining them is believed to create value for shareholders. The argument of shareholder value creation is based on the assumption that the anticipated value of the merging entities together will exceed, in terms of potential wealth creation, the sum of the values of the two separate entities. When the value of a target for the acquirer is higher than its value on a stand-alone basis, combining the two firms creates additional value called *synergy*. Depending on the negotiated *acquisition price*, gains from synergies are divided between the target's and the acquirer's shareholders (see Figure 11 for illustration).

Figure 11: Value creation scheme



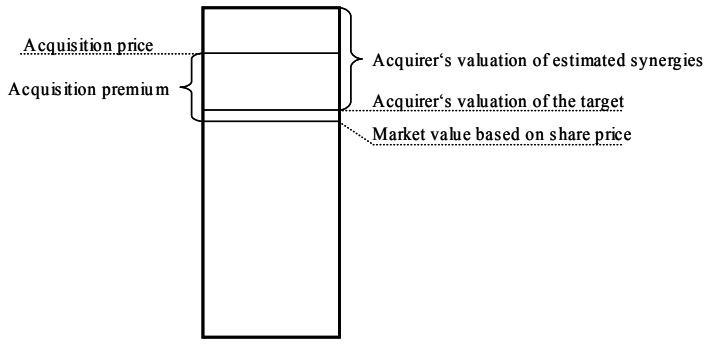
Source: Author

In case of a publicly traded company (see Figure 12), an *acquisition premium*, defined as a difference between the acquisition price and the market price prior to the acquisition, theoretically implies the target's shareholders' part of the gain from synergies. For a transaction to create value, the overall value of synergy must exceed the acquisition premium plus *transaction costs* related to the deal (direct fees to financial advisors, lawyers, auditors and other experts).

Theoretically, both participating parties should gain from M&A; otherwise they would not undertake the transaction. However, this view is based on the assumption that both parties are able to evaluate the company and the synergies correctly. In reality, there are occasions when M&A achieve gains but the buyer nevertheless loses because it pays too much. And it is also possible though rare that the seller loses because it accepts too little. In case of the target being a publicly listed company, its market

capitalization based on the market share price indicates its value for the shareholders. However, ineffective markets can both overvalue or undervalue the shares. Moreover, the buyer's valuation of the target company and especially estimation of the synergies may not be correct. It is important to realize that besides the synergy potential, much of the success of M&A depends on correct valuation.

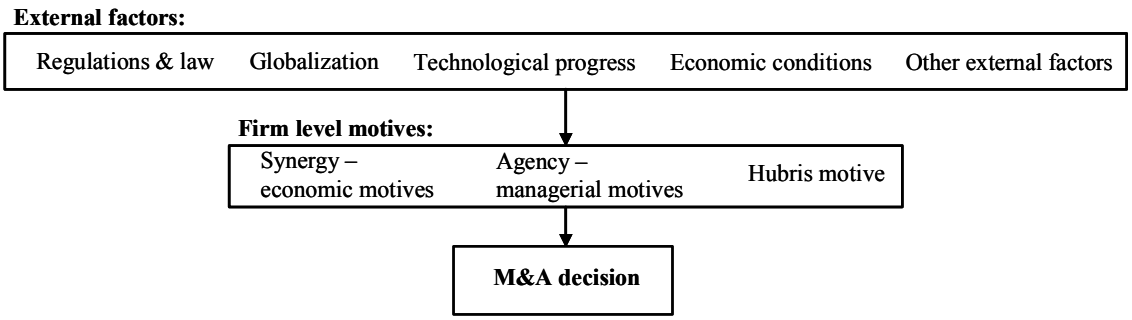
Figure 12: Setting acquisition price of publicly traded company



Source: Author

As Figure 13 illustrates, M&A activity is first of all influenced by various *external factors*. Their effect is especially notable, when significant changes in external conditions bring about M&A waves. We discussed the changing regulatory and economic environment of banking sector in the beginning of the previous chapter (section 2.1) and concluded that the external factors clearly accelerated M&A activity in European banking industry since late nineties.

Figure 13: Motives and factors affecting M&A decision



Source: Author

Now, we turn to the *firm level factors* affecting M&A decisions. First, we discuss the economic motives for mergers as the sources of value added. We aim at answering the fundamental questions: Why shall "1+1= 3" hold in mergers, why two firms may be worth more together than apart, and what explains the significant

premiums over the market price paid in most acquisitions? Later in this chapter, also several non-value maximising motives for M&A are specified such as managerial motives increasing the wealth of managers and hubris motive not creating value for anybody.

3.2.1 Economic Motives for M&A – Increasing Shareholder Value

In general, the existence of synergy means that the combined entity will become more profitable or grow at a faster rate than would the two companies operating separately. M&A literature distinguishes between two types of synergies: *operating* and *financial synergy* (Damodaran, 2002; Ayadi and Pujals, 2005). In this section, we discuss briefly several sources of both operating and financial synergies.

Operating synergies are such synergies that enable companies to reach higher operating income (by adding revenues or cutting cost), increase growth or both. We present here the following operating synergies: *economies of scale, economies of scope and diversification, complementary resources, greater market power,* and *higher growth in new or existing markets*.

Financial synergies allow companies to achieve higher cash flows or lower their cost of capital by redeploying efficiently their cash or equity capital. The following financial synergies are discussed below: *surplus funds, lower cost of funding,* and *capital strength*.

At the end of this section, we also describe two special motives for M&A aiming at increasing shareholders' value, which cannot be thought of as synergy in its narrow sense: *eliminating inefficiencies* and *exploiting stock misvaluation.*

Economies of Scale

Economies of scale can be achieved in horizontal mergers. This view assumes the economies of scale exist in the respective industry and the merging companies operate at such levels of activity, where they still can achieve them. While combining operations, fixed cost can be spread over larger volume of production and redundant costs are eliminated. Thus an average unit cost of production decreases as output grows. The combined company becomes more cost-efficient and profitable. Companies can share different business services such as office management, accounting, controlling, IT, and marketing, top-level management and research department. Moreover, larger

amounts of inputs needed for consolidated production may help to obtain better terms from suppliers.

Banking is a sector with relatively large fixed costs, mainly those related to technology investment, and establishing and operating banks' branch network. Therefore, economies of scale are claimed to exist in most banking M&A transactions. Cost synergy can be achieved by closing redundant branches and more intensive capacity utilization of the remaining ones, consolidating systems, and furthermore, by sharing back offices such as risk, economic research, IT, marketing, public relations, human resources, etc. The cost scale economies are much easier to realize in domestic deals than cross-border ones because of the existence of significant *geographical and operational overlap*s.

Economies of scale can be also related to the revenue side. Becoming larger and building a strong and credible brand name helps banks to attract more clients and also to qualify for serving larger corporate clients. Revenue-related scale economies, however, are less often pronounced as rationale for banks M&A than the cost scale economies.

Economies of scale can be theoretically achieved only up to a certain size of production. Moreover, larger size might increase risks of bureaucratisation, customer remoteness and inefficiency. It implies the existence of an *optimal size of banks*. Findings of early research conducted in the U.S. implied the scale economies existed mainly in mergers of relatively small banks; the limit level of bank's assets was estimated at about USD 10 billion (Mester, 1987a,b; Vander Vennet, 1994). Thanks to technological progress and regulatory changes, the optimal bank size has grown in the last two decades. More recent studies (Berger and Mester, 1997; Vander Vennet, 2002a) suggest that in the nineties, there was a substantial potential for scale efficiency gains from banking mergers even for fairly large bank sizes both in the U.S. and in Europe.

However, the optimum bank size depends on the type of banking involved and the targeted customer. For instance, whereas in retail banking smaller banks with local presence may be efficient, investment banking requires expansion to a pan-European or even a global level.

Economies of Scope and Diversification

Increasing size can also be a source of *scope economies*. When delivering multiple products and services jointly through one organization generates cost savings or boosts revenues, merger is justified. Economies of scope are one of the most quoted

reasons in bank M&A press releases. Bancassurance can serve as an example where cross-selling creates gains. Combining a bank with an insurance company reduces costs by sharing a single distribution network; furthermore, it enhances revenues by sharing the enlarged customer base.

According to Ayadi and Pujals (2005) product and/or geographical diversification brings the following economic advantages with respect to economies of scope: the *satisfaction of specific customer demand* and *risk reduction*. Diversified product range corresponding to customers' demand could help to gain customers' trust in the context of intense competition. Furthermore, it might be comfortable for the customers to get all desired products and services under one roof. As regards corporate customers, they may need and appreciate services of large institutions operating nationwide or across borders.

Finally, diversification can reduce risks, if the asset and liability portfolio of the target institution exhibits different credit, interest rate, and liquidity risk characteristics from the acquirer's. *"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"* (Ayadi and Pujals, 2005, p. 63). Both geographical and product diversification in banking industry offers reduction of risk, because returns on loans in different locations and returns across different financial services may have relatively low or negative correlation. Diversification may thus reduce cash flow variability and the *probability of bank failure*.

On contrary, Berger (2000) pointed out not only theoretical reasons why diversification of banking institutions may be "good", but also reasons why it could be "bad". He argues that diversification may also raise bank risk, increase the probability of failure, and reduce cost and revenue efficiency. To give an example, large banks may not be able to provide relationship-based financial services for small businesses.

It is necessary to note that both Damodaran (2002) and Brealey and Myers (2006) present diversification as a fallacious reason for mergers. They argue that diversification is easier and cheaper on the stockholder level than on the corporate level. Nevertheless, we believe that diversification may be "good" in European banking M&A in some cases and create value for shareholders because of the specific characteristics of banking industry.

Complementary Resources

Merging two companies may be profitable, when they need each other's assets or they can utilize them more efficiently. Acquiring *complementary resources* through M&A makes sense if it is cheaper than developing them on one's own or if it is the only possible way to obtain such assets. In general, combining companies having different complementary strengths is beneficial.

In banking sector, example of such complementarity can be a well-established institution with a large branch network, client base and well-functioning distribution channels on one hand, and a smaller specialized company with a distinct successful or promising product on the other. Other example, an international player with significant operating know-how, experienced managers and strong brand name may beneficially enter new geographical markets by acquiring a local bank with local knowledge, quality human resources, and established relationship with clients.

Greater Market Power

Besides scale and scope economies, companies might want to get larger in order to gain market power. By acquiring a company operating on the same market, the buyer increases its market share. This may lead to lower competitive pressure and *increased pricing power* resulting in higher margins and profitability. A necessary condition for the ability to raise prices above marginal cost is either the existence of entry barriers or product differentiation. Otherwise, new competitors would be atracted to enter the industry and prices would fall down again. In case monopoly pricing is feasible, it creates value for shareholders but lowers the wealth of consumers (and suppliers) at the same time. Therefore, regulatory authorities permit market consolidation only up to a certain stage.

As we showed in the previous chapter, consolidation of banking sector has already reached fairly advanced stage in most European countries. The European banking sector can be described as a system of national oligopolies. As Ayadi and Pujals (2005) noted, there exist relatively high entry barriers in banking industry because of the importance of reputation and credibility of banks. Such market structure, combining high concentration with the existence of entry barriers, allows banks to achieve gains from increased market share. However, in some countries (e.g. Benelux and Scandinavian countries) there is no room left for significant national players to gain

even greater market power as the antimonopoly authorities would not allow further concentration.

Higher Growth in New or Existing Markets

The last type of operating synergy as specified by Damodaran (2002) is enjoying *higher growth* especially in new but also existing markets. As mentioned several times in the previous chapter, western banks carried out many acquisitions in the emerging markets in order to benefit from high local growth rates. Established network and brand name recognition of local banks enable their counterparts from developed markets to expand their operation and sell their broader array of products in faster-growing environment.

Besides of the above mentioned operating synergies there are also financial synergies present in banking M&A.

Surplus Funds

Some motives for acquisitions may have purely financial nature. Major text books, such as Brealey and Myers (2006) and Damodaran (2002), discuss surplus funds as one of the financial motives. When firms generate substantial amounts of cash, but have no or few profitable investment opportunities within its current markets, they can make cash-financed acquisitions. Placing *surplus funds* in different geographical or product markets with lack of capital but higher rates of return creates synergy effect. Excess cash motivation is typical for conglomerate mergers.

Lower Cost of Funding

Large banking groups with well-diversified portfolio of assets and liabilities face lower credit, interest rate and liquidity risk, have more stable revenue stream and therefore may access funds at lower costs. Smaller banks may be motivated to merge together to achieve stronger and more stable cash flows, so that they could enjoy lower cost of internal funding and avoid expensive external financing.

Capital Strength

In banking, regulators require banks to maintain a certain capital adequacy ratio. The required amount of capital shall on the top of provisions and loan loss reserves provide a defence against serious asset quality problems such as those that occurred recently in connection to the U.S. mortgage-backed securities. In such cases large

amounts of bad loans have to be written off not only against provisions and reserves but also against shareholders' equity.

Capital adequacy is an important banks' feature which is of high interest in case of banking M&A. Low ratio of capital to assets may indicate financial weakness. Wheelock and Wilson (2000) found that the lower the equity-to-assets ratio a bank has, the higher is the probability of its acquisition. It suggests weak banks just before becoming insolvent are likely to be acquired by well-capitalized banks, which are able to strengthen the target's financial position.

Moreover, well-capitalized banks face lower risk of bankruptcy and thus they may approach funding at lower cost. Additional financial synergy may arise from lowering cost of funding for the merging entity with low capital-to-assets ratio.

Ayadi and Pujals (2005) argue that the new *Basel II Accord* may be a driver of M&A activity in banking as *capital synergies* may become a new driving factor. On one hand, large banks using the most sophisticated and costly Internal Ratings Based (IRB) approaches will be able to liberate capital to acquire less sophisticated banks having a strong potential to unlock capital. On contrary, smaller banks unable to adopt sophisticated and efficient risk models will face larger capital requirements; therefore, they will become weaker and will be more likely to be acquired.

Eliminating Inefficiencies

The last two sensible motives for M&A that we mention here have nothing to do with synergy effect in the sense of creating value by combining two firms; however, more broadly they belong to the same group of motives. According to Brealey and Myers (2006), companies with poor management are likely to be acquired by companies with better management. When firms are managed inefficiently having unexploited opportunities to cut cost or increase revenues, replacing their incapable management may *eliminate the inefficiencies*. Acquisitions of such companies are motivated by a belief that installing new management can lead to better utilization of the target's resources and thus maximize the value of the target and create value for the acquirer's shareholders. No real synergy need to be present.

There are two arguments supporting this view. First, the acquirer may simply have more experienced management than that of the target company. Second, the target's management may pursue different goals than the target's shareholders (if the *agency conflict* is present), thus not focusing primarily on shareholders' wealth

maximization. In this perspective, takeover threats may serve as an external control mechanism limiting the agency conflict.

Exploiting Stock Misvaluation

The very last motive, which may create value for shareholders, is the recognition of wrongly valued stocks in equity markets. On one hand, as mentioned for example by Damodaran (2002), an undervalued firm is likely to become a target for those who recognise its mispricing. The acquirer gains the difference between the purchase price and the true value of the target company. On the other hand, if management believe their company's stock is overvalued, they may create value for shareholders by carrying out acquisitions paid by stock. Purchasing companies by overvalued stock means in fact buying them cheaper than it is perceived by market. Once the stock price falls to its real value, shareholders are better off than they would have been without making the acquisition (Shleifer, Vishny, 2001).

Both above mentioned motives, however, seem to us rather artificial and purely theoretical. A necessary condition for exploiting stock market mispricings, is the capacity to detect undervalued stocks. This requires having better information or analytical tools than the rest of the market. But obtaining unique inside information is extremely difficult for management as far as other firms are concerned.

Naturally, the management has the best information about its own company. Therefore, the management may be able to detect own stock overvaluation. In case of acquisitions paid by overvalued stocks, however, Andrade *et al.* (2001) argue that the investors perceive the equity issue connected with stock-financed acquisition as a signal of stock overvaluation and bid down the stock price immediately after the announcement of the deal. Our analysis in the next chapter also seems to confirm this view.

3.2.2 Agency Motives for M&A – Increasing Managerial Welfare

In case of large companies, such as banks, decisions concerning M&A are mostly done by their managers rather than shareholders. Therefore, existing agency conflicts between shareholders and managers may lead to M&A motivated by managerial self interest rather than shareholders' wealth maximization. The *manager-utility-maximization hypothesis* was pronounced for example by Ansoff (1988) or

Hawawini and Swary (1990) as a possible explanation of the value destruction observed for the bidders in the U.S. bank mergers and acquisitions.

Box 2: ABN AMRO take-over process

23/04/2007

- Barclays launches an **all-equity public offer** for ABN AMRO.
- Offer consideration: 3.225 new Barclays shares for each ABN AMRO share.
- The offer values the entire issued share capital of ABN AMRO at EUR 66.012bn.
- Current Barclays shareholders will hold 52% of the combined entity with current ABN AMRO shareholders holding the remaining 48%.

29/05/2007

- RFS Holdings, a consortium led by The Royal Bank of Scotland Group, launches a **cash and equity public offer** for ABN AMRO, a counter bid to Barclays' offer.
- Offer consideration: EUR 30.40 in cash and 0.844 new RBS shares for each ABN AMRO share.
- The offer values the entire issued share capital of ABN AMRO at EUR 71.121bn.
- Fortis will provide 33.8% of the consideration (EUR 24bn), Santander will provide 27.9% of the consideration (EUR 19.9bn) and RBS will provide 38.3% of the consideration (EUR 27.2bn)

16/07/2007

- RFS Holdings launches a **revised offer** for ABN AMRO.
- Revised offer consideration: EUR 35.6 in cash and 0.296 new RBS shares per each ABN share.
- The cash component has been increased to 93%. The total consideration remains the same.

23/07/2007

- Barclays launches a **revised offer** for ABN AMRO.
- Revised offer consideration: EUR 13.15 in cash and 2.13 Barclays shares per ABN AMRO share.
- The revised offer values the entire issued share capital of ABN AMRO at EUR 66.187bn.

05/10/2007

- Barclays has **withdrawn its offer** for ABN AMRO.

10/10/2007

- RFS Holdings' offer declared wholly **unconditional**.

Source: mergermarket

Damodaran (2002) points out three motives for M&A connected with managerial self interest: *empire building, compensation and side-benefits,* and *managerial ego*. Sometimes, managers' aim is to enlarge their corporation until it becomes a dominant player in its relevant industry or market. Then they could reign over a large empire, secure their job, and gain greater importance, prestige and respect at the expense of shareholders. Moreover, the larger the company is, the more responsibilities and the higher the wage managers would usually have. If management

compensation is to be increased after a transaction is successfully closed, managers might seek for the private benefits and ignore costs for shareholders. Nevertheless, Anderson *et al.* (2004) found that changes in CEO compensation after mergers are positively related to anticipated gains from merger measured at the announcement date. They examined mergers of large banks in the 1990s and found no evidence of empire-building motives.

For some, acquisitions may resemble a battle, which nobody wants to lose. This is especially the case when a sale tender with multiple bidders takes place. Not infrequently, managerial ego leads to completion of transactions disadvantageous for shareholders. The only gain from such deals is the managers' personal satisfaction from winning. Instead of struggling to win, the managers should ask why the other bidders step off the process or bid lower.

In Box 2, we present ABN AMRO's case as an example for illustration. One can imagine that in such a lengthy process with two competing bidders managerial ego may play certain role. Bidding banks usually invest large amounts of time, effort and also money already in the stage of preliminary bids. The more expenses are already spent in connection with a transaction, the more the managers are reluctant to step off the process. M&A costs are discussed further in this chapter.

Eat-or-Be-Eaten Theory

Merger decision may be also motivated by managerial defensive motives. Managers may opt for acquisitions in order to increase their firms' size and thus lower the likelihood of being taken over. In 2005, Gordon *et al.* presented their "eat-or-be-eaten" theory aiming at explaining the following empirical facts: mergers come in waves, mergers cluster in industries that experience a regime shift and the acquirers lose money on average. According to Gorton *et al.,* when significant regulatory and/or technological changes are anticipated in certain industry, which will create opportunities for profitable M&A in future, it may cause a wave of early unprofitable defensive acquisitions. If managers care sufficiently about private benefits of control, they may carry out even unprofitable acquisitions, in order to ensure that their firms remain independent and they will not be out of a job. Moreover, Gorton *et al.* argue that industries with many firms similar in size are more prone to the waves of unprofitable acquisitions.

European banking industry consolidation seems to confirm this theory. In the first half of 1990s, banking sector was largely dispersed in Europe. With the exception of a few countries, banking was not even consolidated on national level. Looking from a pan-European perspective, we might say that there were many banks similar in size with the same chance to become a future global player or just a target. As described in the previous chapter, the consolidation came in two waves, which were forerun by notable regulatory changes and technological progress. Results of our empirical research answering whether the acquirers' returns were negative on average in banking M&A are presented in the following chapter.

3.2.3 Hubris motive

In some cases, M&A may be motivated by over-optimistic expectations of managers or exaggerated faith in their own abilities. Among the crucial reasons for M&A failure, Copeland *et al.* (2000) classify overoptimistic appraisal of market potential, overestimation of synergies and overlooking problems. Roll formulated the *hubris-hypothesis* in 1986 as an explanation of his findings that M&A decision makers in bidding firms pay too much for their targets on average. When arrogant managers believe that their own valuation of an M&A opportunity is correct, even if the market valuation is lower, they may engage in a transaction with no synergies or overpay the acquisition thus transferring all the gains to the target's shareholders.

3.3 Cost of M&A

Even the reasonable economic motives discussed above may not always lead to value creation due to existence of costs related to mergers. When the costs are too high, they may erase all synergies that justified the merger. Two groups of costs can be distinguished: *costs related to undertaking a transaction* and *costs of post merger integration*. The straightforward cost related to mergers (even though not objectively measurable) is the premium paid over the intrinsic value of the target company. Furthermore, during the M&A process direct fees are paid to advisors such as investment banks, lawyers, auditors and specialists on various issues (e.g. environmental risks). Moreover, managers involved in the process may be distracted from managing the day-to-day business, which may be costly for the company.

The crucial part of each merger or acquisition comes after the deal is settled and an integration process starts. Copeland *et al.* (2000) find poor post-acquisition integration another frequent reason for M&A failure in addition to those stated above. Bringing the expected synergies into life is often costly. Compensation must be paid to redundant workers who are dismissed and contractual penalties are paid when terminating inconvenient contracts. While integrating the two companies' operations, initial barriers must be broken down, such as differences in operating models, IT systems, corporate cultures, etc. Eliminating the differences and harmonising the operations may be a lengthy and costly process.

Nowadays, IT systems are vital for banks. Any failure of the systems may cause serious losses both in terms of money and reputation. Therefore, integrating the IT systems of two merging banks is a serious matter and often a nightmare for those responsible for it. The McKinsey report written by Jenkins, Lancellotti and Schein (2006) warns that operations and IT systems of most banks in Europe are seldom prepared to enable easy and efficient integration of new acquisitions (p. 13): *"When a bank with an unreconstructed operating model attempts to integrate another financial institution, the task of matching up their systems may be so daunting that management continues to operate two virtually separate organizations side by side, failing to produce the cost savings and new revenues that justified the merger."*

Our insight into theoretical motives for M&A provided above suggests that there is potential for synergy in many banking mergers. On the other hand, we show that certain fallacious motives may lead even to value destruction. The next chapter, devoted to empirical analysis, provides evidence on value creation (or destruction) in European bank M&A. Findings of existing research studies as well as our own analysis presented below allow us to judge, whether economic of fallacious motives prevail in banking M&A in Europe.

4 Empirical Analysis of Value Creation

This chapter is aimed at answering whether mergers and acquisitions of European banks are justified by value creation. First, we review respective existing literature with clear focus on European event studies. Based on the literature review, we present our assessment of event study methodology. Afterwards, we conduct our own event study.

4.1 Literature Review

The existing literature concerned with bank M&A can be distinguished according to four prevailing topics:

- Cost and profit efficiency consequences of M&A;
- Effects of M&A on banks' operating performance;
- Event studies of M&A evaluation by capital markets; and
- Effects of bank M&A on customers, mainly the impact on the supply of credit to small business borrowers.

As our analysis focuses on value implications of M&A to bank's shareholders, we omit reviewing the last topic, although it is also interesting.[18]

In order to answer whether M&A create value for shareholders, there are two general analytical approaches; as pointed out by Copeland *et al.* (2000), one can either asses merger consequences *ex post* (*dynamic efficiency studies* and *operating performance studies*) or study the *ex ante* market reaction to the announcement of a deal (*event studies*).

Dynamic efficiency studies[19] examine cost and profit efficiency of merging and acquiring banks. They build on econometric methodology and their aim is to figure out whether M&A improve the efficiency of the banks involved as compared to the industry efficiency.

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[18] Karceski *et al.* (2005), Sapienza (2000), Berger *et al.* (2000), Avery *et al.* (1999), Berger *et al.* (1998), Prager and Hannan (1998), and Peek and Rosengren (1998).

[19] Dynamic efficiency studies: Focarelli *et al.* (2000), Hughes *et al.* (1999), Haynes and Thompson (1999), Fried *et al.* (1999), Resti (1998), Berger (1998), Rhoades (1998), Berger and Humphrey (1997), Peristiani (1997), and Akhavein *et al.* (1997).

Operating performance studies[20] examine development of certain financial ratios, mostly those related to performance (e.g. ROE, ROA, etc.), based on reported financial figures over the period starting typically one year (or more) prior to a deal and continuing 3 to 5 years thereafter.

We believe that *event studies* are the only methodology, which allows us to analyse directly the impact of M&A on the value creation or destruction for shareholders. Therefore, we restrict our detailed literature review to event studies.

There were plenty of event studies conducted in past thirty years, which examined the stock market reaction to merger announcement. To name at least some recent ones, Andrade *et al.* (2001) and Moeller *et al.* (2003) represent important large sample event studies. Moreover, Bruner (2002) summarizes 130 research papers analyzing whether M&A do pay. The conclusion from these three studies is as follows: (1) M&A create value for acquisition targets, (2) the impact on the bidders is unclear, some acquirers gain and some lose, and (3) M&A are most likely to create value in aggregate for the combined entity.

There have been also many studies dealing specifically with banking M&A. However, these were nearly exclusively conducted in the U.S.; only a few studies covering European banking are available. The event studies examine value creation to the shareholders of acquiring banks and/or targets. Sometimes they also study the net wealth effect, calculated as some type of weighted sum of the acquirer's and the target's wealth effects. The underlying methodology of event studies is rather standardized. Only exceptionally, some researchers are innovative as regards the methodology. However, there are great differences in several variables such as number of merger announcements studied, period of time over which the market model is estimated (*estimation window*), period of time over which abnormal returns are calculated (*event window*), etc.

4.1.1 Brief Review of Event Studies Dated 1980 - 2000

Rhoades (1994) presents a valuable comprehensive summary of 39 studies in U.S. banking published between 1980 and 1993, over twenty of which used event study methodology. The event studies reviewed by Rhoades suggest that stockholders of the

[20] Operating performance studies: Calomiris and Karceski (2000), Kwan and Eisenbeis (1999), Chamberlain (1998), and Vander Vennet (1996).

target firms do gain after the merger announcement. For target banks, seven out of eight studies found significant positive abnormal returns. As regards returns to bidders, the results are mixed and thus do not provide clear evidence on value creation for acquiring banks. For the bidding banks, seven studies found significant negative abnormal returns, other seven found no significant influence, three studies found positive returns and four found mixed results. Net returns to bidders and targets combined were examined by four studies; one found small net wealth creation, second no net wealth effect, and the other two found positive results only for certain type of merger announcement but not on average.

Beitel and Schiereck (2001) also provide a comprehensive review of more recent event studies on banking M&A conducted mostly in the U.S. as well as in Europe. They conclude that findings are mixed. Only approximately one fourth of the reviewed event studies of the last 20 years found significant positive cumulative abnormal returns (CAR) implying a fully positive impact on shareholders value. Many studies found significant negative CAR for acquiring banks. The authors note that those studies concluding positively as regards bank M&A value implications mostly focused on net combined effects rather than looking at bidders and targets separately. In Appendix 1, we present an overview of results of 31 event studies published between 1990 and 2000 prepared by Beitel and Schiereck. Interestingly, as the authors remarked, very little research has been conducted in order to analyze cross-border M&A in banking.

4.1.2 Recent Event Studies Focused on European Bank M&A

While little evidence was found supporting the view of value creation in the U.S. banking mergers and acquisitions, the scarce European studies seem to give a more positive picture.

Tourani-Rad and Van Beek (1999)

The study conducted by Tourani-Rad and Van Beek was one of the first event studies focused on banking M&A in Europe. The sample included 56 bidding banks and 17 targets of M&A conducted between 1989 and 1996. Significant value creation effect was observed for targets, while no significant destruction was observed for bidding banks. Several other hypotheses were tested to find impact of different factors such as bank size (and thus their potential for scale and scope economies), bank efficiency, whether the deal was domestic or cross-border, or whether the deals were completed

before or after the Second Banking Directive; however, no significant results were found for these supplementary hypotheses.

Cybo-Ottone and Murgia (2000)

Cybo-Ottone and Murgia examined 46 M&A deals carried on between 1988 and 1997, where both the target and the acquirer were listed companies. The authors compared the stock performance to both a general market index and a bank sector index. Significant value creation of 12-18% (depending on the event window and the index) was observed for targets' shareholders. Moreover, size-adjusted combined performance of both the bidder and the target was found statistically significant and economically relevant; the weighted average abnormal returns of 2-4.5% were observed depending on the event window and the weight used (total assets or equity value). No significant value creation was proved for the bidding banks; however, destruction of value was not observed either. The overall results of Cybo-Ottone and Murgia differ substantially from most of the U.S. studies.

Above all, highly positive abnormal returns were observed for bank-to-bank and banks into insurance deals. The investors on average did not reward cross-border deals, unlike the domestic ones. The market participants expected relatively smaller deals to perform better in future than the large deals.

Beitel and Schiereck (2001)

The study of Beitel and Schiereck examined 98 transactions conducted between 1985 and 2000 from the point of view of all groups of shareholders: the targets, the bidders and also the combined entities. Their study is very comprehensive presenting results not only for the entire sample but also for various sub-samples. The value implications of several M&A characteristics are examined such as geographic diversification, product/activity diversification, bank size and time period.

For the entire sample, Beitel and Schiereck's results are consistent with those of Cybo-Ottone and Murgia proving net aggregate creation of value. The authors conclude, *"M&A transaction of European acquiring banks from an economic point of view can be considered on average as being truly successful"* (p. 29). Furthermore, they reject both the manager-utility-maximization hypothesis and the hubris hypothesis for the entire sample of European bank M&A.

However, the significant negative abnormal returns for bidders observed in the large transactions carried out after 1998 suggest there is a shift towards the U.S.

experience. From the perspective of single market efforts, Beitel and Schiereck find alarming results: according to capital market reactions, generally cross-border and especially cross-border bank-to-bank transactions were significantly destroying value for the bidding banks' shareholders. Also interestingly, on average the investors evaluated within-industry deals better than cross-industry transactions. Moreover, the bidding banks shareholders value more acquisitions with manageable size.

Ekkayokkaya, Holmes and Paudyal (2007)

This study examines the impact of the introduction of the euro on returns to bidding banks' shareholders. The sample of over 900 transactions is divided into three periods: the pre-euro era (1990-95), the run-up to the euro era (1996-98) and the post-euro period (1999-2004). The authors found that the announcement returns to acquiring banks declined with the development of EMU. While in the pre-euro era bidders made significant gains on average, in the other two periods no significant value creation was observed. A significant reduction of returns was observed especially for within-industry and within-euro area bids over the period studied. Ekkayokkaya *et al.* conclude that the changes in external environment of European banking market inducing enhanced competition and integration caused increase in premium bids and had negative impact on the gains from M&A activity for the bidding banks.

Fritsch, Gleisner and Holzhäuser (2007)

This study examines the abnormal returns for bidding banks from Western Europe and the U.S. which undertook M&A transactions in the Central and Eastern Europe between 1990 and 2005. The sample of 56 cross-border transactions was observed. The study did not found on average significant announcement effects for the bidding banks and therefore could not confirm that investments in developing countries create value. Fritsch *et al.,* however, tested different drivers for value creation and found out that the less developed the target country was, the higher the abnormal returns for the bidder. Furthermore, owning a minority stake before the transaction and thus having access to the inside information was rewarded by capital markets.

Lensink and Maslennikova (2008)

The most recent study we identified uses different methodology than most of its predecessors. Instead of the standard market model it is based on the Fama-French three-factor model and applies GARCH estimation method. The data comprise 75 transactions announced in the period of 1996-2004. The results suggest that acquirers

realize positive gains on average, as statistically significant positive abnormal returns were observed around the deal rumour/announcement day.

The authors divide further their sample to four sub-samples separating domestic and cross-border, within and cross-industry deals as we defined in this thesis. Positive and significant results were found for both domestic cross-industry and domestic bank-to-bank deals. Lensink and Maslennikova did not find evidence on their hypothesis predicting negative returns to cross-border acquirers. On contrary, they found positive and statistically significant gains for bidding banks in cross-border within-industry deals.

Summary of Conclusions

To summarize the conclusions of the Europe-focused event studies: (1) highly significant value creation was observed for the targets banks; (2) value creation for the bidding banks was mostly found not significantly different from zero; and (3) evidence was presented which confirms positive net impact on the aggregate combined entity. While the U.S. research results from the 1980s indicated only a transfer of value from the shareholders of acquirers to the shareholders of the target banks (although the evidence from 1990's was a bit more favourable), the European studies clearly find true net value creation.

Table 7: Cumulated abnormal returns for recent event studies on European banking M&A

Study	Regional focus	Years studied	N	Event window in days	CAR [a] Bidder	CAR Target	CAR comb. entity [b]
Tourani-Rad *et al.* (1999)	Europe	89-96	17;56	[-40;+40]	n.s.	+5.71%	n.a.
Cybo-Ottone *et al.* (2000)	Europe	88-97	54;72	[-20;0]	n.s.	+17.95%[c] +16.63%	+3.58%[d] +4.49%
Schiereck and Strauss (2000)	USA/Ger	98-99	1	[-20;+20]	n.s.	+30.10%	n.a.
Beitel and Schiereck (2001)	Europe	87-00	98	[-20;+20]	n.s.	+16.00%	+1.29%
Campa and Hernando (2005)	Europe	98-02	66	[-30;+30]	-2.37%	+5.43%	n.a.
Ekkayokkaya *et al.* (2005)	Europe	90-04	963	[-1;+1]	n.s.	n.a.	n.a.
Fritsch *et al.* (2007)	CEE	90-05	56	[-20;+20]	n.s.	n.a.	n.a.
Lensink *et al.* (2008)	Europe	96-04	75	[-20;+20]	+0.2%	n.a.	n.a.

Source: Author's review of respective studies

Notes: a CAR = Cumulated abnormal return; n.s. = not significant; n.a. = not researched in the study
b Combined entity of the target and the bidder
c Results differ for different market index used
d Results differ for different weight used

Looking at the different sub-samples examined, the results are quite mixed and hardly any conclusion can be formulated. We can conclude that domestic deals clearly outperform cross-border deals as far as the announcement returns are concerned. In aggregate, there is no sound evidence that cross-border deals create value for shareholders. While Lensink and Maslennikova (2008) found positive returns to the bidders on cross-border within-industry deals, Beitel and Schiereck (2001) found exactly the opposite. No significant value creation has been observed either for Western banks making acquisitions in the CEE. Neither any clear conclusion can be drawn from the results on product diversification (within or cross-industry deals) value implications. As far as bank size is concerned, we can say that relatively smaller deals seem to be evaluated better by the markets than large deals.

4.2 Assessment of Event Studies

4.2.1 The Principle of Event Studies

The event study methodology allows directly investigating whether an event creates value and gives a hint as to the wealth effect quantification. Event studies are based on observing abnormal returns of stocks of companies engaged in mergers or acquisitions in a certain time period before and after the deal announcement. This approach is believed to quantify the market expectations on shareholders value creation related to the merger. The methodology does not aim at explaining the determinants of value creation.

Event studies have straightforward methodology, which makes presentation of results understandable to readers. The only data needed is the M&A announcement date and daily stock prices of the involved parties around that date. The information obtained by observing abnormal returns show shareholders' overall expectations. It includes the expected magnitude of efficiency gains, market power gains and other value creating effects compared with the announced purchase price and other expected costs related to the merger. The market reaction to the deal announcement therefore directly indicates the net value implications for the target's and the bidder's shareholders separately and enable us to draw conclusions also for the aggregate value effects.

The alternatives to event studies as presented above in "Literature Review" are based on published financial results. Proponents of event studies argue that accounting

data are not reliable and that the market reaction is more likely to provide an accurate answer to the value creation hypothesis. Alternative approaches mostly examine the development of *ex post* financial performance, after the merger or acquisition is completed, compared to the financial results before the transaction. The period studied tend to be much longer than in case of event studies for obvious reasons. First, the financial results are reported on quarterly basis at the most. Second, it may take several years before the whole integration is completed and all the synergies and costs materialize. We argue that it is not possible to identify clearly the effects of a merger from the *ex post* financial performance; other factors may influence the performance during the studied period and we are not able to distinguish between the effects caused by the merger and caused by the other factors.

The event studies do not need to rely on the potentially misleading accounting figures; on the other hand, they are relying on market expectations regarding yet unrealized events. There is an important assumption of at least semi-strong efficiency of capital markets underlying the event study approach[21]. The assumption that market participants are able to correctly evaluate the impact of an M&A deal on the value creation for shareholders is crucial. It may be disputable similarly as the reported figures are accused to be unreliable. It is important to bear in mind that the event studies results represent the *ex ante* market expectations and not the true M&A outcome.

4.2.2 Weak Points When Conducting an Event Study

The Data

A straightforward weakness of the event studies is that it restricts automatically the studied sample to publicly traded banks. In many banking M&A, of course, private companies are involved. Therefore, the event studies results may not necessarily be representative of all bank M&A activity.

The limited data available is another shortcoming. Because of the limited number of European bank M&A transactions, where both involved entities were listed on a stock exchange, the research is often conducted separately for different number of bidders and targets often not engaged in the same transactions. Such results cannot provide any aggregate conclusions.

[21] The semi-strong form of market efficiency hypothesis denotes that markets correctly and immediately react to any relevant public information.

Researchers have to deal with another issue regarding their data sample: whether to include or exclude those acquirers that are engaged in multiple deals over certain period of time. To give an example, Lensink and Maslennikova (2008) filtered out deals where the acquirer undertook another M&A deal during a 9-month period before the studied transaction was announced. This practice aims at reducing the "noise" caused by multiple shocks (events). However, some authors (e.g. Pilloff and Santomero, 1997) argue, that this practice omits relevant data by excluding those acquirers, who are active in M&A and are able to carry out multiple successful acquisitions because they are especially efficient in the integration process. Therefore, such adjustments in the sample may lead to biased results.

Event Day

Market reaction can be observed only to unexpected news. Setting correctly the *day 0* for the analysis is therefore crucial. But it may not be an easy task. The *event day* should represent the first trading day when the information about an M&A deal reaches the market for the first time. Official announcement of a transaction can be forerun by rumours. Therefore all published news regarding a given transaction must be studied carefully in order to identify the accurate date.

Event Window

Even if the day 0 is correctly set, there can be information leakage prior to the deal announcement. Then investors who posses the unique information or significant insider trading can cause that the expectations may already be partially or even fully included in the stock price by the time the information becomes public. Therefore it is important to carefully set the *event window* (the period of time around the announcement for which abnormal returns are analysed) so that it ideally covers any pre-announcement information leakage.

Although so many event studies have been conducted, there is still no prevailing opinion on the ideal length of the event window. The event windows vary greatly from study to study. Usually the studies present results for multiple event periods and it is unclear which windows are preferred. The results appear to be sensitive to the event window chosen. The event windows in the above reviewed studies mostly examine symmetric periods of different lengths ranging from 3 to 81 trading days, e.g. [-1;+1], [-3;+3], [-10;+10], or [-40;+40], or different number of trading days up to the event, e.g. [-1;0], [-5;0], or [-20;0]. It is up to every researcher, which event windows they choose.

As Pilloff and Santomero (1997) point out, the time period shall be long enough to capture the effect of information leakage and to allow the market to fully incorporate the information in the stock price. At the same time, the event window shall be as short as possible not to include too much noise related to *"contaminating events"*, such as earnings announcement (Hanzlík, 2007).

Credibility of Evidence Based on Abnormal Returns

Rhoades (1994) points out that abnormal returns in the short period around the event day may reflect short-run speculative trading rather than long-term investments. If investors seek gains from short-term trading, they care little about the long-term performance of the firm. If the short-term movements in the stock price are influenced largely by short-term speculations, abnormal returns would be of limited use for assessing the performance effects of M&A.

Another issue that must be taken into account is the possibility of *non-synchronous trading*. The problem arises when returns on a security and a market index are measured over different trading interval. For example if we consider the last price in a trading day, but the security is traded in lower frequency than the market index moves, we do not compare the same time points. Scholes and Williams (1977) proposed an alternative procedure for market model parameter estimation in order to get unbiased and consistent parameters. However, when the studied securities are sufficiently liquid, the problem of non-synchronous trading does not need to be considered (Cybo-Ottone and Murgia, 2000). Indeed, Brown and Warner (1985) discussed and tested the Scholes-Williams procedure and they found "no clear-cut benefit" of the alternative method in event studies.

4.3 Own Event Study

4.3.1 Hypotheses

Before examining the value effects of mergers and acquisitions in European banking, we formulate our hypotheses based on the results of previous research.

Wealth-Effect Hypotheses

Hypothesis 1: *European bank mergers and acquisitions announced in the period of 1998-2007 created value for targets' shareholders on average.*

Hypothesis 2: *The shareholders of bidding banks did neither gain nor lose significantly on average.*

Hypothesis 3: *In aggregate, the mergers and acquisitions created value for the combined entities' shareholders.*

We are aware that our data sample is different from the past studies as it includes the recent years and do not include most of the 1990s. However, we expect our full sample results not to differ from prevailing evidence of previous research work as presented above in the section 4.1. Therefore our first three hypotheses reflect prevalent event studies results.

Geographic Diversification Hypothesis

Hypothesis 4: *Domestic European bank mergers and acquisitions announced in the period of 1998-2007 created higher value on average than cross-border transactions.*

In the project of this thesis, we only stated a hypothesis that cross-border and within-country M&A differ significantly when it comes to value creation. In light of reviewed past evidence, we now hypothesize that domestic M&A clearly created value, whereas we expect the wealth effect of cross-border deals to be somewhat smaller. The reason could be that there is higher potential for cost savings in domestic M&A, as the two involved banks operate in the same environment and have more overlapping operations. We expect the elimination of redundancies is an important factor leading to value creation. On contrary, if geographic diversification and related increased stability of the revenue stream plays an important role, cross-border M&A deals might outperform those within a country.

Consideration Structure Hypothesis

Hypothesis 5: *Purely cash-financed European bank mergers and acquisitions announced in the period of 1998-2007 created higher value on average than equity-financed transactions.*

The importance of the distinction between stock and cash-financed transactions is often stressed; e.g. Andrade *et al.* (2001, p.111) pointed out that *"mergers financed with stock, at least partially, have different value effects form mergers that are financed*

without any stock". Andrade *et al.* and also Ayadi and Pujals (2005) noted that from the acquirer's point of view, stock-financed mergers are in fact two simultaneous transactions: an M&A transaction and an equity issue. While M&A may be valued positively by the bidding firm shareholders, new equity issues are on average associated with negative abnormal returns. One possible explanation of this empirical finding was discussed in the chapter 3: If investors believe that managers tend to issue new equity when it is overvalued, they will drive the stock price down after the stock issue announcement. Therefore, the abnormal returns around the merger announcement day mix the reaction to possibly "good news" related to the merger and "bad news" related to its financing. Andrade *et al.,* moreover, find out that target firm shareholders are also better off in case of purely cash-financed mergers. We can argue that the reason is again the same. When a target's shareholders are informed that their company is being acquired and the acquisition is equity-financed, they suspect the bidder's stock is overvalued, and evaluate the event worse than they would in case of cash-financed transaction.

Interestingly, with the exception of Ekkayokkaya *et al.* (2007), none of the above reviewed European bank M&A studies analyzed the difference between pure cash and equity-financed deals. Nevertheless, we believe this distinction allow us to examine more precisely the wealth effects on bidding banks. In light of the results of Andrade's and Ekkayokkaya's studies we expect returns to bidders to be significantly higher when mergers are financed with cash only relatively to mergers financed with stocks. We also examine the wealth effects on the targets and the combined entities.

Size Hypothesis

Hypothesis 6: *Relatively smaller European bank mergers and acquisitions announced in the period of 1998-2007 created higher value on average than large transactions.*

There are two lines of reasoning behind this hypothesis. First, smaller banks are believed to have larger potential for scale and scope economies, while large banks may even experience diseconomies of scale. Therefore, smaller bank deals shall outperform the large deals. Second, large mergers are perceived to be less manageable in terms of post merger integration; the transactions are accompanied with higher risk of unsuccessful integration and more difficulties in synergy exploitation. Similar

hypothesis was proved by Cybo-Ottone and Murgia (2000), Beitel and Schiereck (2001) and Ekkayokkaya *et al.* (2005).

4.3.2 Data Sample

To identify the list of M&A transactions of our interest, we utilized the mergermarket database. We selected deals meeting the following criteria:

- The transactions have been announced in the period between January, 1 1998 and December, 31 2007.
- Both the bidder and the target are classified by mergermarket as European banks, belonging in the product category "Banking" and the geographic category "European Union" (EU-27).
- Both the bidder and the target were listed entities.
- The deals have been completed; we excluded those that lapsed or were withdrawn after announcement.
- We chose only such deals where change of corporate control occurred; therefore we eliminated minority stakes deals.

Applying these criteria we arrived at a final sample of 59 transactions. The number is comparable with the sample size of past studies (Tourani-Rad and Van Beek, 1999; Cybo-Ottone and Murgia, 2000; Fritsch, Gleisner and Holzhäuser, 2007). As Pilloff and Santomero (1997) suggested, we do not exclude any deals because of multiple M&A activity of bidders.

Table 8: Summary overview of identified transactions

		Target Size			Geographic Focus		Consideration Structure		
Year	**Number**	**Small**	**Mid**	**Large**	**Domestic**	**Cross-Border**	**Cash**	**Equity**	**Unknown**
2007	5	2	0	3	4	1	1	4	0
2006	4	1	2	1	2	2	2	2	0
2005	5	1	2	2	3	2	3	2	0
2004	1	1	0	0	1	0	0	0	1
2003	6	3	3	0	3	3	2	2	2
2002	4	2	2	0	4	0	1	1	2
2001	6	3	2	1	3	3	1	2	3
2000	15	3	8	4	11	4	2	11	2
1999	10	0	5	5	7	3	2	6	2
1998	3	1	0	2	2	1	1	2	0
Total	**59**	**17**	**24**	**18**	**40**	**19**	**15**	**32**	**12**

Source: Author

In order to analyze value effects of key transaction characteristics (to test hypotheses 4 to 6), we divided our sample into several sub-samples. Table 8 presents distribution of the identified transactions according to target size, geographic location and consideration structure. In order to obtain three sub-groups of similar size, we defined small deals as those with implied target enterprise value (based on purchase price) under EUR 700m, large deals over EUR 5bn enterprise value and mid-sized deals with the enterprise value between these two limits[22]. We also separately examined ten largest deals later referred to as "mega" deals with target enterprise value exceeding EUR 10bn.

The distinction between domestic and cross-border deals is straightforward. However, it is worth underlining that we did not include any transactions outside the European Union in the sample. Domestic deals clearly outnumber cross-border ones in our sample, which is in line with the geographic distribution of the overall banking M&A activity as discussed in the section 2.2.

Table 9: Geographic distribution of identified transactions

Target Country \ Bidder Country	AU	BE	BU	CZ	DE	FI	FR	GE	GR	HU	IR	IT	NL	NO	PL	PT	ES	SL	SW	UK	Σ
AU	1							1													**2**
BE		2																			**2**
BU									1												**1**
CZ							1														**1**
DE					2														2		**4**
FI						1															**1**
FR							4													1	**5**
GE								2				1	1								**4**
GR							1		1												**2**
HU												1									**1**
IR																				1	**1**
IT												14	1								**15**
NL																					**0**
NO					1														1		**2**
PL												1			2						**3**
PT																2					**2**
ES																1	4			1	**6**
SL												1									**1**
SW																					**0**
UK								1												5	**6**
Σ	**1**	**2**	**0**	**0**	**3**	**1**	**6**	**4**	**2**	**0**	**0**	**18**	**2**	**0**	**2**	**3**	**4**	**0**	**3**	**8**	**59**

Source: Author

Note: AU = Austria, BE = Belgium, BU = Bulgaria, CZ = Czech Republic, DE = Denmark, FI = Finland, FR = France, GE = Germany, GR = Greece, HU = Hungary, IR = Ireland, IT = Italy, NL = Netherlands, NO = Norway, PL = Poland, PT = Portugal, ES = Spain, SL = Slovenia, SW = Sweden, UK = United Kingdom.

[22] Implied enterprise values were obtained from mergermarket. They imply the value of 100% stake in the target based on its purchase price. It is an alternative measure of deal size besides the simple deal value.

Regarding the transaction consideration structure, we separated pure cash deals from those financed, at least partially, with equity. In our sample, equity financed deals are notably prevalent over the pure cash deals.

The geographic distribution of our sample is presented in Table 9. Italy dominates the sample; other most "active" countries were UK, France and Spain. Most of the banks in our sample come from the EU-15 countries; however, 2 bidders and 7 targets are banks headquartered in the CEE region.

Table 10 indicates the average size of banks in our sample. Because of several very large outliers, we present both the arithmetic average and median values. The average implied enterprise value of the targets amounts to EUR 5.3bn; the median target is valued at EUR 1.3bn. The size characteristics of our sample are slightly higher than in the other European studies covering earlier time periods (Beitel and Schiereck, 2001; Cybo-Ottone and Murgia, 2000). In comparison with the US event studies, the average deal size as well as the average book value is in general significantly higher in the European samples.

In our sample, bidders are on average eight times larger than the targets with regards to total assets and seven times larger according to the equity book value. The ratio is notably lower in the samples of Beitel and Schiereck (2001) and Cybo-Ottone and Murgia (2000), where bidders are five and four and half times larger, respectively. The difference between the size characteristics of our sample as compared to the earlier studies is in line with development of deal size in banking M&A over the last two decades and emergence of "megabanks" as described in the section 2.2.

Table 10: Size characteristics of identified transactions (EUR m)

Characteristics	Bidders	Targets	Bidder/Target
Total Assets			
Average	235,119	55,022	165
Median	137,143	13,884	8.1
Total Shareholders' Equity			
Average	12,030	2,160	65
Median	6,711	587	6.9
Implied Enterprise Value			
Average	n.a.	5,284	n.a.
Median	n.a.	1,319	n.a.

Source: Author's calculations based on Bloomberg and mergermarket data

Note: Total assets and equity as of December, 31 of the year prior to announcement day.

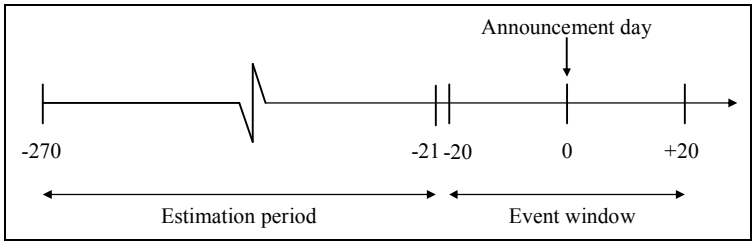
In the end it was not possible to obtain stock prices for certain targets and bidders, because they had been delisted from the stock exchange already before the transaction. Also financial data, needed in order to set weights for combined entities, were missing for some banks. However, we decided to keep all transactions in our sample, as the missing data do not matter for our purpose. Finally, we based our analysis on a sample of 55 targets, 52 bidders and 41 combined entities.

4.3.3 Methodology

Day 0

In order to identify the *days 0* for our analysis, we relied on the announcement days indicated by mergermarket in the first level. As discussed earlier, setting correctly the event day is crucial. It is important to identify the date of effective information release. Therefore, we cross-checked the dates obtained in mergermarket with newspaper articles available through Factiva. In several cases, we adjusted the date 0 to be related already to rumour release instead of subsequent official announcement. Most past studies, which we reviewed, did not give exact definition of the announcement day. We followed Lensink and Maslennikova (2008), who defined the day 0 as the earliest of the rumour or the announcement day.

Figure 14: Estimation period and event window



Source: Beitel and Schiereck (2001), p. 10

Event Windows

In order to observe the market reaction more precisely, we applied ten different event windows: five symmetric windows with the same number of trading days prior to and after the announcement day and 5 asymmetric windows ending at the announcement day. Additionally, we show results for the announcement day itself. Our longest window is [-20,+20] being 41 days long. This is a standard maximum length of event window in banking studies; sometimes, however, longer windows are used such as [-30,+30] in Campa and Hernando (2005) or [-40,+40] in Tourani-Rad and Van Beek

(1999). Examining market reactions over multiple time periods allow us not only to realize a sensitivity analysis, but also to easily compare the results of our analysis with other studies.

Estimation Window

Estimation window is the period over which the *market model* parameters are estimated. It shall not include the announcement day in order to avoid any effect of the announcement on the parameters. Usually, the period ends one day before the maximum event window begins. The length of the estimation window differs from study to study. Following Cybo-Ottone and Murgia (2000) and Lensink and Maslennikova (2008), we define the estimation window as [-270,-21]. These 249 trading days equal approximately to one full year.

Market Model

In order to estimate parameters, which could be subsequently used for abnormal returns calculations, we applied standard *market model* (Brown and Warner, 1984; Cybo-Ottone and Murgia, 2000; Beitel and Schiereck, 2001; Fritsch *et al.*, 2007). The market model has the following form:

$$R_{jt} = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt},$$

where R_{jt} is the observed return on security $j = 1,\ldots,n$ in trading day $t \in$[-270;-21] and R_{Mt} is the observed market return (return on the benchmark) in day t. The returns were calculated as follows:

$$R_t = \ln\left(\frac{P_t}{P_{t-1}}\right),$$

where P_t and P_{t-1} are the last prices in day t and $t-1$, respectively, obtained from Bloomberg. We applied the OLS regression to estimate the market model parameters α_j, β_j for each stock j. As a benchmark for the estimation, we used a general local market index different for each country as suggested by Bloomberg.

The reviewed event studies use either local market indices or different bank sector indices to estimate the market model parameters. Therefore, initially in addition to the local indices, we wanted to use the European bank index FTSE Eurotop 300 Banks and compare the results afterwards. However, findings of Cybo-Ottone and Murgia (2000) suggest the local indices may be more appropriate for the estimation. On

average, they did not found significant differences in using the two benchmarks. However, for bidding banks the bank industry index showed less pronounced market revaluation of an event than the local index. The authors explain their finding by the "contagious effects", which drive banks' stocks up when a merger in the industry is announced. Therefore we decided to keep only the local indices as benchmark.

Calculation of Abnormal Returns

The abnormal return (AR) on a stock $j = 1,\ldots,n$ in day $t \in [-20;+20]$ is calculated as the difference between the observed return R_{jt} and the expected return $\hat{R}_{jt}$:

$$AR_{jt} = R_{jt} - \hat{R}_{jt} = R_{jt} - \left(\hat{\alpha}_j + \hat{\beta}_j R_{Mt}\right),$$

where $\hat{\alpha}_j$ and $\hat{\beta}_j$ are the estimated parameters. Similarly as Beitel and Schiereck (2001), we did not adjust the estimated parameters to reflect non-synchronous trading according to Scholes and Williams (1977). As discussed earlier, it was not proved to bring clear-cut benefit.

After we obtain the daily abnormal returns for both bidders' and targets' shareholders based on the above described method, we can calculate the aggregate abnormal returns for a given transaction. The abnormal return on a hypothetical stock of the combined entity in day t is calculated as a weighted sum of abnormal returns of the bidder and the target involved in a given transaction:

$$AR_{t,transaction} = \frac{AR_{tB} \cdot TA_{tB} + AR_{tT} \cdot TA_{tT}}{TA_{tB} + TA_{tT}},$$

where the weights TA_{tB} and TA_{tT} are the total assets of the bidder and the target, respectively, at the end-of-year before the merger announcement date.[23]

Aggregation of Abnormal Returns

In order to calculate cumulative abnormal returns over the event windows, first we have to average the daily abnormal returns for all n analyzed stocks:

$$\overline{AR}_t = \frac{1}{n}\sum_{j=1}^{n} AR_{jt}.$$

[23] Market capitalisation some time prior to the announcement date may be alternatively used as the weights in this calculation (Cybo-Ottone and Murgia, 2000; Beitel and Schiereck, 2001).

Then we can aggregate the abnormal returns and finally obtain the cumulative abnormal returns (CAR) for any given event window [t_1;t_2] as follows:

$$CAR_{[t1;t2]} = \sum_{[t1;t2]} \overline{AR}_t .$$

Test of Significance

In order to test statistical significance of the abnormal returns, we applied a standard method presented by Brown and Warner (1984) and recently used by e.g. Tourani-Rad and Van Beek (1999) and Lensink and Maslennikova (2008).[24] We test the null hypothesis that the observed cumulative abnormal returns are statistically not different from zero. Only if the null hypothesis is rejected, we can conclude that the event had impact on distribution of security returns and the merger or acquisition created or destroyed value for shareholders. The test statistics for any event window [t_1;t_2] is specified as cumulative abnormal returns standardized by standard deviation estimated over the estimation period [-270;-21]:

$$t = \frac{CAR_{[t_1;t_2]}}{\sqrt{t_2 - t_1 + 1} \cdot \hat{S}\left(\overline{AR}_t\right)},$$

where

$$\hat{S}\left(\overline{AR}_t\right) = \sqrt{\frac{\sum_{t=-270}^{-21}\left(\overline{AR}_t - \overline{\overline{AR}}\right)^2}{249}},$$

$$\overline{\overline{AR}} = \frac{1}{250} \cdot \sum_{t=-270}^{-21} \overline{AR}_t .$$

If we assume the mean abnormal returns are independent, identically distributed, and normal, the test statistics is distributed Student-*t*. Since the degrees of freedom exceed 200, the test statistics is distributed unit normal.

4.3.4 Results

Results for the Entire Sample

In order to test the Wealth-Effect Hypotheses, we first of all analysed the value effects for the entire sample. Our results for the entire sample are presented in Table 11, Figure 15, Figure 16 and Figure 17.

[24] Alternatively, a procedure introduced by Dodd and Warner (1983) is also often used in event studies.

The results for targets are consistent with majority of past studies. Very similarly to Cybo-Ottone and Murgia (2000) and Beitel and Schiereck (2001), we found statistically significant highly positive cumulative abnormal returns for targets' shareholders in any of the studied event windows. Therefore, we can conclude that M&A deals in European banking sector are a clear success for the targets' shareholders; we proved the Hypothesis 1 expecting positive value creation for targets.

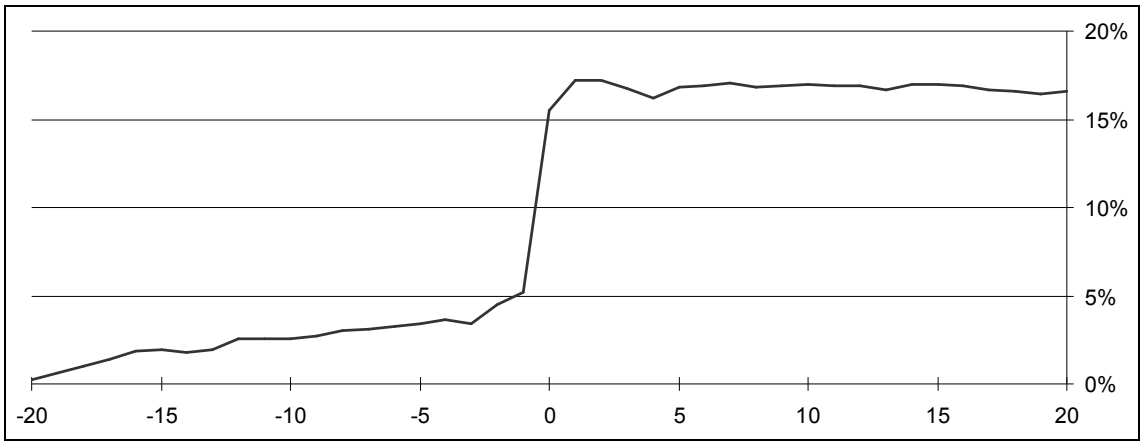
Table 11: CARs of the entire sample

Event Window	Targets			Bidders			Combined Entities		
	CAR		t-value	CAR		t-value	CAR		t-value
Entire Sample	(N = 55)			(N=52)			(N=41)		
[-20;+20]	16.60%	***	8.699	-1.79%	n.s.	-1.141	1.41%	n.s.	0.901
[-10;+10]	14.47%	***	10.593	-0.38%	n.s.	-0.338	1.73%	*	1.539
[-5;+5]	13.59%	***	13.747	-0.13%	n.s.	-0.164	1.82%	**	2.245
[-2;+2]	13.78%	***	20.681	-0.67%	n.s.	-1.227	0.97%	**	1.775
[-1;+1]	12.69%	***	24.583	-0.78%	**	-1.833	0.63%	*	1.492
[0;0]	10.30%	***	34.554	-1.37%	***	-5.585	0.14%	n.s.	0.584
[-20;0]	15.50%	***	11.350	-0.88%	n.s.	-0.788	1.73%	*	1.545
[-10;0]	12.95%	***	13.107	-0.69%	n.s.	-0.857	1.36%	**	1.676
[-5;0]	12.24%	***	18.364	-0.73%	*	-1.341	1.09%	**	1.995
[-2;0]	12.06%	***	23.365	-1.23%	***	-2.899	0.38%	n.s.	0.908
[-1;0]	10.97%	***	26.019	-1.14%	***	-3.302	0.45%	*	1.300

Source: Author

Note: * = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level, n.s. = not significant.

Figure 15: Development of CARs of the entire sample: targets



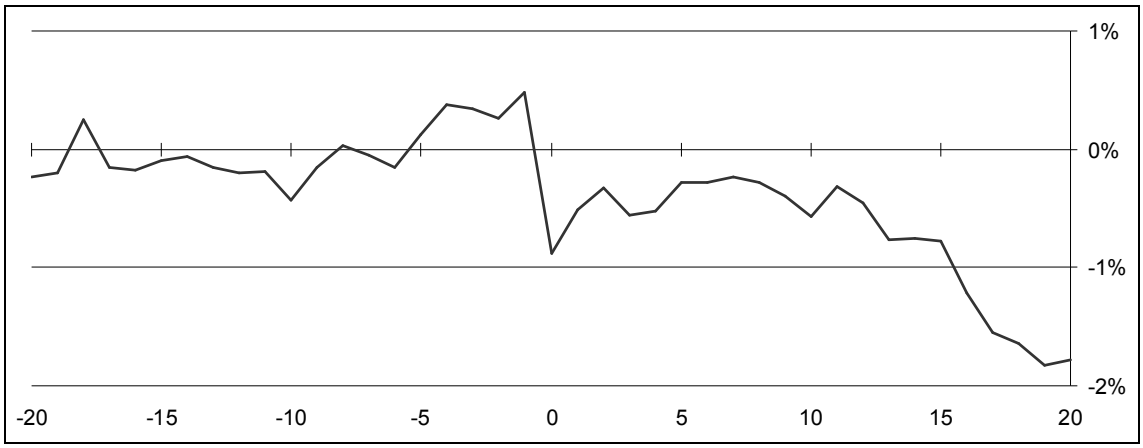
Source: Author

The targets' shareholders gain 10.3% CAR during the single day of the announcement and 16.6% CAR over the longest 41-day window. Comparing the results for symmetric versus non-symmetric event windows, it is clearly visible that the market

reaction comes mostly at the event day and in the preceding days. It suggests the transactions are anticipated before the announcement. No more significant positive abnormal returns are observed in the twenty days following the announcement date. More to the contrary, slightly downward trend can be observed.

For bidding banks, the reviewed studies found both positive and negative market evaluation, but the results were mostly not significantly different from zero. Contrary to Cybo-Ottone and Murgia (2000) and Lensink and Maslennikova (2008), who found positive abnormal returns statistically significant in certain time intervals, our results suggest negative market evaluation of a merger announcement. Our findings are consistent with many U.S. studies, but not many European-focused studies (e.g. Beitel and Scheireck (2001) found significant value destruction only for deals since 1998). Negative cumulative abnormal returns were observed in all examined event windows. While the t-test confirmed statistical significance of negative returns in short windows just around the announcement date, no significant value destruction was proved in longer intervals. During the announcement day, bidding banks' stocks lost on average 1.37% of their value. We can conclude that announcements of M&A transactions are on average evaluated as slightly value destroying events from the bidding banks' point of view. Based on the literature review, our Hypothesis 2 expected no significant positive or negative returns would be observed for bidders. Our results reject the Hypothesis 2, although we found significant negative CARs only for a few time intervals.

Figure 16: Development of CARs of the entire sample: bidders



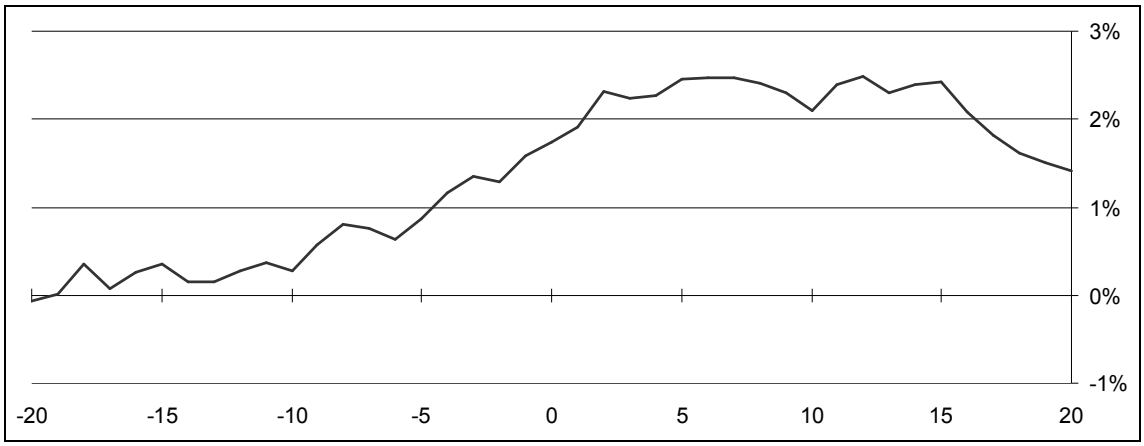
Source: Author

Because of value destruction observed from the bidders' perspective, we cannot deny presence of either management-utility-maximization, "eat-or-be-eaten" or hubris motive in bank M&A deals. In light of our results, bank managers seem to have the

power to carry out transactions not welcomed by shareholders; therefore, we can argue shareholder's control is not sufficiently powerful and effective in European banks.

Possible reasoning behind often observed non-significant abnormal returns for bidding banks was pointed out by Tourani-Rad and Van Beek (1999). Non-significant market reaction can be explained by the large differences in size between bidders and their targets. The reaction of the bidders' shareholders is often not significant, because they do not find the relatively small deals sufficiently important. Moreover, the authors suggested the existing competitive environment in European bank M&A prevent the bidders to exercise significant gains from mergers and acquisitions. The biddings banks seem to overpay under the pressure of competitive bids (both potential and real).

Figure 17: Development of CARs of the entire sample: combined entities



Source: Author

Our results for the combined entities show significant slightly positive returns for most of the event windows. However, CARs are not significant e.g. for the event day [0;0] and the longest window [-20;+20]; for other intervals the significance is only at the 10% or 5% level. The aggregate CARs were calculated as an average of the targets' and the bidders' CARs weighted by their total assets. When we described our data sample earlier in this chapter, we showed that the targets' net book asset value is on average as much as eight times lower than the bidders'. It explains the relatively low aggregate abnormal returns as compared to the substantial value creation observed for the targets' shareholders. Our findings are consistent with Cybo-Ottone and Murgia (2000) and Beitel and Schiereck (2001), the only papers which dealt with wealth effects for the combined entities in European bank M&A. However, their results are mostly significant even at the 1% level. Our conclusion is that the European bank M&A was value creating on a net basis between 1998 and 2007. Thus we proved the Hypothesis 3

expecting positive net value creation. Our findings support the view of bank M&A net value creation on contrary to pure value transfer from targets' to acquirers' shareholders as argued in many past U.S. studies.

Results with Respect to Geographic Diversification

Diversification is often stated as one of the motives in banking M&A. Reducing risk and smoothing the volatility of earnings are the desired outcomes. Cross-border banking M&A are motivated by expectations of risk reduction and future growth, while domestic transactions are undertaken in order to increase market share and exploit potentials for economies of scale. In order to find out, how diversification across national borders is evaluated by banks' shareholders as compared with transactions within the borders, we analyzed domestic and cross-border deals separately. The results are shown in Table 12, Figure 18, Figure 19 and Figure 20.

Table 12: CARs and geographic diversification

Event Window	Targets			Bidders			Combined Entities		
	CAR		t-value	CAR		t-value	CAR		t-value
Domestic		(N=38)			(N=34)			(N=27)	
[-20;+20]	15.42%	***	6.405	-1.51%	n.s.	-0.768	2.80%	*	1.445
[-10;+10]	13.48%	***	7.821	0.18%	n.s.	0.126	2.76%	**	1.991
[-5;+5]	12.17%	***	9.755	0.03%	n.s.	0.031	2.36%	***	2.354
[-2;+2]	12.16%	***	14.460	-0.68%	n.s.	-0.995	0.91%	*	1.350
[-1;+1]	11.08%	***	17.017	-0.50%	n.s.	-0.939	0.73%	*	1.397
[0;0]	8.25%	***	21.929	-1.60%	***	-5.205	-0.36%	n.s.	-1.195
[-20;0]	13.93%	***	8.082	-0.11%	n.s.	-0.077	2.93%	**	2.109
[-10;0]	11.16%	***	8.951	-0.03%	n.s.	-0.029	2.09%	**	2.082
[-5;0]	10.35%	***	12.306	-0.64%	n.s.	-0.926	1.37%	**	2.023
[-2;0]	10.22%	***	15.686	-1.38%	***	-2.592	0.14%	n.s.	0.259
[-1;0]	9.19%	***	17.274	-1.17%	***	-2.700	0.26%	n.s.	0.608
Cross-Border		(N=17)			(N=18)			(N=14)	
[-20;+20]	19.23%	***	7.361	-2.30%	n.s.	-0.934	-1.27%	n.s.	-0.531
[-10;+10]	16.68%	***	8.920	-1.43%	n.s.	-0.811	-0.28%	n.s.	-0.162
[-5;+5]	16.77%	***	12.388	-0.44%	n.s.	-0.347	0.78%	n.s.	0.628
[-2;+2]	17.41%	***	19.081	-0.65%	n.s.	-0.750	1.08%	*	1.296
[-1;+1]	16.28%	***	23.035	-1.30%	**	-1.943	0.44%	n.s.	0.680
[0;0]	14.88%	***	36.477	-0.92%	***	-2.389	1.12%	***	2.990
[-20;0]	19.02%	***	10.171	-2.34%	*	-1.327	-0.57%	n.s.	-0.334
[-10;0]	16.96%	***	12.532	-1.95%	*	-1.527	-0.05%	n.s.	-0.038
[-5;0]	16.46%	***	18.043	-0.91%	n.s.	-1.061	0.56%	n.s.	0.665
[-2;0]	16.18%	***	22.900	-0.94%	*	-1.406	0.86%	*	1.337
[-1;0]	14.95%	***	25.900	-1.08%	**	-1.982	0.82%	*	1.544

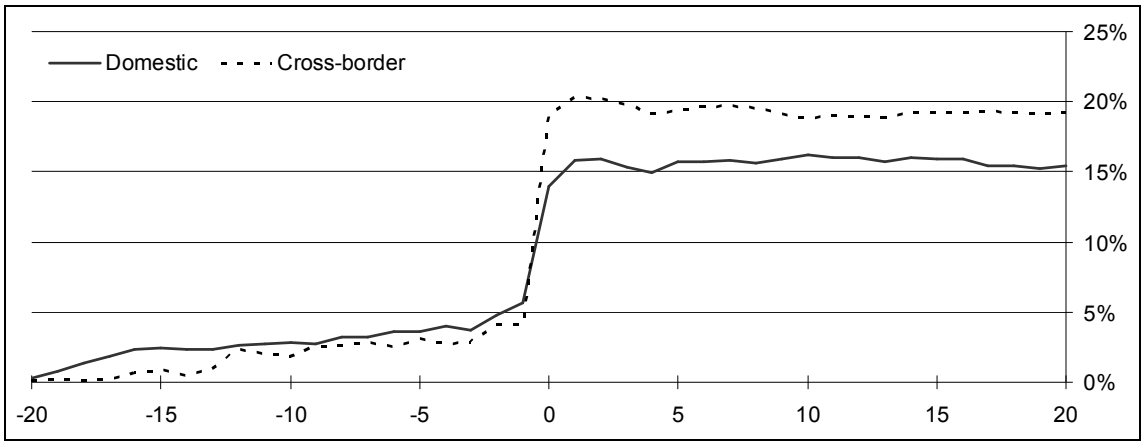
Event Window	Targets			Bidders			Combined Entities		
	CAR		t-value	CAR		t-value	CAR		t-value
Difference									
[-20;+20]	-3.81%	n.s.	-1.120	0.79%	n.s.	0.255	4.07%	*	1.369
[-10;+10]	-3.20%	*	-1.315	1.61%	n.s.	0.723	3.04%	*	1.428
[-5;+5]	-4.60%	***	-2.609	0.48%	n.s.	0.295	1.59%	n.s.	1.030
[-2;+2]	-5.25%	***	-4.419	-0.04%	n.s.	-0.035	-0.17%	n.s.	-0.162
[-1;+1]	-5.20%	***	-5.645	0.80%	n.s.	0.946	0.29%	n.s.	0.364
[0;0]	-6.64%	***	-12.489	-0.68%	*	-1.399	-1.48%	***	-3.183
[-20;0]	-5.09%	**	-2.090	2.24%	n.s.	1.004	3.50%	*	1.644
[-10;0]	-5.80%	***	-3.289	1.92%	n.s.	1.192	2.14%	*	1.388
[-5;0]	-6.12%	***	-5.146	0.28%	n.s.	0.255	0.81%	n.s.	0.784
[-2;0]	-5.97%	***	-6.483	-0.44%	n.s.	-0.525	-0.73%	n.s.	-0.906
[-1;0]	-5.76%	***	-7.662	-0.09%	n.s.	-0.137	-0.55%	n.s.	-0.845

Source: Author

Note: * = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level, n.s. = not significant.

In order to analyze, whether there are significant differences between domestic and cross-border deals, we conducted mean-difference tests. For each interval we examined significance of CARs difference (in Table 12).

Figure 18: Development of CARs of domestic vs. cross-border transactions: targets

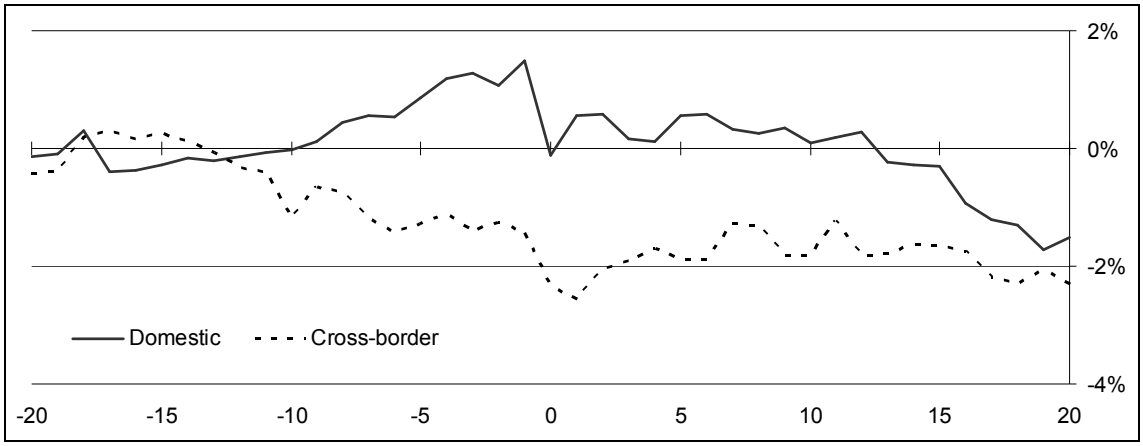


Source: Author

From the point of view of the targets' shareholders, a mean cross-border deal in our sample created significantly higher value over the event window than domestic deals. Figure 18 illustrates that the market reaction differed especially at the day 0.

For the bidding banks, there are mostly insignificant negative abnormal returns observed around the announcement of domestic deals, very similarly to the entire sample results. The difference between the two sub-samples is not significant from the bidding banks point of view.

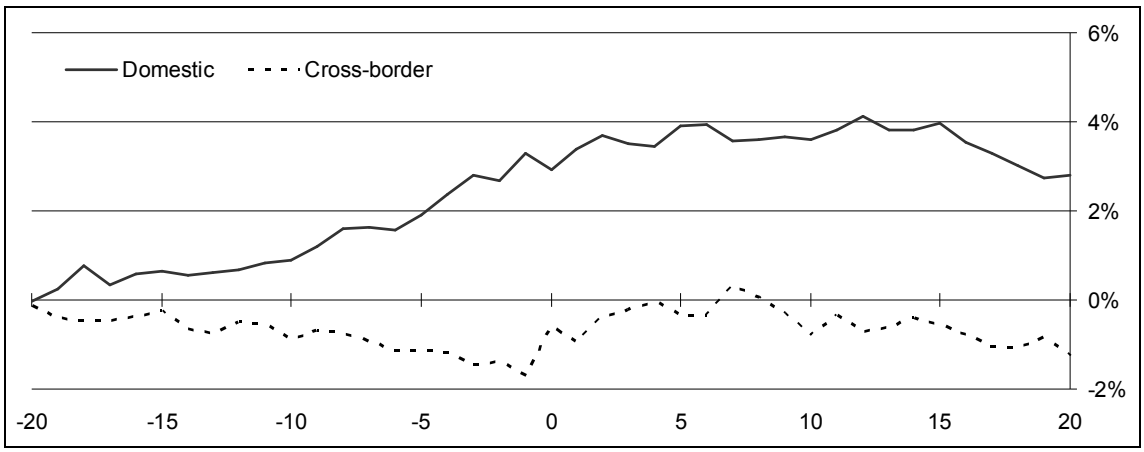
Figure 19: Development of CARs of domestic vs. cross-border transactions: bidders



Source: Author

The difference between the effects of domestic and cross-border transaction announcement is not confirmed either by looking at the aggregate effect on targets' and bidders' stock prices. While we observed significant positive CARs for combined entities for domestic deals in most of the intervals, the CARs of cross-border deals are mostly insignificant and even negative in some intervals. Our sub-sample of domestic transactions seems to outperform the cross-border one in terms of market valuation of hypothetical combined entities only in longer intervals. Contrary, cross-border sub-sample significantly outperforms domestic deals at the announcement day [0;0]. In other intervals, the difference is not significant. As the results are mixed, they can neither reject nor provide clear support for the Hypothesis 4 stating that domestic transactions created higher value on average than cross-border deals.

Figure 20: Development of CARs of domestic vs. cross-border transactions: combined entities



Source: Author

Results with Respect to Consideration Structure

Table 13: CARs and consideration structure[25]

Event Window	Targets			Bidders		
	CAR		t-value	CAR		t-value
Cash		(N=15)			(N=10)	
[-20;+20]	18.55%	***	5.951	-0.36%	n.s.	-0.120
[-10;+10]	13.59%	***	6.091	0.26%	n.s.	0.122
[-5;+5]	12.51%	***	7.751	-1.21%	n.s.	-0.776
[-2;+2]	12.17%	***	11.177	-0.61%	n.s.	-0.579
[-1;+1]	10.59%	***	12.560	-0.63%	n.s.	-0.777
[0;0]	10.10%	***	20.744	-0.33%	n.s.	-0.712
[-20;0]	19.76%	***	8.858	1.82%	n.s.	0.844
[-10;0]	14.92%	***	9.240	1.26%	n.s.	0.806
[-5;0]	13.59%	***	12.483	-0.65%	n.s.	-0.623
[-2;0]	12.67%	***	15.027	-0.23%	n.s.	-0.278
[-1;0]	10.52%	***	15.275	-0.24%	n.s.	-0.362
Equity		(N=31)			(N=31)	
[-20;+20]	15.01%	***	7.209	-2.42%	n.s.	-1.266
[-10;+10]	13.45%	***	9.031	-0.15%	n.s.	-0.109
[-5;+5]	12.09%	***	11.209	-0.47%	n.s.	-0.474
[-2;+2]	11.73%	***	16.133	-0.95%	*	-1.431
[-1;+1]	10.91%	***	19.368	-0.90%	**	-1.745
[0;0]	8.96%	***	27.553	-1.79%	***	-6.014
[-20;0]	14.18%	***	9.518	-1.61%	n.s.	-1.174
[-10;0]	12.14%	***	11.254	-1.06%	n.s.	-1.074
[-5;0]	11.09%	***	15.253	-1.27%	**	-1.909
[-2;0]	10.15%	***	18.023	-1.94%	***	-3.747
[-1;0]	9.66%	***	21.002	-1.70%	***	-4.029
Difference						
[-20;+20]	3.54%	n.s.	0.970	2.06%	n.s.	0.600
[-10;+10]	0.13%	n.s.	0.051	0.41%	n.s.	0.168
[-5;+5]	0.43%	n.s.	0.227	-0.74%	n.s.	-0.416
[-2;+2]	0.44%	n.s.	0.344	0.35%	n.s.	0.290
[-1;+1]	-0.32%	n.s.	-0.320	0.27%	n.s.	0.291
[0;0]	1.14%	**	2.000	1.46%	***	2.728
[-20;0]	5.58%	**	2.135	3.42%	*	1.395
[-10;0]	2.78%	*	1.471	2.32%	*	1.306
[-5;0]	2.50%	**	1.959	0.62%	n.s.	0.518
[-2;0]	2.52%	***	2.552	1.71%	**	1.845
[-1;0]	0.86%	n.s.	1.066	1.46%	**	1.929

Source: Author

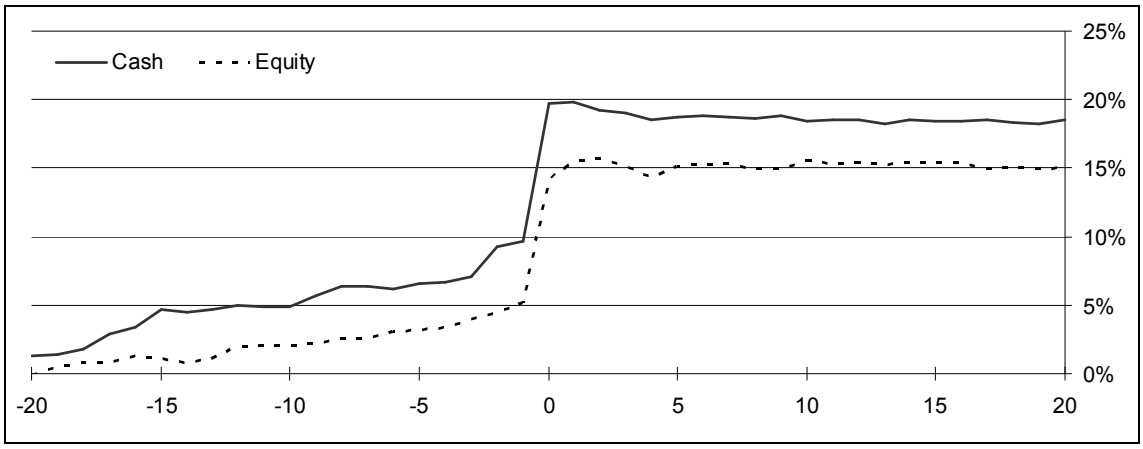
Note: * = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level, n.s. = not significant.

[25] For the sub-samples divided according to consideration structure and also size, we do not present results for the combined entities. It is because some of those sub-samples would be already too much restricted in terms of number of observations and therefore the results would not be credible.

In order to test whether structure of transaction consideration plays a role in respect of stock market reaction to the announcement, we separated pure cash deals from those financed, at least partially, with equity. We expect the abnormal returns around the announcement of stock-financed deals (especially to bidders' shareholders) to be lower compared to cash-financed deals. Table 13 and Figures 21 and 22 show the results of our analysis.

For the targets, pure cash deals did on average significantly better among the studied transactions. The difference is significant in the pre-announcement period including the announcement day. After the event day, the two sub-samples behaved similarly.

Figure 21: Development of CARs of cash vs. equity-financed transactions: targets

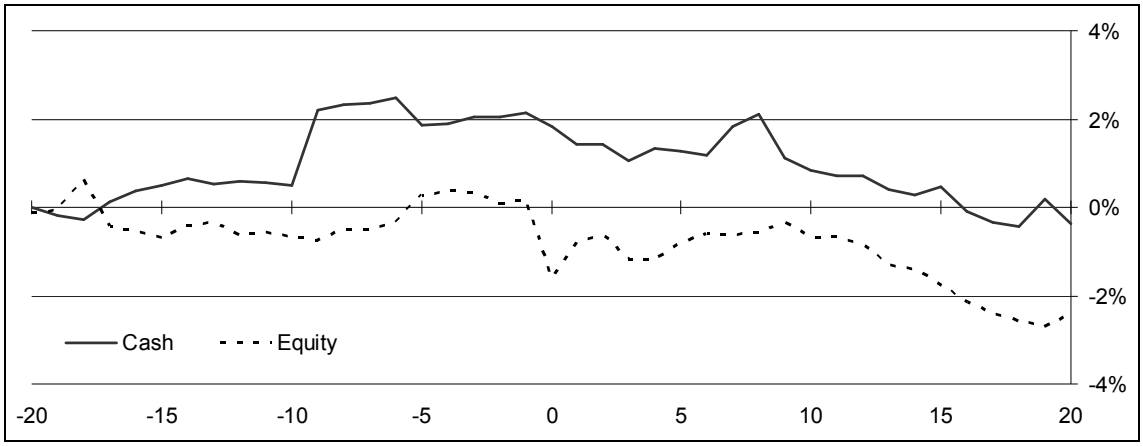


Source: Author

From the bidders' perspective, equity sub-sample results resemble pretty much the full sample results. We found negative abnormal results significant only for shorter windows around the event day. The magnitude of negative CARs is slightly larger in all intervals than for the entire sample. On contrary, pure cash deals results indicate even positive returns is some intervals, although none of them are statistically significant. Testing significance of the difference between the two sub-samples, we can say that there is certainly significant difference in the market reaction to cash versus stock-financed deal at the announcement day and less significant difference in most of the preceding intervals.

Our results confirm that announcing a stock-financed deal mixes different information, which may induce totally opposite reaction of the bidders' shareholders. We may conclude that the observed negative evaluation of a new equity issue is likely to worsen the results for the entire sample.

Figure 22: Development of CARs of cash vs. equity-financed transactions: bidders



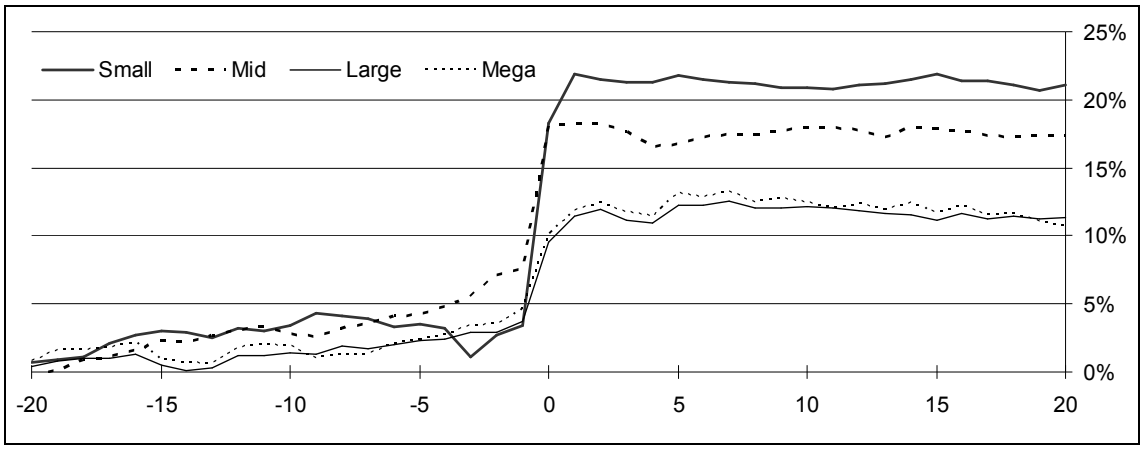
Source: Author

Based on the presented results, we can confirm our Hypothesis 5 stating that purely cash-financed deals created higher value than those financed with equity in the studied transactions on average. However, it is important to note, that nearly all purely cash-financed deals in our sample were small or mid-sized transactions. Therefore, it is not possible to clearly distinguish between the size effect and consideration structure effect.

Results with Respect to Size

In order to test the size effects, we analysed sub-samples of small, mid-sized and large deals as defined above. From the large deals sub-sample we picked the "mega" deals and analyse them separately. Furthermore, we tested significance of the difference between various sub-samples. Resulting CARs are shown in Table 14, Figure 23 and Figure 24.

Figure 23: Development of CARs of small vs. large transactions: targets



Source: Author

Table 14: CARs and size

Event Window	Targets			Bidders		
	CAR		t-value	CAR		t-value
Small		(N=16)			(N=15)	
[-20;+20]	21.13%	***	4.906	0.91%	n.s.	0.305
[-10;+10]	17.90%	***	5.807	0.58%	n.s.	0.274
[-5;+5]	18.42%	***	8.257	1.87%	n.s.	1.215
[-2;+2]	20.41%	***	13.573	-0.68%	n.s.	-0.657
[-1;+1]	19.19%	***	16.474	-0.20%	n.s.	-0.244
[0;0]	14.83%	***	22.043	-0.77%	**	-1.661
[-20;0]	18.25%	***	5.920	0.16%	n.s.	0.075
[-10;0]	15.24%	***	6.832	0.05%	n.s.	0.031
[-5;0]	14.89%	***	9.903	0.40%	n.s.	0.384
[-2;0]	17.19%	***	14.752	-1.09%	*	-1.353
[-1;0]	15.55%	***	16.345	-0.41%	n.s.	-0.625
Mid		(N=22)			(N=19)	
[-20;+20]	17.37%	***	6.769	-1.37%	n.s.	-0.530
[-10;+10]	14.68%	***	7.993	-0.58%	n.s.	-0.314
[-5;+5]	12.64%	***	9.514	-2.09%	*	-1.555
[-2;+2]	12.68%	***	14.153	-0.78%	n.s.	-0.866
[-1;+1]	11.13%	***	16.038	-1.77%	***	-2.519
[0;0]	10.47%	***	26.130	-1.67%	***	-4.139
[-20;0]	18.09%	***	9.851	-0.85%	n.s.	-0.456
[-10;0]	14.82%	***	11.151	-1.12%	n.s.	-0.837
[-5;0]	13.93%	***	15.542	-2.14%	***	-2.366
[-2;0]	12.54%	***	18.069	-1.50%	**	-2.143
[-1;0]	10.95%	***	19.330	-1.81%	***	-3.164
Large		(N=17)			(N=18)	
[-20;+20]	11.34%	***	4.103	-4.47%	**	-2.002
[-10;+10]	10.96%	***	5.542	-0.97%	n.s.	-0.607
[-5;+5]	10.26%	***	7.167	0.26%	n.s.	0.223
[-2;+2]	8.96%	***	9.287	-0.54%	n.s.	-0.696
[-1;+1]	8.59%	***	11.484	-0.21%	n.s.	-0.356
[0;0]	5.81%	***	13.465	-1.53%	***	-4.401
[-20;0]	9.57%	***	4.835	-1.79%	n.s.	-1.121
[-10;0]	8.39%	***	5.861	-0.86%	n.s.	-0.745
[-5;0]	7.55%	***	7.825	-0.19%	n.s.	-0.244
[-2;0]	6.62%	***	8.850	-1.05%	**	-1.746
[-1;0]	6.67%	***	10.925	-1.04%	**	-2.120
Mega		(N=10)			(N=10)	
[-20;+20]	10.75%	***	3.134	-6.78%	**	-2.041
[-10;+10]	10.41%	***	4.238	-1.74%	n.s.	-0.733
[-5;+5]	11.06%	***	6.221	1.42%	n.s.	0.824
[-2;+2]	8.99%	***	7.501	0.29%	n.s.	0.248
[-1;+1]	8.36%	***	9.011	1.36%	*	1.514
[0;0]	5.37%	***	10.019	-0.34%	n.s.	-0.654
[-20;0]	9.99%	***	4.070	-1.84%	n.s.	-0.773
[-10;0]	7.95%	***	4.474	-0.27%	n.s.	-0.155
[-5;0]	7.88%	***	6.573	1.00%	n.s.	0.859
[-2;0]	6.53%	***	7.036	-0.34%	n.s.	-0.377
[-1;0]	6.48%	***	8.556	0.16%	n.s.	0.217

Event Window	Targets			Bidders		
	CAR		t-value	CAR		t-value
Difference Small vs. Large						
[-20;+20]	9.79%	**	1.913	5.38%	*	1.549
[-10;+10]	6.93%	**	1.894	1.55%	n.s.	0.626
[-5;+5]	8.16%	***	3.078	1.62%	n.s.	0.899
[-2;+2]	11.45%	***	6.407	-0.14%	n.s.	-0.116
[-1;+1]	10.60%	***	7.662	0.02%	n.s.	0.020
[0;0]	9.01%	***	11.279	0.76%	*	1.405
[-20;0]	8.68%	***	2.371	1.95%	n.s.	0.785
[-10;0]	6.85%	***	2.584	0.91%	n.s.	0.506
[-5;0]	7.34%	***	4.108	0.59%	n.s.	0.486
[-2;0]	10.57%	***	7.636	-0.04%	n.s.	-0.038
[-1;0]	8.88%	***	7.856	0.63%	n.s.	0.827
Difference Small vs. Mid						
[-20;+20]	3.76%	n.s.	0.787	2.28%	n.s.	0.594
[-10;+10]	3.22%	n.s.	0.942	1.17%	n.s.	0.425
[-5;+5]	5.78%	***	2.334	3.96%	**	1.993
[-2;+2]	7.73%	***	4.635	0.10%	n.s.	0.075
[-1;+1]	8.06%	***	6.238	1.57%	*	1.512
[0;0]	4.36%	***	5.839	0.90%	*	1.506
[-20;0]	0.16%	n.s.	0.047	1.00%	n.s.	0.366
[-10;0]	0.42%	n.s.	0.170	1.17%	n.s.	0.589
[-5;0]	0.97%	n.s.	0.580	2.54%	**	1.896
[-2;0]	4.65%	***	3.595	0.41%	n.s.	0.398
[-1;0]	4.59%	***	4.354	1.40%	**	1.651

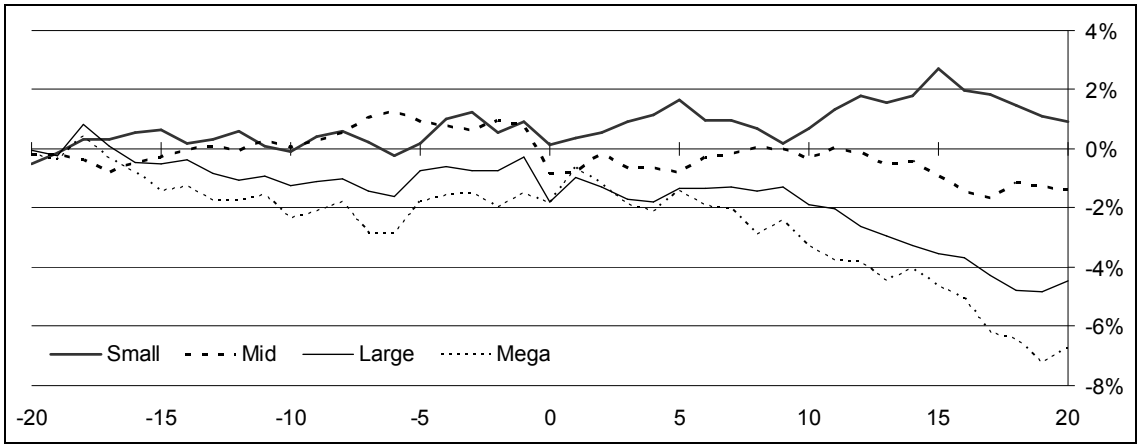
Source: Author

Note: * = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level, n.s. = not significant.

Based on the results for the targets' shareholders, we can clearly conclude that small deals are evaluated better than large deals. We also found significant positive difference between mid-sized and large deals, which is not presented in Table 14, but it is also visible from Figure 23. There is nearly no difference observed between large and mega transactions.

From the bidders' point of view, the differences are less significant. Small deals appear to outperform mid-sized and large deals in most of the intervals on average; however, the differences are significant only in some intervals. The abnormal returns measured over the whole [-20;+20] event window suggest that transaction size does matter also for bidders: the smaller the deals, the better they are evaluated by the bidders' shareholders.

Figure 24: Development of CARs of small vs. large transactions: bidders



Source: Author

We can conclude that stock market participants expect better future performance of relatively smaller bank deals compared to large or mega deals. Our results therefore confirmed Hypothesis 6 suggesting that smaller transactions imply larger synergy potential and better manageability of their exploitation. Our results are in line with past empirical evidence.

4.3.5 Acquisition Premiums and Multiples Analysis

Acquisition Premiums

In this section, we would like to supplement briefly our event study with an analysis of acquisition premiums paid in European bank M&A. We believe that the magnitude of acquisition premiums can also serve as an indicator of expected value creation, though the premiums reflect management's expectation rather than that of shareholders. As our previous analysis suggests, managerial self-interest, "eat-or-be-eaten" or hubris motive might play a certain role in M&A decision making and it might cause that the bidding banks overpay. However, as we discussed, the observed negative abnormal returns for acquirers may also be explained by the shareholders' reaction to a new equity issue rather than discontent with the transaction and its price. Therefore, we believe it is useful to look at the premiums even if our purpose is to analyse the value creation for shareholders.

For this analysis, we use the same transaction sample as described above. To analyse the magnitude of a premium, we compare the offered price per share (as available in mergermarket) with the target's share price one day before the deal announcement (t – 1) and also one day before the event window (t – 21). The resulting

average premiums paid are presented in Table 15. In our sample, bidding banks in the period between 1998 and 2007 offered on average (median) 18.9% premium over the price 21 days before and 13.1% premium over the price 1 day before the announcement. We may compare the premiums with above presented abnormal returns to targets' shareholders over intervals [-20;0] and [0;0], which are equal to 15.5% and 10.3%, respectively. This comparison suggests that most of the acquisition premium is reflected in the share price during the studied event period.

Table 15: Transaction multiples and premiums paid – Event study sample

	Implied P/BV	Implied P/E	ROE	Premium paid
Transaction multiples				
Average	2.72x	26.46x	8.68%	
Median	**2.46x**	**19.81x**	**11.68%**	
Trading multiples (t – 21)*				**Premium paid (t – 21)**
Average	2.20x	21.43x		23.4%
Median	**2.07x**	**16.66x**		**18.9%**
Trading multiples (t – 1)*				**Premium paid (t – 1)**
Average	2.32x	22.61x		17.0%
Median	**2.18x**	**17.51x**		**13.1%**

Source: Author's calculations, based on data from mergermarket and Bloomberg

Note: * Calculated from transaction multiples by subtracting the premium.

Transaction and Trading Multiples

In order to roughly estimate value of a firm, *comparative valuation* based on different multiples is often used in practice. In the banking sector, specific ratios such as *price to book value* (P/BV) and *price to earnings* (P/E) are usually compared.[26] We study two different sets of multiples: *transaction multiples* (also called exit multiples) and *trading multiples*.

Transaction multiples are implied ratios derived from the purchase price in M&A transactions. We present the average implied P/BV and P/E ratios of our sample transactions in Table 15. The results imply that mean acquiring bank in the studied period of 1998-2007 paid purchase price equal to 2.46times the target's book value of shareholder's equity and 19.81times its net income.

[26] Price to book value (P/BV) is calculated as market capitalization divided by book value of shareholder's equity, price to earnings (P/E) ratio is calculated as price per share divided by earnings per share (EPS) (Damodaran, 2002).

Trading multiples are calculated from current market capitalization (or price per share), therefore they indicate stock market valuation of companies. When we compare trading and transaction multiples observed in a certain market sector, it enables us to judge on the premiums paid in M&A transactions. In Table 15, we show the trading multiples for which our sample targets were traded on average one day prior to event window and one day prior to the announcement day.

Table 16: Trading multiples – European banks peer groups*

	Western Europe			Eastern Europe		
	P/BV	**P/E**	**ROE**	**P/BV**	**P/E**	**ROE**
Trading multiples, June 2007						
Average	2.14x	14.81x	15.67%	4.05x	24.24x	18.18%
Median	**2.07x**	**13.95x**	**15.73%**	**3.33x**	**21.55x**	**17.86%**
Trading multiples, March 2008						
Average	1.36x	9.48x	15.69%	2.51x	12.82x	18.64%
Median	**1.29x**	**8.67x**	**14.96%**	**2.37x**	**12.23x**	**19.31%**

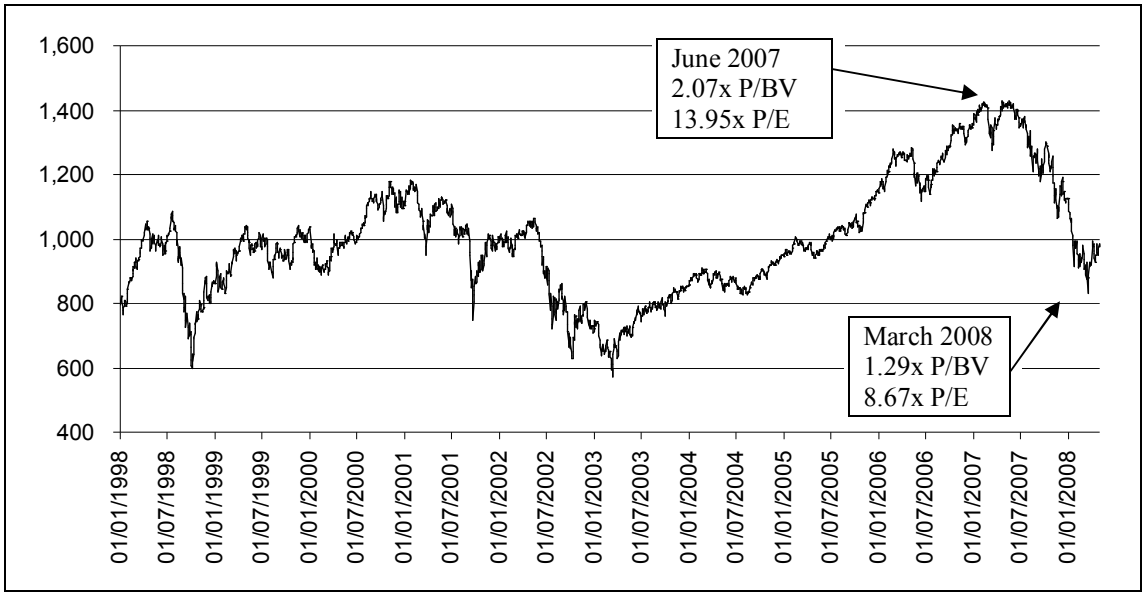
Source: Author's calculations, based on Bloomberg data

Note: * Details on the peer groups are provided in Appendix 2.

For comparison, we also calculated current trading multiples of two peer groups of European banks: 96 Western European banks and 56 banks from the CEE and other less developed European countries. Table 16 presents the average results, detailed results are attached in Appendix 2. Because of the sharp fall in stock prices since mid-2007 (as discussed above in the section 2.3.2 and also shown in Figure 25), we also calculated the trading multiples as of June 2007.

Clearly, European banks were traded for much higher multiples before the financial crisis than afterwards (see Figure 25). Comparing our event study sample with the peer groups, we need to recall that nearly all transactions in the sample (except for one) were announced before the market correction connected to the sub-prime crisis. Furthermore, most of the targets in our sample were western banks, but there were also several banks from the CEE region. Taking this into account, we may say that the trading multiples of our sample banks are comparable to the peer group multiples before the crisis.

Figure 25: Western European bank index and trading multiples before and after the crisis



Source: Thomson; author's calculations based on Bloomberg data

Note: The chart shows development of FTSE Eurotop 300 Banks E Index between 01/01/1998 and 30/04/2008. The index' constituents are 47 top European banks, whereas the multiples are calculated for a peer group of 96 Western European banks as described in Appendix 2.

The effect of current low multiples on the future M&A activity is ambiguous. On one hand, the M&A targets are now cheaper on average, and moreover, some weakened banks are more likely to become acquisition targets. As we share the optimistic view on future banking sector growth with Dietz, Reibestein and Walter (2008, as discussed in the section 2.3.2), we would predict that a new wave of European banking consolidation and M&A activity will come after the recent break. The low market multiples shall help bidding banks to negotiate lower purchase prices and therefore create more value for their shareholders. On the other hand, also the bidding banks' equity is valued less nowadays, and it might be even undervalued. The popular way of M&A financing – with new equity – is thus not favourable under these conditions. Therefore, it is difficult to predict the future banking M&A development.

4.3.6 Summary of Results

Before concluding our thesis, the following table presents recapitulation of main results of our analysis. It provides symbolic overview of observed average cumulative abnormal returns, repeats our hypotheses and summarizes results of their testing. Except from Geographical Diversification Hypothesis, we were able to confirm or reject all of our hypotheses.

Table 17: Results Overview

Sample Characteristics			
Sample Size	59 transactions		
Period	1998-2007		
Premium Paid (t – 21)	18.9%		
Abnormal Returns	**Targets**	**Bidders**	**Combined Entities**
Entire Sample	+ + +	–	+ +
Domestic vs. Cross-Border	– – –	+ / –	+ / –
Cash vs. Equity	+ +	+	n.a.
Small vs. Large	+ + +	+	n.a.

Hypotheses:	**Results:**	**Results in compliance with:**
Wealth-Effect Hypotheses		
Hypothesis 1: *European bank mergers and acquisitions announced in the period of 1998-2007 created value for targets' shareholders on average.*	**Confirmed**	Tourani-Rad *et al.* (1999) Cybo-Ottone *et al.* (2000) Beitel, Schiereck (2001) Campa, Hernando (2005)
Hypothesis 2: *The shareholders of bidding banks did neither gain nor lose significantly on average.*	**Rejected**	Campa, Hernando (2005)
Hypothesis 3: *In aggregate, the mergers and acquisitions created value for the combined entities' shareholders.*	**Confirmed**	Cybo-Ottone *et al.* (2000) Beitel, Schiereck (2001)
Geographic Diversification Hypothesis		
Hypothesis 4: *Domestic European bank mergers and acquisitions announced in the period of 1998-2007 created higher value on average than cross-border transactions.*	**Mixed results**	Tourani-Rad *et al.* (1999)
Consideration Structure Hypothesis		
Hypothesis 5: *Purely cash-financed European bank mergers and acquisitions announced in the period of 1998-2007 created higher value on average than equity-financed transactions*.	**Confirmed**	Ekkayokkaya *et al.* (2007)
Size Hypothesis		
Hypothesis 6: *Relatively smaller European bank mergers and acquisitions announced in the period of 1998-2007 created higher value on average than large transactions.*	**Confirmed**	Cybo-Ottone *et al.* (2000) Beitel, Schiereck (2001) Ekkayokkaya *et al.* (2007)

Source: Author

Note: +, – indicate sign, magnitude and significance of CARs (i.e. +++ means high significance, + low significance, +/- mixed results), n.a. stands for not researched in our study

5 Conclusions

The main goal of this thesis was to evaluate wealth effects of European bank M&A for the banks' shareholders by conducting an event study. For this purpose, we studied 59 banking transactions in the period between 1998 and 2007. We tested six hypotheses concerning the overall average wealth effects of M&A announcements as well as differences in terms of value creation between domestic and cross-border deals, cash and equity-financed deals and transactions of different sizes.

Our findings suggest that targets are clear winners in European bank M&A, whereas bidders lose on average. Unlike the majority of past event studies, we found significant value destruction for bidding banks' shareholders. Therefore, presence of fallacious motives for M&A cannot be denied. Managements' M&A decision making seems to be influenced by their own wealth maximization goals, their hubris or their tendency to "eat rather than being eaten". Alternatively, observed value destruction may be explained by tough competitive pressure making bidding banks overpay.

Despite the observed value destruction from bidders' perspective, we found evidence of a positive net wealth effect. Our findings suggest that European bank M&A lead to net value creation on average. Therefore, we reject a pure transfer of value from bidders' to targets' shareholders. Economic motives for M&A prevail in aggregate. Clearly, there is a potential for synergies in banking M&A and we confirmed that merging banks are able to exploit the synergies. We can conclude that M&A transactions during the banking consolidation wave of the last decade were justified by value creation in aggregate.

Studying separately domestic and cross-border deals, we did not find significant difference between the two sub-groups in terms of aggregated value creation. Due to mixed results, we cannot draw any clear conclusion. However, from the perspective of single market efforts, we can point out that no significant value destruction was observed for cross-border deals. Domestic deals were not proved to make shareholders better off than transactions leading to geographical diversification. Therefore, our results do not confirm the existence of any obstacles preventing cross-border banking consolidation.

Furthermore, we have obtained relevant results by analysing the difference between cash and equity-financed deals. Purely cash-financed deals outperform those financed at least partially with stocks. We have confirmed that the announcement of new equity issue related to M&A transaction is negatively evaluated by bidding banks shareholders and worsens the results of the entire sample. It suggests that the significant value destruction observed for bidders may be partly related to new equity issue rather than the M&A announcement.

Last but not least, we found that smaller transactions were better awarded by stock market participants than large ones. We argue that this is because small targets have larger synergy potential on one hand and can be more easily merged on the other.

Results of our analysis allow us to conclude that mergers and acquisitions in the European banking industry have created value for shareholders on average, and therefore, the strong M&A wave of the last decade has been successful. Implications for future banking consolidation have to be drawn with great caution. However, based on our analysis, we believe that nothing, not even recent financial markets turmoil, can hinder further consolidation of European banking sector including expansion of cross-border banking.

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Appendix 1

Table 18: Cumulated abnormal returns for event studies on banking M&A in the period 1990-2000

Study	Year	Regional focus	Years studied	N	Event window in days	CAR [a] Bidder	CAR Target	CAR comb. entity [b]
Hawawini, Swary	1990	USA	72-87	123	[0;+5]	-1,7%	+11,5%	+3,1%
Baradwaj et al.	1990	USA	80-87	53	[-60;+60]	n.s.	25,9-30,3%[c]	N/A
Allen, Cebenoyan	1991	USA	79-86	138	[-5;+5]	n.s.	N/A	N/A
Cornett, De	1991	USA	82-86	152	[-15;+15]	n.s.	+9,7%	N/A
Cornett, Tehranian	1992	USA	82-87	30	[-1;0]	-0,8%	+8%	N/A
Baradwaj et al.	1992	USA	81-87	108	[-5;+5]	-2,6%	N/A	N/A
Houston, Ryngaert	1994	USA	85-91	153	[-4L;+1A][e]	-2,3%	+14,8%	+0,5%
Madura, Wiant	1994	USA	83-87	152	[0;36M]	-27,1%	N/A	N/A
Palia	1994	USA	84-87	48	[-5;+5]	-1,5%	N/A	N/A
Seidel	1995	USA	89-91	123	[-20;+20]	+1,8%	N/A	N/A
Zhang	1995	USA	80-90	107	[-5;+5]	n.s.	+6,9%	+7,3%
Hudgins, Seifert	1996	USA	70-89	160	[-1;+1]	n.s.	+7,8%	N/A
Siems	1996	USA	1995	19	[-1;+1]	-2%	+13%	N/A
Pilloff	1996	USA	82-91	48	[-10;0]	N/A	N/A	+1,4%
Houston, Ryngaert	1997	USA	85-92	209	[-4L;+1A][e]	-2,4%[f]	+20,4%[f]	N/A
Subrahmanyam et al.	1997	USA	82-87	263	[-1;+1]	-0,9%	N/A	N/A
Banerjee et al.	1998	USA	90-95	92	[-1;0]	-1,3%	+13,1%	N/A
Toyne, Tripp	1998	USA	91-95	68	[-1;0]	-2,2%	+10,9%	-0,7%
Cyree, DeGennaro	1999	USA	89-95	132	[-1;0]	n.s.	N/A	N/A
Kwan, Eisenbeis	1999	USA	89-96	3844	[-1;0]	N/A	N/A	+0,8%
De Long	1999	USA	88-95	280	[-10;1]	-1,7%	+16,6%	n.s.
Tourani-Rad et al.	1999	Europe	89-96	17;56	[-40;+40]	n.s.	+5,7%	N/A
Cornett et al.	2000	USA	88-95	423	[-1;+1]	-0,78%	N/A	N/A
Cybo-Ottone et al.	2000	Europe	87-98	46	[-10;0]	n.s.	+16,1%	+4,0%
Becher	2000	USA	80-97	558	[-30;+5]	-0,1%	+22,6%	+3,0%
Brewer et al.	2000	USA	90-98	327	[0;+1]	N/A	+8,3-14%[d]	N/A
Houston et al.	2000	USA	85-96	64	[-4L;+1A][e]	N/A	N/A	+3,1%
Kane	2000	USA	91-98	110	{0}	-1,5%	+11,4%	N/A
Schiereck, Strauss	2000	USA/Ger	98-99	1	[-20;+20]	n.s.	+30,1%	N/A
Zollo et al.	2000	USA	77-98	579	[-10;+10]	N/A	N/A	N/A

Source: Beitel and Schiereck (2001)

Notes:

a CAR = Cumulated abnormal return; n.s. = not significant; N/A stands for not researched in the study
b Combined entity of the target and the bidder
c The authors study hostile (25,9%) and friendly (30,3%) takeovers
d The authors only study different sub-samples without presenting results for the entire sample
e -4 days prior to the leakage date to 1 day after the announcement
f No tests for significance

Appendix 2

Table 19: Trading multiples – Western European banks peer group

Bank	Coun -try	Market Cap [a] (EUR m)	ROE 2006	ROE 2007	P/E 2006 [b]	P/E 2007 [c]	P/BV 2006 [b]	P/BV 2007 [c]
Raiffeisen International Bank	AU	12,727.59	25.76%	13.82%	15.21	15.54	3.92	2.15
Erste Bank der	AU	11,826.04	8.55%	13.18%	20.02	10.07	1.71	1.33
Fortis	BE	32,385.53	20.19%	12.67%	13.16	7.50	2.66	0.95
KBC Groep NV	BE	29,545.60	17.75%	15.86%	11.20	9.57	1.99	1.52
Dexia SA	BE	18,279.73	17.04%	14.24%	10.24	7.99	1.74	1.14
Royal Bank of Scotland	UK	46,285.25	13.63%	15.70%	10.20	5.21	1.39	0.82
Standard Chartered PLC	UK	30,523.00	13.09%	14.43%	10.69	8.45	1.40	1.22
HBOS PLC	UK	27,979.96	18.32%	17.99%	10.62	5.41	1.95	0.97
Lloyds TSB Group PLC	UK	31,954.18	24.36%	23.16%	11.80	8.44	2.87	1.96
Barclays PLC	UK	38,287.40	16.69%	19.59%	10.47	6.70	1.75	1.31
HSBC Holdings PLC	UK	121,901.11	13.74%	14.81%	7.03	5.28	0.97	0.78
Bradford & Bingley PLC	UK	1,679.83	7.70%	14.07%	28.32	6.17	2.18	0.87
Alliance & Leicester PLC	UK	2,981.67	16.80%	19.63%	11.46	6.54	1.92	1.28
Danske Bank A/S	DE	16,833.43	14.19%	13.87%	11.42	7.99	1.62	1.11
Roskilde Bank	DE	429.41	9.71%	14.95%	32.63	7.02	3.17	1.05
Spar Nord Bank A/S	DE	781.18	18.64%	12.63%	11.62	10.24	2.17	1.29
Ringkjoebing Landbobank	DE	483.10	19.58%	19.25%	17.30	9.34	3.39	1.80
Forstaedernes Bank A/S	DE	313.19	16.02%	12.02%	16.85	7.48	2.70	0.90
Amagerbanken A/S	DE	286.52	19.37%	14.18%	10.70	5.73	2.07	0.81
Fionia Bank A/S	DE	332.29	17.54%	12.01%	9.79	10.24	1.72	1.23
Sparbank	DE	223.22	12.21%	9.30%	13.98	10.59	1.71	0.99
Vestjysk Bank A/S	DE	231.98	14.43%	12.93%	11.70	7.55	1.69	0.98
Ringkjoebing Bank A/S	DE	100.07	13.72%	11.82%	15.08	6.78	2.07	0.80
Sydbank A/S	DE	1,499.54	25.53%	19.43%	11.23	7.42	2.87	1.44
Jyske Bank	DE	2,495.05	21.86%	16.63%	11.22	10.96	2.45	1.82
BNP Paribas	FR	54,214.93	13.33%	15.51%	11.34	6.86	1.51	1.06
Natixis	FR	12,037.12	5.17%	5.99%	25.14	11.50	1.30	0.69
Credit Agricole SA	FR	30,389.58	12.35%	11.09%	10.41	6.80	1.29	0.75
Societe Generale	FR	40,607.32	15.62%	2.32%	15.28	n.a.	2.39	1.16
CA Ile de France	FR	1,931.70	9.35%	11.29%	8.49	5.73	0.79	0.65
CIC Credit Indus et Comm	FR	7,453.21	16.18%	18.32%	8.68	5.38	1.40	0.99
Deutsche Bank AG	GE	38,176.43	19.73%	12.03%	9.27	7.78	1.83	0.94
Commerzbank AG	GE	12,545.95	11.88%	11.51%	12.49	6.66	1.48	0.77
HVB AG	GE	31,942.89	22.11%	10.81%	7.69	15.51	1.70	1.68
Hypo Real Estate Holding AG	GE	3,656.15	15.73%	7.30%	18.99	6.63	2.99	0.48
Aareal Bank AG	GE	932.06	21.14%	9.42%	5.70	6.57	1.20	0.62
IKB Deutsche Industriebank	GE	559.47	12.86%	n.a.	14.99	n.a.	1.93	0.77
National Bank of Greece SA	GR	17,035.99	11.70%	22.05%	20.88	10.48	2.44	2.31
EFG Eurobank Ergasias SA	GR	9,648.50	15.19%	21.25%	16.84	9.35	2.56	1.99
Piraeus Bank SA	GR	6,512.61	18.80%	18.49%	14.54	9.55	2.73	1.77
Alpha Bank AE	GR	7,940.07	19.83%	24.88%	17.66	9.95	3.50	2.48
Agricultural Bank of Greece	GR	3,006.07	13.50%	17.49%	19.03	11.54	2.57	2.02
Emporiki Bank of Greece SA	GR	2,592.22	n.a.	17.24%	na	15.95	3.28	2.75
Glitnir Banki HF	IC	2,505.87	15.70%	15.39%	15.78	8.61	2.48	1.32

Bank	Coun -try	Market Cap [a] (EUR m)	ROE 2006	ROE 2007	P/E 2006 [b]	P/E 2007 [c]	P/BV 2006 [b]	P/BV 2007 [c]
Landsbanki Islands HF	IC	2,938.12	21.09%	17.58%	10.79	7.98	2.27	1.40
Allied Irish Banks PLC	IR	11,730.35	22.04%	18.67%	9.08	6.40	2.00	1.20
Bank of Ireland	IR	9,150.00	24.43%	19.58%	9.67	5.99	2.36	1.17
Anglo Irish Bank Corp PLC	IR	7,270.30	24.55%	22.90%	13.33	6.26	3.27	1.43
UniCredito Italiano SpA	IT	64,695.04	12.75%	11.89%	16.93	9.99	2.16	1.19
Credito Emiliano SpA	IT	2,337.11	16.56%	15.46%	14.13	9.99	2.34	1.54
Piccolo Credito Valtellinese S	IT	1,418.00	6.32%	5.58%	25.93	16.22	1.64	0.91
Banco di Desio e della	IT	840.88	12.81%	27.49%	16.54	4.39	2.12	1.21
Banca Popolare di Milano	IT	3,232.29	11.45%	10.79%	11.44	8.91	1.31	0.96
Banca CR Firenze	IT	5,560.24	15.36%	11.93%	19.94	26.66	3.06	3.18
Banca Carige SpA	IT	4,559.04	5.07%	5.72%	45.21	22.91	2.29	1.31
Unione di Banche Italiane	IT	9,823.67	7.95%	8.53%	14.18	9.86	1.13	0.84
Intesa Sanpaolo SpA	IT	55,964.43	7.12%	9.20%	17.71	11.13	1.26	1.02
Banca Monte dei Paschi di	IT	8,855.30	11.65%	11.08%	13.66	9.13	1.59	1.01
Liechtenstein Landesbank	LCH	1,460.38	17.09%	16.01%	15.91	8.60	2.72	1.38
Verwalt & Privat-Bank AG	LCH	749.73	12.93%	13.62%	14.02	8.12	1.81	1.11
ABN AMRO Holding NV	NL	70,505.20	18.21%	16.86%	14.13	16.66	2.57	2.81
SNS Reaal	NL	3,584.79	11.59%	11.85%	11.98	7.95	1.39	0.94
DnB NOR ASA	NO	13,144.60	30.02%	14.96%	7.33	8.67	2.20	1.30
Sparebank 1 SR Bank	NO	516.18	23.12%	25.82%	4.62	4.70	1.07	1.21
Sparebanken Midt-Norge	NO	413.24	20.18%	26.26%	4.54	4.44	0.92	1.17
Sparebanken Nord-Norge	NO	260.67	19.95%	46.77%	3.56	3.07	0.71	1.43
Sparebanken More	NO	183.34	15.19%	32.77%	4.18	4.36	0.64	1.43
Sandnes Sparebank	NO	130.80	16.58%	23.11%	5.18	4.40	0.86	1.02
Sparebanken Ost	NO	69.61	6.66%	32.16%	6.20	3.28	0.41	1.06
Sparebanken Vest	NO	59.33	19.93%	20.15%	0.75	0.79	0.15	0.16
Banco Comercial Portugues	PT	6,644.85	15.39%	12.41%	15.17	10.88	2.33	1.35
Banco Espirito Santo SA	PT	5,875.00	11.21%	13.03%	14.01	9.28	1.57	1.21
Banco BPI SA	PT	2,618.20	18.64%	20.85%	13.95	6.98	2.60	1.46
Banif SGPS SA	PT	740.00	13.02%	18.30%	20.84	7.40	2.71	1.35
BSCH	ES	73,362.90	15.74%	17.98%	10.01	7.79	1.58	1.40
Banco Sabadell SA	ES	7,368.56	16.99%	15.75%	13.41	9.64	2.28	1.52
Banco Pastor SA	ES	2,499.10	12.87%	16.78%	21.48	10.39	2.76	1.74
Bankinter SA	ES	3,861.60	22.84%	16.00%	15.10	12.66	3.45	2.03
Banco Espanol de Credito SA	ES	7,783.44	16.50%	16.75%	15.99	9.07	2.64	1.52
BBVA	ES	50,335.23	21.93%	23.36%	11.53	7.78	2.53	1.82
Banco Popular Espanol SA	ES	12,555.42	18.98%	20.69%	14.42	9.08	2.74	1.88
Banco de Valencia SA	ES	4,037.17	10.10%	13.19%	33.45	25.31	3.38	3.34
Skandinaviska Enskilda	SW	11,712.00	17.75%	14.96%	11.66	8.67	2.07	1.30
Svenska Handelsbanken AB	SW	11,472.65	19.82%	15.53%	9.67	9.31	1.92	1.45
Swedbank AB	SW	9,106.57	19.90%	16.34%	11.13	7.01	2.21	1.15
Julius Baer Holding AG	SZ	10,352.82	14.62%	14.52%	22.23	14.65	3.25	2.13
EFG International	SZ	3,463.27	9.98%	15.31%	38.11	12.82	3.80	1.96
Banque Cantonale Vaudoise	SZ	2,674.63	18.57%	14.09%	10.34	9.43	1.92	1.33
St Galler Kantonalbank	SZ	1,680.72	13.68%	12.62%	14.73	11.57	2.02	1.46
Bank Sarasin & Compagnie	SZ	1,697.28	9.16%	16.01%	33.77	13.55	3.09	2.17
Graubuendner Kantonalbank	SZ	1,840.71	16.11%	8.48%	37.06	18.13	5.97	1.54
Valiant Holding	SZ	1,967.13	8.41%	8.92%	20.90	19.37	1.76	1.73

Bank	Coun -try	Market Cap [a] (EUR m)	ROE 2006	ROE 2007	P/E 2006 [b]	P/E 2007 [c]	P/BV 2006 [b]	P/BV 2007 [c]
Luzerner Kantonalbank	SZ	1,418.66	12.38%	9.99%	16.49	12.52	2.04	1.25
Banque Cantonale de Geneve	SZ	600.84	8.10%	8.22%	17.09	12.26	1.38	1.01
Vontobel Holding AG	SZ	1,409.49	19.47%	15.79%	19.54	9.29	3.81	1.47
Hypothekarbank Lenzburg	SZ	221.22	8.99%	7.52%	16.46	16.11	1.48	1.21
Average			15.67%	15.69%	14.81	9.48	2.14	1.36
Median			**15.73%**	**14.96%**	**13.95**	**8.67**	**2.07**	**1.29**

Source: Bloomberg

Notes:
a Current Market Capitalization as on 05/03/2008.
b Based on share prices on 01/06/2007 and financial results of the year 2006.
c Based on share prices on 05/03/2008 and financial results of the year 2007.

Table 20: Trading multiples – Eastern European banks peer group

Bank	Coun -try	Market Cap [a] (EUR m)	ROE 2006	ROE 2007	P/E 2006 [b]	P/E 2007 [c]	P/BV 2006 [b]	P/BV 2007 [c]
Central Cooperative Bank AD	BUL	28	10.21%	na	60.19	na	6.15	2.34
Economic & Investment Bank	BUL	345	18.51%	na	27.21	na	5.04	na
Bulgarian American Credit	BUL	115	30.55%	na	28.13	na	8.59	6.17
Komercni Banka AS	CZE	202	18.03%	19.77%	16.23	13.97	2.93	2.76
Bank of Cyprus Public Co Ltd	CYP	230	34.58%	26.57%	23.35	8.91	8.07	2.37
Marfin Popular Bank Public	CYP	142	4.87%	16.69%	45.49	8.85	2.22	1.48
Hellenic Bank Ltd	CYP	117	41.07%	na	18.78	6.20	7.71	na
Universal Bank Ltd	CYP	94	27.64%	na	17.45	na	4.82	na
Privredna Banka Zagreb d.d.	CRO	n.a.	20.01%	na	39.15	32.19	7.84	na
Jadranska Banka DD	CRO	45	16.92%	na	22.56	na	3.82	na
Erste & Steiermarkische Bank	CRO	1,815	14.42%	na	37.38	na	5.39	3.52
Zagrebacka Banka DD	CRO	4,569	13.09%	na	31.31	na	4.10	na
OTP Bank Nyrt	HUN	7,380	23.73%	21.96%	14.88	9.19	3.53	2.02
FHB Mortgage Bank PLC	HUN	388	25.91%	19.26%	20.13	16.01	5.22	3.08
AB DnB NORD Bankas	LITH	366	11.78%	na	24.71	na	2.91	na
Ukio Bankas	LITH	202	12.09%	na	15.74	na	1.90	na
Bankas Snoras AB	LITH	230	17.70%	na	18.66	na	3.30	na
Siauliu Bankas	LITH	118	32.02%	na	17.92	na	5.74	na
NORD/LB Latvija JSC	LAT	115	12.06%	na	16.09	na	1.94	na
JSC Latvijas Krajbanka	LAT	42	18.79%	na	16.99	na	3.19	na
Powszechna Kasa	POL	12,205	21.11%	22.33%	25.96	16.43	5.48	3.67
Bank Pekao SA	POL	13,260	20.10%	14.12%	39.11	22.15	7.86	3.13
Bank BPH SA	POL	722	18.72%	21.38%	3.90	1.63	0.73	0.35
Bank Zachodni WBK SA	POL	3,396	20.71%	21.04%	26.04	12.53	5.39	2.64
Bank Handlowy w Warszawie	POL	3,004	12.13%	14.35%	25.85	13.08	3.14	1.88
BRE Bank SA	POL	3,067	16.07%	21.68%	36.73	15.33	5.90	3.32
ING Bank Slaski SA	POL	1,920	15.92%	16.84%	22.76	9.99	3.62	1.68
Bank Millennium SA	POL	1,854	13.58%	18.06%	38.96	14.32	5.29	2.59
Getin Holding SA	POL	2,307	7.61%	19.67%	74.86	13.27	5.70	2.61

Bank	Coun -try	Market Cap [a] (EUR m)	ROE 2006	ROE 2007	P/E 2006 [b]	P/E 2007 [c]	P/BV 2006 [b]	P/BV 2007 [c]
Kredyt Bank SA	POL	1,596	22.37%	15.06%	14.51	15.99	3.25	2.41
Fortis Bank Polska SA	POL	1,000	13.56%	na	36.39	na	4.93	na
DZ Bank Polska SA	POL	582	8.83%	na	26.86	na	2.37	na
Nordea Bank Polska SA	POL	248	8.75%	na	21.55	na	1.89	na
Bank Ochrony Srodowiska	POL	345	30.33%	30.57%	24.46	16.18	7.42	4.95
Bank of Georgia	Repu	549	14.39%	12.92%	41.11	29.76	5.92	3.85
BRD-Groupe Societe	ROM	3,882	14.20%	na	46.54	nm	6.61	na
Banca Transilvania	ROM	1,245	5.71%	8.65%	na	nm	6.57	4.57
Banca Comerciala Carpatica	ROM	156	21.90%	na	24.71	na	5.41	na
Komercijalna Banka AD	SER	863	18.06%	na	12.99	na	2.35	na
Jubmes Banka AD	SER	117	15.27%	na	14.55	na	2.22	na
Vseobecna Uverova Banka	SLO	1,519	18.98%	na	10.36	na	1.97	na
Dexia Banka Slovensko AS	SLO	142	10.14%	na	20.01	na	2.03	na
Tatra Banka	SLO	990	22.65%	20.51%	13.65	8.85	3.09	1.81
OTP Banka Slovensko AS	SLO	186	14.36%	14.89%	9.55	9.50	1.37	1.41
Akbank TAS	TUR	10,253	29.01%	31.36%	10.47	6.78	3.04	2.13
Turkiye Is Bankasi	TUR	8,101	17.02%	16.35%	15.25	12.23	2.60	2.00
Turkiye Garanti Bankasi AS	TUR	7,918	27.14%	21.21%	12.33	12.34	3.35	2.62
Yapi ve Kredi Bankasi	TUR	4,945	25.27%	20.41%	13.48	9.74	3.41	1.99
Finansbank AS/Turkey	TUR	3,798	6.77%	10.10%	36.07	9.55	2.44	0.97
Denizbank AS	TUR	1,543	21.07%	16.35%	15.08	10.15	3.18	1.66
Fortis Bank AS	TUR	873	11.90%	11.53%	27.81	14.32	3.31	1.65
Turk Ekonomi Bankasi AS	TUR	758	29.05%	na	6.10	na	1.77	na
Sekerbank TAS	TUR	777	4.84%	10.42%	34.36	10.74	1.66	1.12
Turkiye Kalkinma Bankasi	TUR	716	19.29%	na	14.87	na	2.87	na
Tekstil Bankasi AS	TUR	215	15.88%	19.37%	11.08	7.45	1.76	1.44
Alternatifbank AS	TUR	194	21.25%	25.72%	12.46	9.82	2.65	2.53
Turkiye Vakiflar Bankasi Tao	TUR	3,933	10.21%	na	60.19	na	6.15	2.34
Turkiye Halk Bankasi AS	TUR	5,764	18.51%	na	27.21	na	5.04	na
Average			18.18%	18.64%	24.24	12.82	4.05	2.51
Median			**17.86%**	**19.31%**	**21.55**	**12.23**	**3.33**	**2.37**

Source: Bloomberg

Notes:
a Current Market Capitalization as on 05/03/2008.
b Based on share prices on 01/06/2007 and financial results of the year 2006.
c Based on share prices on 05/03/2008 and financial results of the year 2007.