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Title of Doctoral Thesis:

# **The Cross-Border M&A Wealth Impact in the European Banking Industry**

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### **D e c l a r a t i o n   o f   A u t h e n t i c i t y**

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Prague, September, 2018

Signature

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The Cross-Border M&A Wealth Impact in the European Banking Industry

**Abstract:**

The cross-border European banking M&A wave is currently at an all-time low in aggregated value, and with no similar precedents in the past century. From the 1980s until 2007, the M&A industry overall grew exponentially, changing the landscape of the financial structure and the economic wealth. This research groundwork comprises the period between 1985 and 2017, and was built under an extensive investigation about the major drivers of banking M&A. The focus of the empirical study was conducted to find evidence of the wealth effects to shareholders around the transaction announcement to the bidder, to the target, and to the combined entities. Our empirical findings regarding wealth effects in cross-border banking M&As show significant negative abnormal returns to the bidding banks after the announcement date, stock value creation to the targets, and significant positive abnormal stock gains to the combined entities. We explain our different results from the existing studies until 2008 as stemming from the different financial landscape after the financial crisis, by the consistent lack of profitability, and by the excess of existing small and medium size banks in Europe during the last ten years. Our results are in line with the latest studies made by policy makers and scientific researchers about European banking profitability and consolidation.

**Key words:**

Mergers and acquisitions, banking, Europe, value

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# 1. Introduction

The importance of the banking industry in the European economy is undeniable as it is the economic structural pillar of any economy. Banks are the cornerstone element in market oriented nations dependent on the balance between credit demand and money supply. The banking system is the main source providing access to credit and money supply, and they represent the benchmark of wealth and wellbeing of a nation. Taking into consideration that the banking system is the main driver fuelling the economy of Europe, it is essential to assure that the regulatory and political conditions have been created to mitigate future financial distress, to propel growth, and to enhance the profitability performance of the industry. Between the decades of the 1980s and the 1990s the banking industry experienced an unprecedented merger and acquisition wave that resulted in a unique consolidation momentum. Along with the increased number of banking transactions, the premiums of takeovers also grew at the same pace, as well as the goodwill premiums paid. The wave of mergers and acquisitions in Europe had a continuous upward trend until 2009, and even though this was not a new phenomenon, its extent showed an inconsistent trend. The main factors that contributed to the remarkable upward trend at the beginning of 2000s were related to the stable political landscape, growing competition, technological advances, and financial globalisation (Berger, 2001). This trend is mainly explained by the new wave of financial integration in Europe, the demand of shareholders for larger profits, and the ideal economic conditions of that period (Jones, Critchfield, 2005). The banking industry landscape has changed its structure significantly during the last thirty years. During the mid-1990s the number of large mergers and acquisitions amounted to the overall share value of 80%. In this period, the banking landscape experienced an exponential growth in the market share of the large financial institutions from 1% in the year 1990 to 19% at the end of the first decade of the new millennium. This change led to a decrease in the number of existing banks from 8.600 in 1997 to 6.000 in the year 2007, which means a percentage deviation of -29% comparatively (ECB, 2010). The first reasoning to pursuit a cross-border banking business activity had foundation in the assumption that in a competitive world, a bank will set its operations in regions where can offer services with the lower costs (Samuelson, 1974). In this regard, a bank operating in foreign countries would be able to compete with comparative advantages against the local native banks. The second rationale for the expansion of banks to foreign markets is related to the strategy of serving international clients with global solutions, and to match their demands with an edge against domestic local banks. From the year 2000, the M&A cross-border growth started to slow down slightly, and after 2009 it sharply decreased. This decreasing trend has been more evident since the aftermath of the crisis in the banking industry (Dokulilová, Zetek, Janda, 2009). There is not enough empirical evidence of a direct correlation between the consolidation of M&As and financial stability in the banking sector, however, we found that merged entities would become more resilient and with higher stock returns if the new entity prospectively achieved synergy and control gains after the transaction. The current fragmentation of the banking network carries profitability challenges which we believe that a new banking wave of consolidation under a single supervision and resolution mechanism could solve.

Furthermore, enhanced structural reforms should be made to completely overcome the effects caused by the financial crisis and propel the profitability and wealth across the European banking system. The insufficient integration of European banks exposes the lack of consolidation comparatively to peers in overseas markets. During the years 2016 and 2017, most of the existing banking M&As were cross-border, and despite a small increase in the overall value, the aggregated European number of transactions diminished. There is strong evidence that, in the short run, the consolidation of banks through cross-border mergers and acquisitions is the most viable option to improve profitability and gain economic resilience (Revenda, 2005). This strategy opens the possibility of accessing the international capital markets without being bound to the local national lenders. The banking cross-border M&As also solve the needed financial stability and diversification that this industry requires to serve their creditors with improved liquidity ratios. The consolidation and modernization of the banking system has a positive impact in the reforms that are being made in mutual, cooperative and traditional banks. The enhancement of higher levels of consolidation in the European banking system shall also lead to the decrease of non-performing loans in the balance sheet, and the mitigation of risks targeted by the supervisory institutions. The existing research in the field of value creation within the banking M&A scope have shown that there is no existing consensus among the different authors. The objective of our empirical research is to test the following hypotheses: I) The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 created wealth effects among the bidding banks; II) The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 created wealth effects among the acquired banks; III) The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 created wealth effects among the combined bidding and acquired banks; IV) The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 on average created more value to the targeted banks in Western Europe than in Eastern Europe.

The thesis is structured as follows. Chapter I provides background information relevant to the main question, incorporating an overview of the banking M&A trends during the last three decades. Chapter II is a comprehensive theoretical background, covering aspects related to the event study stock gains during the announcement window period of an M&A, and surveys the empirical evidence found in previous research. It also covers the determinants of the current banking industry situation related to the lack of profitability and establishes a link between the current status quo and the need for further cross-border consolidation to improve the overall banking wealth. Chapter III includes the description of the methods employed in the study, and the hypothesis tested. Chapter IV presents the results of the data population and sample, as well as a detailed description of significance testing, data analysis, and statistical techniques reviewed. Chapter V presents the discussion and summary of findings. The results are compared with the past research. A critical discussion of potential sources of bias and errors also are developed, as well as additional implications arising from the results. Chapter VI summarizes the findings and empirical evidence, outlines the achievements of the thesis goals, and includes further implications for theory and practice, and future research developments.

## **2. Theoretical background**

### **2.1 European Banking M&As**

The banking institutions in Europe have grown their notoriety worldwide during the last thirty years, and substantially decreased the prior overwhelming dominance of U.S. banks in foreign markets during the 1980's. The consolidation trend in Europe until 2007 became popular with the systematic opening of cross border subsidiaries or branches. This option was also preferred due to the lack of regulatory intervention that allowed for expansion and operations without strong regulatory constraints.

The European Central Bank (ECB) is currently working on different dimensions to harmonize the regulations across countries to facilitate the consolidation of banks, reviewing policy instruments, and adding lending mechanisms to enhance the liquidity more effectively. Adding to the ECB regulatory work, there are other initiatives and proposals towards a more resilient financial system with higher levels of integration. The main initiatives are focused on the review of the directive related to Capital Requirements and its Regulations, the Single Resolution Mechanism Regulation, and the Bank Recovery and Resolution Directive.

The consolidation trend in Europe remains subdued and this pattern is closely related to insufficient cross-border banking integration. Most of the transactions were domestic, and even though several acquisition values were considerably high, the number of pan-European acquisitions has decreased significantly year-over-year since 2009. We concluded that the current lack of integration in the European financial markets is related to insufficient cross-border banking deals. The harmonization of policies in the financial sector towards a single jurisdiction in the EU area would also address the minimum financial liquidity ratios set by the Basel committee, and minimize the impact of any systemic financial distress, as well as diminish the likelihood of insolvency. The regulatory trends are related to the need of fiscal policy harmonization across countries, and the tax treatment relating to losses carried forward when acquiring a bank. At the economic political level, the existing uncertainty caused by several country-centric politicians and the persistent low growth among southern countries, is creating an unfavourable environment for cross-border banking M&As.

### **European Banking Mergers & Acquisitions. What happened in the last 30Y?**

In this study, we observed relevant indicators of merger and acquisition activity in Europe during the last 30 years, using the Eikon database from Thomson Reuters. This database features deal details covering around 700,000 transactions since the year 1970. The information available in Eikon aggregates over 1,000 data elements, including target and acquirer industry, location, parent company information, deal terms (lock-ups, acquisition techniques, percent acquired, consideration offered). It also offers information related to financial and legal advisory assignments, fees, deal values, stock premiums, synopsis, event history, deal status, financial sponsors, investor group detail, purchase and pooling accounting, and the attitude of the seller and the acquirer. We conducted the analyses on M&As where both target and bidding

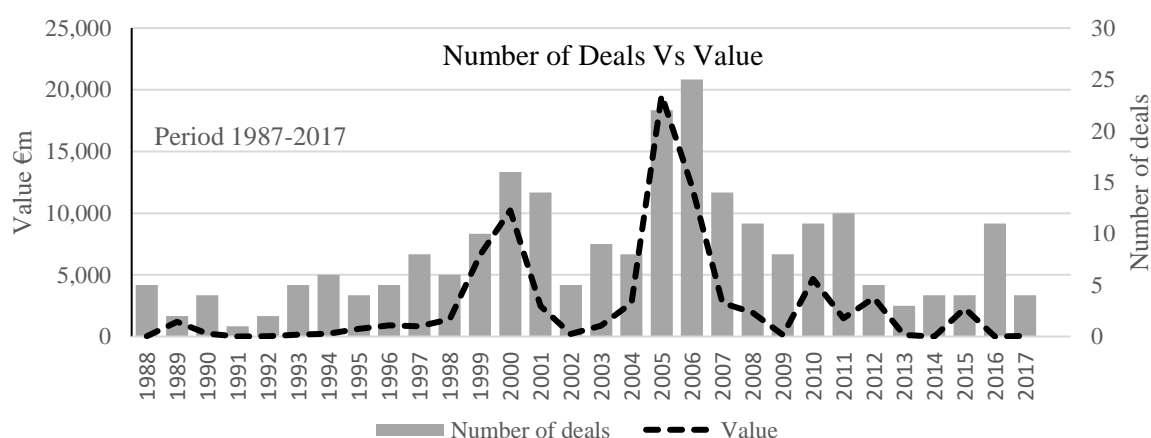


banks were publicly in Europe. The sample used to analyse the cross-border deals in banking industry comprehended the following inputs:

- Region: European cross-border transactions.
- M&A transactions period: between 01.01.1985 and 31.12.2017
- Deal size: up to 18.5B euros
- Countries and areas screened: Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Gibraltar, Greece, Greenland, Guernsey, Hungary, Ireland, Isle of Man, Italy, Jersey, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom
- Form of transaction: merger, acquisition of majority assets, acquisition of assets, and acquisition of certain assets
- Sector classification: banks, corporate banks, private banks, diversified investments, wealth management, investment management, consumer credit.
- Top 3 deal purpose: 1) general strategy to take advantage of sound investment opportunities; 2) strengthen operations and raise cash through disposal; 3) create synergies and eliminate duplicate services/operations.
- Minimum % of target share: >50%

Figure 1 shows two different metrics to measure the cross-border M&A activity in Europe. The bar chart represents the number of transactions made year-over-year and the dotted line describes the banking M&A activity as a yearly sum of reported values put together across the same 30 year period.

*Figure 1: Aggregate banking M&A in Europe 1987-2017*



*Source: author calculation. Eikon Thomson Reuters M&A database*

This figure shows clear evidence about the two well-known takeover waves since 1987. The first wave in this period starts showing consistent signs of growth in 1997 after three previous years of consecutive increases of asset reallocation through M&As. The first wave had its peak in 2000, in tandem with the dot-com bubble in the United States during the same period (Veselá, 2011). On March 10, 2000, Nasdaq reached an all-time stock value high of 5.048.62€. The value of European cross-border banking M&As also had its first peak in 2000 with the largest takeover being done by the German bank Bayerische Hypo-und Vereinsbank AG and the Bank Austria AG. HypoVereinsbank (HVB) from Germany merged with Bank Austria AG (BA) in a stock swap transaction valued at 107.453 billion schillings (7.809 billion Euros). HVB offered one ordinary share for every BA share. Based on HVB's closing stock price of 942.57 schillings (68.5 Euros) on July 21, the last full trading day prior to the announcement, each BA share was valued at 942.57 schillings (68.5 Euros). In an initial strategy, BA combined all its business operations into a new subsidiary which was then sold to HVB in exchange for 114 million new shares. BA, now a holding company with a 22% stake in HVB, was folded into the latter by exchanging its stockholders' shares for the newly issued HVB shares. Following the deal, AVZ Savingsbank, Allianz AG and Munich Re were to hold 5.1%, 13.7% and 5% of HVB respectively. The second largest merger in 2000 was made by a unit of Nordic Baltic Holding (NBH) named MeritaNordbanken (MN) of Finland. It merged with Unidanmark A/S, in a stock swap transaction valued at 34.3 billion krone (3.585 billion Euros). MN offered 12,704 ordinary shares of its parent company NBH for every Unidanmark share, plus a special dividend of 10 krone (1.3 Euros) per share subject to completion. Based on NBH's closing price on the Helsinki exchange on March 3, the last full trading day prior to the announcement, each Unidanmark share was valued at 524.4 krone (67.6 Euros), including the dividend. The merged company would be 30% owned by Unidanmark shareholders, and 70% owned by MeritaNordbanken.

The total value of cross-border transactions in 2000 was 10.225 billion Euros and the number of deals in the same year reached a peak of 16 transactions within our selected sample. After the first activity peak around the year 2000, the M&A wave in the banking industry starts falling rapidly in 2001, also in line with the burst of the US dotcom bubble, and with the major financial crisis in Argentina. In the year 2002, the aggregated value decreased to the level of one decade before. From 2003 onward the total takeover value started to consistently increase again steeply up to the largest peak during the last 30 years. This peak happened between the years of 2005 and 2006, and was led by some of the most important cross-border transactions of all time. The largest one was conducted by Unicredito Italiano SpA (UI) of Italy. They completed the tender offer to acquire the entire ordinary share capital of Munich-based Bayerische Hypo-und Vereinsbank AG (BH) from Muenchener Rueckversicherungs Gesellschaft AG (18.4%) and other shareholders, in a stock swap transaction valued at 15.073 billion Euros. UI offered 5 new ordinary shares BH based on UI's closing stock price of 4.095 Euros on the last full trading day prior to the announcement, each BH share was valued at 20.475 Euros. Subsequently, UI agreed to acquire the remaining 22.5% in Bank Austria Credinstalt AG and the remaining 28.8% stake in Bank BPH Spolka Akcyjna, both majority-owned units of BH. The offer was conditioned upon at least 65% of shares being tendered. The transaction was subject to regulatory approvals. The total value of this merger was ~18.256 billion euros and it has remained as the largest deal by far during the last the decades.

The second largest merger was announced on 9th of November 2006, and was done by Danske Bank A/S of Denmark, which acquired the entire share capital of Helsinki-based Sampo Bank Oyj, from Sampo Oyj, for 4.05 billion Euros in cash. The transaction was approved by regulatory authorities. Danske Bank A/S successfully managed to merge 100% of the Finnish bank with the general strategy of taking advantage of a sound investment opportunity, to strengthen operations, to create synergies, and to eliminate duplicate services/operations. In 2006 the number of deals achieved an all-time high number of 25 takeovers, and in terms of aggregated total value, the year 2005 was the highest with 19.549 billion Euros as a result of the merger between the Italian Unicredit, and the German target Bayerische Hypo-und Vereinsbank AG. Between 2009 and 2017 there was a systematic downward trend in the value and quantity of cross-border banking M&As in Europe, reaching bottom levels equivalent to the ones observed 30 years ago at the end of the 1980s.

### Transaction form in Europe from 1985 to 2017

Table 1 shows evidence related to the most common transaction form and deal status, both measured by value terms. The information is summarized in groups of five years, except the first period that aggregates seven years due to the low deal activity at the end of the 1980s and the beginning of the 1990s. The four transaction forms selected to analyse this dimension were acquisitions of: total assets, just certain assets, the majority of assets, or mergers. Comparing these transactions across the time, it is possible to observe that mergers doubled the value of the transactions compared to the acquisition of a majority of assets.

*Table 1: Transaction form & Deal status in Europe*

<b>Transaction form &amp; Deal status</b>	<b>1985- 1992</b>	<b>1993- 1997</b>	<b>1998- 2002</b>	<b>2003- 2007</b>	<b>2008- 2012</b>	<b>2013- 2017</b>	<b>Grand Total</b>
Acquisition of assets	733	933	1,711	2,093	848	117	6,435
Acquisition of certain assets	0	4	0	0	0	0	4
Acquisition of majority of assets	20	1,508	4,680	11,266	8,914	9	26,398
Merger	1,200	291	14,493	24,664	1,597	2,339	44,584
<b>Completed</b>	<b>1,954</b>	<b>2,736</b>	<b>20,883</b>	<b>38,023</b>	<b>11,359</b>	<b>2,466</b>	<b>77,421</b>

*Source: author calculation. Eikon Thomson Reuters M&A database*

The results of this observation made during the period before the world financial crisis in 2008 is interesting by itself, because it suggests that a merger between two banks is likely to produce more benefits. There are clear opportunities for synergies when merging, rather than acquiring. As an example, if a bank can connect its experience and products with the other merged bank. Another possible factor explaining the overwhelming difference of value when merging is related to the possibility to scale the operations, gain market share, and control the

management of the entity. Another strategic rationale to explain why most of the banks had chosen to merge instead of acquiring, is related to the central topic of this thesis – the cross-border transactions. A bank that wants to gain a foothold in a lucrative expansion across European countries may lack expertise and experience in the new region. To overcome these expansion challenges, a bank may choose between either opening a local expansion office for research and development, or merging with a local bank with a clear past success in that area. The former option has typically high costs and unknown results going forward. Another rationale for the observed merging ratios in the table is related to the defensive strategy that a bank may have to adopt to thrive in an environment where every other bank around is merging and scaling up operations. This is a strategy that is commonly followed in the banking sector due to the existence of large and competitive operators. Another piece of evidence found to explain why the acquisition of assets was not the preferred transaction method during the last 30 years in Europe, is related to the speculative approach in the acquisition option.

Acquisition is often the best strategy when a bank considers a target as a commodity that can be used, separated, or disposed of, after being acquired. This strategy has high risks related to the connection that the different banking services have with external customers, therefore a post-split or a partial sell-off could potentially damage the reputation of both entities. Again, the merger seems to be the best choice in the banking industry due to this reason. Another driver to explain the large mergers ratio is linked with the need of an acquiring bank to integrate financial services developed exclusively in another bank. This situation happens typically between large banks and smaller financial entities such as financial boutiques, or with any other bank highly specialized in a market niche. It would likely take several years, with large market investments, for an acquiring bank to develop the access to these small specialized niches.

## Target region

Table 2 describes the geographic distribution of targets in the banking industry across the sub-regions of Europe. The largest concentration of deals measured by value were clearly in Western Europe, while the opposite trend happened just between 2008 and 2012. This exceptional period can be explained by two factors: first Western Europe suffered heavy losses and insolvencies after the world financial crisis in 2008, and the second reason is related to the opening of the markets in the Eastern transition economies, where nations like Poland, Russia, Ukraine and Hungary showed robust deal making activity.

*Table 2: Target region*

Target region	1985-1992	1993-1997	1998-2002	2003-2007	2008-2012	2013-2017	Grand Total
Eastern Europe	20	455	2,449	12,957	9,499	143	25,523
Western Europe	1,933	2,281	18,435	25,066	1,861	2,322	51,898
<b>Europe</b>	<b>1,954</b>	<b>2,736</b>	<b>20,883</b>	<b>38,023</b>	<b>11,359</b>	<b>2,466</b>	<b>77,421</b>

*Source: author calculation. Eikon Thomson Reuters M&A database*

## Public status

Table 3 reports the public status of acquirers and targets in European cross-border M&As from 1995 to 2017. The number of transactions rose uniformly during the 5 years preceding the year 2008, and there is consistent evidence of larger volume of deals made between public banking acquirers and public targets. The second total value is between the aggregated public acquirers and the group of subsidiaries, the third rank is between public acquirers and private targets, and the fourth largest group is between the bidding subsidiaries and public acquired banks. It is interesting to note the small value of acquisitions performed by Governments directly to target banks, on the other hand the joint ventures with public banks by far outnumbered the acquisitions made by private acquirers. As an example, in Australia, the government approved a policy preventing large banks from merging, therefore they started to seek targets overseas to expand their operations. All the acquirers, whether they were Governmental, JV, private or public, decreased steeply the deal activity since 2008 up to nowadays, except the subsidiaries. Only the subsidiaries managed to recover during the last ten years after the drop of value after the crisis in 2008.

Table 3: Public status

<b>Public status</b>							
<b>Acquirer</b>	<b>1985-</b>	<b>1993-</b>	<b>1998-</b>	<b>2003-</b>	<b>2008-</b>	<b>2013-</b>	<b>Grand</b>
<b>Target</b>	<b>1992</b>	<b>1997</b>	<b>2002</b>	<b>2007</b>	<b>2012</b>	<b>2017</b>	<b>Total</b>
<b>Government</b>	<b>0</b>	<b>146</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>151</b>
Private	0	0	5	0	0	0	5
Subsidiary	0	146	0	0	0	0	146
<b>Joint Venture</b>	<b>0</b>	<b>0</b>	<b>2,254</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>2,404</b>
Public	0	0	2,254	0	0	0	2,254
Subsidiary	0	0	0	150	0	0	150
<b>Private</b>	<b>17</b>	<b>222</b>	<b>24</b>	<b>382</b>	<b>24</b>	<b>0</b>	<b>670</b>
Government	0	0	15	0	0	0	15
Private	17	5	10	20	24	0	76
Public	0	60	0	0	0	0	60
Subsidiary	0	157	0	362	0	0	519
<b>Public</b>	<b>1,689</b>	<b>2,273</b>	<b>14,326</b>	<b>35,259</b>	<b>11,220</b>	<b>2,310</b>	<b>67,077</b>
Government	0	153	0	362	11	0	527
Joint Venture	0	0	0	0	0	0	0
Mutual	0	733	0	0	0	0	733
Private	0	303	548	7,642	509	0	9,002
Public	1,200	822	12,289	17,997	7,834	2,193	42,335
Subsidiary	488	262	1,490	9,259	2,865	117	14,481
<b>Subsidiary</b>	<b>248</b>	<b>96</b>	<b>4,274</b>	<b>2,232</b>	<b>115</b>	<b>156</b>	<b>7,120</b>
Private	228	14	90	0	0	0	331
Public	0	0	4,107	1,978	46	0	6,131
Subsidiary	20	82	78	254	69	156	658
<b>Grand Total</b>	<b>1,954</b>	<b>2,736</b>	<b>20,883</b>	<b>38,023</b>	<b>11,359</b>	<b>2,466</b>	<b>77,421</b>

Source: author computation. Eikon Thomson Reuters M&A database

## Financial advisor

Table 4 presents surprising evidence related to the advisory firms. During the last 30 years most of the financial advisory firms were just a small group which were hired to advise both sides – acquirer and target – in alternated turns. To support this finding it is possible to observe for example that the larger merger between the Italian Unicredit and the German target Bayerische Hypo-und Vereinsbank AG had. On the acquiring side, Goldman Sachs & Co, Merrill Lynch & Co Inc, Morgan Stanley, and on the target side, the advisory group was composed of Citigroup, Deutsche Bank, JP Morgan & Co Inc, Lehman Brothers International. If we analyse the second largest banking cross-border M&A in Europe between Danske Bank A/S of Denmark, which acquired the entire share capital of Helsinki-based Sampo Bank Oyj, the advisor of the bidder was JP Morgan & Co Inc, KPMG, and the advisor on the target side was Goldman Sachs & Co.

*Table 4: Number of deals per each advising bank*

<b>Financial advisors: Acquirer Vs Target 1985-2017</b>			
<b>Deals</b>	<b>Acquirer</b>	<b>Deals</b>	<b>Target</b>
3	Lazard AB	3	Deutsche Bank
2	Goldman Sachs & Co	3	JP Morgan & Co Inc
2	KPMG	2	Citi
2	Morgan Stanley	2	Goldman Sachs & Co
1	Bank of America Merrill Lynch	2	Lehman Brothers International
1	Danske Bank	1	AIB Corporate Finance
1	JP Morgan & Co Inc	1	Bank of America Merrill Lynch
1	Merrill Lynch & Co Inc	1	Lazard
1	MNB Maizels	1	Morgan Stanley
1	Nomura Securities Co Ltd	1	Rothschild & Co
1	Santander Global Corporate Banking	1	UBS Investment Bank

*Source: author computation. Eikon Thomson Reuters M&A database*

If we continue observing the financial advisory firms involved in the largest banking deals from 1985 to 2017, we may present the following evidence:

- The financial advisory firms within the largest transactions are a small group composed mainly of these 16 investment firms: AIB Corporate Finance, Bank of America Merrill Lynch, Citigroup, Danske Bank, Deutsche Bank, Goldman Sachs & Co, JP Morgan & Co Inc, KPMG, Lazard AB, Lehman Brothers International, MNB Maizels, Morgan Stanley, Nomura Securities Co Ltd, Rothschild & Co, Santander Global Corporate Banking, and UBS Investment Bank
- Most of the financial advisory firms worked for acquiring and the target side at different time.

The implications of these two observations are dramatic, and contribute to the underlying assumptions explaining why the M&As for the acquiring side are dilutive in terms of value creation. Considering that most of this small group of financial consultants rotate to both sides of the deals, it is possible to conclude that they have a large motivation to conclude the deal regardless the real future outcome of the transaction for the stockholders.

*Table 5: Groups of financial advisors consulting both sides of banking M&As*

<b>Financial Advisors</b>							
<b>Acquirer</b> Target	<b>1985- 1992</b>	<b>1993- 1997</b>	<b>1998- 2002</b>	<b>2003- 2007</b>	<b>2008- 2012</b>	<b>2013- 2017</b>	<b>Grand Total</b>
<b>Goldman Sachs &amp; Co, Merrill Lynch &amp; Co Inc, Morgan Stanley</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,787</b>	<b>0</b>	<b>0</b>	<b>14,787</b>
Citigroup, Deutsche Bank, JP Morgan & Co Inc, Lehman Brothers International	0	0	0	14,787	0	0	14,787
<b>JP Morgan &amp; Co Inc, KPMG</b>	<b>0</b>	<b>0</b>	<b>5,927</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,927</b>
Goldman Sachs & Co	0	0	5,927	0	0	0	5,927
<b>Bank of America Merrill Lynch, KPMG, Nomura Securities Co Ltd, Santander Global Corporate Banking</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,559</b>	<b>0</b>	<b>4,559</b>
AIB Corporate Finance, Deutsche Bank, Morgan Stanley	0	0	0	0	4,559	0	4,559
<b>Danske Bank, Morgan Stanley</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,186</b>	<b>0</b>	<b>0</b>	<b>4,186</b>
JP Morgan & Co Inc	0	0	0	4,186	0	0	4,186
<b>Goldman Sachs &amp; Co</b>	<b>0</b>	<b>592</b>	<b>0</b>	<b>1,510</b>	<b>0</b>	<b>2,049</b>	<b>4,151</b>
Bank of America Merrill Lynch, Citi, Rothschild & Co, UBS Investment Bank	2,049	0	0	0	0	2,049	2,049
Lazard	0	0	0	1,510	0	0	1,510
JP Morgan & Co Inc	0	592	0	0	0	0	592
<b>Lazard</b>	<b>0</b>	<b>0</b>	<b>3,908</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,908</b>
Lazard	0	0	3,908	0	0	0	3,908
<b>Lazard Brothers &amp; Co Ltd, Lazard AB, MNB Maizels</b>	<b>0</b>	<b>0</b>	<b>3,585</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,585</b>
Goldman Sachs International	0	0	3,585	0	0	0	3,585

*Source: author computation. Eikon Thomson Reuters M&A database*

This observed evidence was found in prior literature related to the role of investment banks and their incentives to conclude an M&A. The main reason leading to this situation relates to the typical advisory fee that accounts for 80% of the payment if the deal is concluded, instead of rewarding the respective value creation after the completion of the deal (McLaughlin, 1990).

Other studies also identified that the market share of an investment bank is closely related to the announcement of the number of deals that they advised and concluded in that period. The findings from Rau (2000), suggest that acquirers and bidders ultimately choose the financial advisory firm according to the accumulated number of deals completed. There is evidence that the widespread established incentives to complete deals do not enhance the value maximization of the stockholder's shares. Table 5 demonstrates that among European banks, global financial advisory firms are preferred instead of European consulting companies. The larger deals integrated a syndicate of investment banks on both sides. The systematic appearance of the same advising firms sometimes at the acquiring side and sometimes at the target side, suggests a strong dependency between the European banking M&As and these large investment advisory banks. There are numerous purposes and strategic rationales for one bank to acquire another. The most common reasons observed in the sample suggested that taking advantage of sound investment opportunities, the strengthening of operations, and the raising of cash through disposal constituted the main drivers to trigger a cross-border banking M&A. The literature suggests that there are several other underlying reasons motivating mergers and acquisitions.

### **Underlying strategic advisory M&A purposes**

The strategic purpose motivating an M&A is a mean to secure market share, the control of demand, to defend the competitiveness, or even to expand across the border more effectively. The purpose of an acquisition may be based on the rationale of improving the company value through control and substitution of the previous management. Banks with weak governance are more likely to be taken over because of a previous management misalignment or failure. The need of a specific division of a banking product or the customer database are valuable commodities to a bank. The speculative acquisitions may be followed by a split of these divisions into pieces and the consequent sale of those areas. These complex purchases and split of banks into pieces to sell are highly risky in terms of value creation for the acquirer.

A bank may want to diversify to financial areas or sectors to balance the portfolio risks and to create other potential strategic opportunities. Some lending sectors are cyclically affected by crisis and this is a risk management strategy to mitigate economic downsides. Another sound investment opportunity may be the vertical integration of a key supplier to services or financial products to reduce the risk profile associated with that supplier, and secure the supply continuity. The European banking overcapacity continues to be inevitable to overcome through consolidation. The M&A in banking is currently considered one of the main strategies to face the low profitability and improve the returns on equity issues. The large levels of non-performing loans remain unsolved and the weak equity quality in the balance sheets persists in different degrees across European countries, and the trend of closing brick & mortar retail branches is inevitable. Adding to these reasons, the Basel regulatory requirements keep demanding higher levels of liquid capital reserves affecting the returns and profitability. The digitalization of the system also imposes pressure on the existing workers that had all life being in financial B2C retail, and the low-interest rates impose strong difficulties to add profit to the P&L.



## Deal purpose and attitude

Table 6: Top purposes triggering banking M&As

Deal Purpose	1985-1992	1993-1997	1998-2002	2003-2007	2008-2012	2013-2017	Grand Total
General strategy to take advantage of sound investment opportunities	0	0	0	14,787	0	0	14,787
Strengthen operations	0	0	0	3,817	1,238	0	5,054
Raise cash through disposal, Strengthen operations	0	0	0	0	4,559	0	4,559
Strengthen operations, Create synergies, eliminate duplicate services/operations	0	0	0	4,186	0	0	4,186
Expand presence in new/foreign markets	0	0	383	2,438	3,732	0	6,553
Strengthen operations, Create synergies, eliminate duplicate services/operations	0	0	0	2,692	0	0	2,692
Strengthen existing operations/expand presence in secondary market, Other, Allow to offer new products and services, Create synergies, eliminate duplicate services/operations	0	0	0	0	0	2,049	2,049
Response to other bid/tender offer, Create synergies, eliminate duplicate services/operations	0	0	0	1,967	0	0	1,967
Other	1,954	2,736	20,500	3,477	771	282	29,720

Source: author computation. Eikon Thomson Reuters M&A database

The table 7 described below aggregates the deal attitude in these following areas: friendly, neutral or hostile. The main difference between these three deal attitudes is that in the case of a friendly acquisition the target is willing to be acquired. The target may consider that being acquired can improve its liquidity, prospectively open opportunities in different areas, and make

available resources to expand operations. The current period of lack of liquidity and profitability in the European banking industry may be one of the strategic reasons for a well-accepted takeover. In addition, the acquisition of a bank may be done in a hostile manner if the target does not agree to be taken over. In these cases, banks often seek for a third party to enter in the bidding process to interfere in the initial purchase offer. One of the typical trade-offs when a hostile acquisition starts, is that may be necessary to go to the open markets to buy as much of the target stock as possible, and this practice leads to a significant increase of the share price. This practice is called a “dawn raid” because the initial bidder tries to purchase quickly by surprise the maximum stock available. The third-party bidder that may enter in the process to compete for the acquisition is called a “White knight”. The bidders usually still have to buy stock directly from the bank shareholders. In this study, the sample was selected including solely banks that were acquired at level of more than 50%. In this case, if the management board approves the purchase and if the shareholders foresee a significant profit from the sale, the transaction will be concluded. The payment is made by cash or by stock, and its acceptance will depend on the profile of the target shareholding group. The exchange using shares is more likely to be accepted in situations where the shareholders are long-term investors, and in bullish markets. Payments in cash are more likely to be accepted by short terms investors seeking immediate liquidity and fast profits. The largest volume of cross-border M&As in Europe during this period had a friendly attitude.

*Table 7: Ranking of deal attitude and strategy*

<b>Deal Attitude</b>	<b>1985-1992</b>	<b>1993-1997</b>	<b>1998-2002</b>	<b>2003-2007</b>	<b>2008-2012</b>	<b>2013-2017</b>	<b>Grand Total</b>
Friendly	1,954	2,736	17,298	30,113	11,359	2,387	65,848
Neutral	0	0	0	7,910	0	0	7,910
Hostile	0	0	3,585	0	0	79	3,664
<b>Grand Total</b>	<b>1,954</b>	<b>2,736</b>	<b>20,883</b>	<b>38,023</b>	<b>11,359</b>	<b>2,466</b>	<b>77,421</b>

*Source: author computation. Eikon Thomson Reuters M&A database*

### **Structuring the deal and the acquisition %**

There is a direct linkage between the % invested in the acquisition of a bank, the structuring of the transaction, and its financing. Table 8 shows evidence that the most preferred acquired % is at the top level between 95% and 100% in the period between 1985 and 2017. This deal structure determines the financing requirements in terms of payment needs to acquire the shares of the target or the respective assets, and debt less cash proceeds. The capacity of the bidder to finance the deal determines if the transaction may be concluded. The structure of the deal includes the negotiation process, and the agreement between the two parties describing the obligations and rights. The agreement shall include other major structuring frameworks such as the acquisition vehicle, the post-integration details, the payment elements, the legal form of the transaction, and the pricing of the deal. To reach this agreement structure, it is also necessary to include tax obligations, the accounting framework, and financial disclosures.

Table 8: Breakdown with aggregated acquisition value above 51% ownership

%	1985- 1992	1993- 1997	1998- 2002	2003- 2007	2008- 2012	2013- 2017	Grand Total
<b>55%</b>	0	0	163	232	0	0	<b>395</b>
<b>60%</b>	20	0	864	486	11	0	<b>1,382</b>
<b>65%</b>	0	0	45	5,953	0	0	<b>5,998</b>
<b>70%</b>	0	232	234	281	552	0	<b>1,298</b>
<b>75%</b>	0	0	27	2,205	0	0	<b>2,232</b>
<b>80%</b>	0	230	33	531	467	9	<b>1,270</b>
<b>85%</b>	0	296	0	104	0	0	<b>400</b>
<b>90%</b>	0	153	454	918	11	0	<b>1,536</b>
<b>95%</b>	0	597	2,650	1,807	75	0	<b>5,129</b>
<b>100%</b>	1,933	1,228	16,413	25,506	10,244	2,457	<b>57,781</b>
<b>Total</b>	1,953	<b>2,736.</b>	<b>20,883</b>	<b>38,023</b>	<b>11,359</b>	<b>2,465</b>	<b>77,421</b>

Source: author computation. Eikon Thomson Reuters M&A database

The deal structuring process of an acquisition starts with the negotiation of certain key elements that will create value in the future.

To this purpose, the main structural elements of this agreement shall clearly identify the following areas: I) stakeholders, II) legal framework, III) payment method, IV) tax strategy, V) accounting rules.

- I. Stakeholders** – the key participants, and their goals and responsibilities shall be clearly defined.
- II. The acquisition vehicle and legal framework** – this is the legal entity created to carry out the acquisition or merger of the other banking party. The most common forms are the corporate shell, the joint venture, the holding company, the partnership, the ESOP, or the limited liability company. In the case of acquisitions in the form of statutory mergers, all the debts from the target shall be transferred to the bidder. Typically, in statutory acquisitions the buyer may acquire and operate the target through a holding company to shield the parent company from the target's liabilities. The corporate structure is the most common acquisition vehicle chosen due to the limited liability of the owners, financing flexibility, and ownership. A partnership or joint-venture (JV) may be preferred in cases where the risks are high and the shareholders would want to split it among the partners of both banks. The JVs on the other hand may slow down the decision-making processes, and the implementation of the synergies may be dependent on consensus and close cooperation between all the parties. This post-closing

organization form may also not secure the expected profitability coming from the merger of activities due to the slowdown of the integration and dispersed ownership. A holding is the most suitable purchase vehicle structure when acquiring a bank that is highly leveraged, or located in politically unstable transition economies (e.g. Slovakia, Poland, Hungary), or also in a situation where the bidder is a serial acquirer without necessarily being specialized in the financial field. With a holding structure, the parent bank can legally be protected from the liabilities held by the daughter subsidiary. If at some point in time there would be the need to file the subsidiary for bankruptcy, it would not financially affect the parent bank. A holding is often preferred by acquirers that make strategic buys without having any interest in operating the target bank directly.

**III. The payment of acquisition** – this may be the combination of cash or debt for assets, cash or debt for stock, stock for stock, stock for assets, or a statutory merger. The payment may be done over time, or contingent to the future performance of the bank, or paid on a fixed point of time, and it shall reflect how the ownership is agreed and structured. The purchase price contingent to the prospective future earnings, facilitates the supervision of the agreed and expected post-integration performance. This payment form mitigates possible litigation related to any operational underperformance of the acquired bank. Payment with cash. Cash is the preferable payment method when the acquirer wants to keep control, has a high credit rating, large available cash balances, financial liquidity, strong borrowing capacity, and has the stock undervalued. When the shares are already below the market value an acquisition could trigger a faster dilution of their value. The shareholders of an acquiring bank may prefer to use cash to pay a deal if the use of the stock to pay the deal would withdraw their voting rights. In a situation that a shareholder would hypothetically lose his voting rights in a stock-per-stock payment exchange, the investor would certainly choose to pay the purchase in cash. On the other hand, if the target bank would receive an offer to be bought and was offered underperforming shares as a mean of payment, it would rather prefer to receive the payment in cash (Huang et al., 2011). Payment with stock. A bidder will use stock as a preferable means of payment in the following conditions: the stock is overvalued, the balance sheet is overleveraged (Uysal, 2018), the access to credit is restrained, or the creditworthiness rating is low. The acquirer may also choose to pay an acquisition using stock exchange when the whole transaction process is lengthy, and the associated cost of holding the unused credit becomes expensive. Adding to these reasons, the use of stock will allow the buyer to apply its cash in other investment opportunities with higher returns during the acquisition process. When the targeted bank is in financial distress, privately acquired, or has poor assets difficult to value, the payment made using stock is likely to be easier to accept and hamper the motivation of the target to keep negotiating the deal. When the value of the bidder's stock shows prospective positive value outlook, the target may demand to be paid primarily in stock, also taking into consideration that use the received shares to postpone tax payments (Ismail, Krause, 2010). Payment with cash and stock. Structuring a deal including a mix of payment options with cash and stock may ignite a wider pool of bidders trying to get involved in the same acquisition. Bidders that may have difficulties to access credit, or are facing a

shortage of liquidity, may prefer to pay in cash and stock together. The payment using a combination of stock and cash is the preferred method of payment by sellers which are not certain about the true value of the stock being offered. Target banks that are insolvent may also prefer this form of payment, to be able to pay the costs associated to the taxes when selling their stock respectively. This payment strategy brings uncertainty in terms of the final mix of stock and cash at the conclusion of the deal, because between the announcement date and the effective date of the deal the value of stock may vary significantly. From the announcement date until the conclusion date of the acquisition process, several months or even a year may pass. In this situation, the bidder shall include a clause referring to the exact proportion between stock and cash as a defensive measure against the fluctuation of stock value, as well as to protect from variations on the valuation of the acquired bank. Convertible debt. The convertible debt as a form of payment is applied when the bidders are not sure about the trustworthiness of the seller's status. The main advantages of the convertible securities are related to the avoidance of possible dilution of the acquirer's stock value, also with the possibility of earning high interests in return, and the possibility of converting the security to equity according to the agreement terms. The central disadvantage of the convertible debt concerns the possibility that the bidder has of not exercising the convertible option. If the security is not converted, it will remain as debt and the seller is obliged to keep paying high interest directly to the lender and the target may increasingly become overleveraged (Finnerty et al., 2012).

- IV. The tax agreement** – the tax agreement shall reflect if the purchase is taxable to the acquirer's shareholders. The main considerations to be included are related to two tax alternatives: firstly a taxable purchase if the transaction is made exchanging cash or debt for assets or stock; secondly a non-taxable deal in cases where the transaction is mostly paid in stock-for-stock or assets. Taking into consideration the different tax regimes in cross-border deals, the tax impact on stock value shall also be accounted in terms of avoiding double taxation, or in allocating any prospective loss to the stockholders. The effects of the tax incidence over the wealth of the shareholder's target is likely to be included in the structure of the agreement increasing the final price of the deal. This higher pricing may affect the financing mix of the bidder. It is possible for the buyer to offset taxes related to the higher pricing by increasing the amount of debt/ equity ratio used to acquire the bank.
- V. Accounting framework** – the deal structure includes accounting considerations and shall reflect the impact of statutory financial reporting on earnings and contingent payouts of the combined banks. The valuation of the entities may also reflect the closing date of the deal and the announcement day, as well as any goodwill reviews. Accountants may require the adjustment of the fair value of the earnings, equity, and other payments. The possibility of impairments or write-offs executed by accountants may decrease the motivation of bidders to overpay an acquisition. This situation is applicable if there is a high likelihood of large pricing volatility between the announcement day and the accounting closing day.

## Serial acquirers by nations

Table 9 describes the countries that have led the way in terms of transaction value since 1985, accumulating deals with a value of 16.345 billion Euros. Italy ranks in first place mainly due to the leading European merger between the Italian bank Unicredit and the German target bank Bayerische Hypo-und Vereinsbank AG.

*Table 9: Ranking describing countries per aggregated transaction value 1985-2017*

<b>Acquiring Nation Rank</b>	<b>1985-1992</b>	<b>1993-1997</b>	<b>1998-2002</b>	<b>2003-2007</b>	<b>2008-2012</b>	<b>2013-2017</b>	<b>Grand Total</b>
Italy	0	296	520	15,394	0	134	16,345
Germany	1,709	67	6,506	606	770	39	9,697
Austria	0	6	477	6,680	598	0	7,761
Spain	17	0	710	45	4,559	2,128	7,460
Denmark	0	230	631	5,846	0	0	6,707
Finland	0	0	5,839	0	39	0	5,878
France	0	216	1,128	3,199	0	0	4,543
Sweden	0	0	3,908	254	154	156	4,472
Russia	0	0	8	122	3,791	0	3,920
Belgium	0	592	0	1,967	0	0	2,560
United Kingdom	228	4	682	30	603	0	1,547
Hungary	0	0	12	1,161	0	0	1,173
Iceland	0	0	0	1,162	0	0	1,162
Cyprus	0	14	0	620	467	0	1,100
Ireland	0	749	0	0	224	0	973
Luxembourg	0	232	337	160	0	0	728
Andorra	0	0	0	351	24	0	375
Greece	0	0	16	343	11	0	369
Netherlands	0	153	94	0	69	0	316
Portugal	0	157	0	0	0	0	157
Turkey	0	14	5	0	32	9	60
Lithuania	0	0	0	22	0	0	22
Ukraine	0	0	0	20	0	0	20
Poland	0	0	0	19	0	0	19
Switzerland	0	0	0	14	1	0	15
Slovenia	0	0	0	0	11	0	11
Croatia	0	0	0	11	0	0	11
Estonia	0	1	9	0	0	0	10
Bulgaria	0	0	0	0	6	0	6
Czech Republic	0	5	0	0	0	0	5
<b>Grand Total</b>	<b>1,953.7</b>	<b>2,736.2</b>	<b>20,883.4</b>	<b>38,023.0</b>	<b>11,359.4</b>	<b>2,465.6</b>	<b>77,421.4</b>

*Source: author computation. Eikon Thomson Reuters M&A database*

Germany came in second place ranked by value as it accumulated deals worth a combined 9.697 billion Euros, and was followed by Austria, Spain, Denmark, Finland, France, Sweden, Russia and Belgium, with 7.761€b, 7.460€b, 6.707€b, 5.878€b, 4.543€b, 4.472€b,

3.920€b, and 2.560€b respectively. During the period between 1985 and 1992, and during the years 1998 to 2002, Germany was clearly ahead of the other countries in terms of aggregated cross-border M&A value. The last five countries in this acquiring list are the Eastern transition economies of Slovenia, Croatia, Estonia, Bulgaria, and Czech Republic, with 11€m, 11€m, 10€m, 6€m, and 5€m respectively. Taking into consideration the selected attributes of the sample (European cross-border deals, with completed transactions, and above 50% of ownership share), the countries Belarus, Faroe Islands, Georgia, Jersey, Latvia, Liechtenstein, Norway, Serbia, and Slovakia did not have any eligible banking M&A.

### The banking industry acquisition activity. Who buys whom?

The cross-border M&A activity in the European banking industry sector for the acquirer and target is characterized by a large concentration of acquisitions made by banks (NEC) with a total value of 65.7 billion Euros.

*Table 10: Cross-border banking M&As according to their business activity*

Acquirer Target	1985- 1992	1993- 1997	1998- 2002	2003- 2007	2008- 2012	2013- 2017	Grand Total
<b>Banks</b>	<b>1,689</b>	<b>1,473</b>	<b>14,263</b>	<b>34,403</b>	<b>11,169</b>	<b>2,466</b>	<b>65,608</b>
Banks (NEC)	0	0	4,747	19,738	3,352	143	27,980
Corporate Banks	1,689	1,473	9,517	14,665	7,804	2,322	37,469
Factoring	0	0	0	0	14	0	14
Private Banks	0	146	0	0	0	0	146
<b>Corporate Banks</b>	<b>265</b>	<b>1,118</b>	<b>6,616</b>	<b>3,575</b>	<b>165</b>	<b>0</b>	<b>11,739</b>
Banks	0	0	10	66	64	0	140
Commercial Building	0	0	94	0	0	0	94
Corporate Banks	265	1,118	6,512	3,349	101	0	11,345
Private Banks	0	0	0	160	0	0	160
<b>Diversified Investment Services</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
Corporate Banks	0	0	4	0	0	0	4
<b>Private Banks</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>24</b>	<b>0</b>	<b>70</b>
Corporate Banks	0	0	0	45	0	0	45
Investment Banking	0	0	0	0	24	0	24
<b>Wealth Management</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>
Corporate Banks	0	0	0	0	1	0	1
<b>Grand Total</b>	<b>1,954</b>	<b>2,736</b>	<b>20,883</b>	<b>38,023</b>	<b>11,359</b>	<b>2,466</b>	<b>77,421</b>

*Source: author computation. Eikon Thomson Reuters M&A database*

The largest target banks acquired were corporate banks, banks (NEC), private banks, and factoring, with 37.5€b, 28€b, 146€m, and 14€m respectively.

The second largest acquiring banking sector is corporate banking, with a total value of 11.8€b during the last 30 years. The main target group in this second ranking level is also corporate banking, seconded by private banking, banks (NEC), and commercial building banks, with an overwhelming 11.4€b, and followed by smaller residual values of 160€m, 140€m, and 94€m. The group composed of private banks, acquiring diversified investment services, and wealth management banks, have together a comparatively residual aggregated value of 70€m, 4€m, and 1€m respectively.

### **Banking business characterization**

The standard conceptual definition of a “bank” is: “An institution whose current operations consist in granting loans and receiving deposits from the public”. This definition clearly states the core performing activities of a bank. Understanding the importance of its functions and the impact on people’s well-being is of the utmost importance (Freixas, Rochet, 1997). This definition refers to the main activities of a commercial bank, regarding the simultaneous lending of loans and acceptance of deposits, which is a key differentiator characteristic from other financial intermediaries. This is a definition that the regulators usually apply when they have to decide whether a financial intermediary has to submit to the prevailing prudential regulations for being a bank. Banks also provide other supplementary financial offers that may be summed up in these three common activities: firstly, banks provide the public with cash liquidity and payment services through the deposits made into their accounts; secondly, banks manage assets in terms of quality, maturity and associated risks; thirdly, banks monitor and process information from their clients to tailor sophisticated customer relationship management systems to establish long-term relationships and to allocate more accurate credit resources (ECB CAREFIN, 2009).

The investment banking (IB) activity is an economic characterization coined by the specific activity of an investment conducted by certain banks mainly in the securities market. There are several definitions of investment banking in the literature of theory of economics, and according to Petr Musilek (1999), the following four definitions are acceptable: “All the activities of major Wall Street firms – from international issuing operations to retail business, including real estate business and trading in insurance products. All the activities in capital markets, i.e. issuing operations, corporate finance, mergers & acquisitions, assets management, financing using venture capital, merchant banking and securities transactions for institutional investors. This concept of IB does not include retail securities transactions and trading in insurance products. Selected capital market operations with emphasis on issuing operations, mergers & acquisitions and merchant banking. The narrowest definition is historically rooted, when once in the past issuing operations and brokerage or dealer trading in secondary markets were deemed to constitute IB” (Kuhn, 1990).

The private banking activity evolves a set of services addressing the wealthiest individual or families which equity reached considerable levels of value. It includes the management of investments in funds, as well as large lending activities. The performance of these operations requires a banking license including the provision of investment services. They provide complex financial services in areas such as capital raising, underwriting the request



on the behalf of the client, and issuance of securities, to governments, individuals, and corporations. An investment bank may also assist banks involved in mergers and acquisitions (M&A) and provide ancillary services such as market making, trading of derivatives and equity securities, and other services like fixed income instruments, currencies, and commodities. They commonly have a dependence on high-interest income, are more profitable, have larger leverage, and the earnings are more volatile.

The Corporate Banking activity is typically a division of a commercial bank specialized in banking solutions for larger enterprises, offering them a portfolio of cash solutions, asset management, credit management, issuing of bonds, stocks, and other securities. Often the corporate banks offer the following products tailored to wholesale clients: a) International transaction, trade finance, foreign exchange transactions, and FX hedging, b) M&As, advisory, money market transactions, issuing and sale of bonds and stock while often underwriting the initial offers at a fixed price, c) capital project finance to large risky projects or infrastructures, d) corporate banks may also sell insurance to their B2B clients as a complementary service to their core corporate activities.

### **Italian cross-border banking M&A – historical facts I**

The table 11 describes the ranking of the largest Italian cross-border banking M&A measured by total deal value between 1985 and 2017. The largest cross-border acquisition made by the Italian bank Unicredito Italiano SpA (UI), has completed its tender offer to acquire the entire ordinary share capital of the Munich-based Bayerische Hypo-und-Vereinsbank AG (BH) from the Muenchener Rueckversicherungs Gesellschaft AG (18.4%), and from other minority shareholders. It was a stock swap transaction valued at 15.073 billion Euros, and UI offered 5 new ordinary shares in exchange of 1 BH share. Based on UI's closing stock price of 4.095 Euros, the last full trading day prior to the announcement, each BH share was valued at 20.475 Euros. Subsequently, UI agreed to acquire the remaining 22.5% of the Bank Austria Credinstalt AG, along with the remaining 28.8% stake in Bank BPH Spolka Akcyjna, both majority-owned units of BH. The offer was conditioned upon at least 65% of shares being tendered. The transaction was subject to regulatory approvals. The second largest deal made by an Italian bidding bank was performed by Banca Intesa SpA when it acquired a 94.47% interest, or 3.852 million ordinary shares, in Vseobcna Uvervo Banka AS for 23,280.266 Slovak koruny (550 million Euros). In third place, Banca Intesa SpA (BI) from Italy, acquired a 90% interest plus one share in Belgrade-based Delta Bank (DB), for 24.131 billion Yugoslavian dinara (333 million Euros). Originally, BI planned to acquire a 75% interest plus one share in DB, for 20.110 billion dinara (277.5 million Euros). In the fourth place of this ranking, the Banca Commerciale Italiana (BCA) raised its stake to 95% from 13.2% in Central-European International Bank (CEIB) by acquiring an 81.8% interest from the following banks: Societe Generale, Bayerische Vereinsbank, Long Term Credit Bank of Japan (LTBJ), and Sakura Bank, which each held a 13.2% stake in BCA, and from the state-owned National Bank of Hungary, which held a 34% stake. The transaction was concluded for 71.895 billion Hungarian forints (620 billion Italian lire). Upon completion, LTBJ retained the remaining 5% stake in CEI.

Table 11: Ranking with the largest deals made by Italian banks

Deal size >100€m							
Acquirer Nation: Italy	1997	2000	2001	2005	2006	2013	Grand Total
Acquirer Name							
Target Nation							
Target Name							
<b>Italy</b>							
<b>Unicredito Italiano SpA</b>		<b>37</b>		<b>14,787</b>			<b>14,825</b>
Germany				14,787			14,787
Bayerische Hypo AG				14,787			14,787
<b>Banca Intesa SpA</b>			<b>383</b>	<b>350</b>			<b>733</b>
Slovakia			383				383
Vseobcna Uvervo Banka AS			383				383
Serbia				350			350
Delta Bank				350			350
<b>Banca Commerciale Italiana SpA</b>	<b>296</b>						<b>296</b>
Hungary	296						296
Central-European I.Bank Ltd	296						296
<b>UniCredit SpA</b>						<b>134</b>	<b>134</b>
Ukraine						134	134
PAT "UniCredit Bank"						134	134
<b>SanPaolo IMI SpA</b>					<b>127</b>		<b>127</b>
Albania					127		127
American bank of Albania					127		127
<b>Banca Carim - Risparmio SpA</b>				<b>118</b>			<b>118</b>
San Marino				118			118
Credito I. Sammarinese SA				118			118
<b>Grand Total</b>	<b>296</b>	<b>37</b>	<b>383</b>	<b>15,256</b>	<b>127</b>	<b>134</b>	<b>16,234</b>

Source: author computation. Eikon Thomson Reuters M&A database

The following deal in the list was also made by the bidding bank UniCredit SpA. It acquired the entire share capital, or 653.508 million ordinary shares, in Lutsk-based PAT "UniCredit Bank", from Bank Polska Kasa Opieki SA, majority-owned by UniCredit SpA, for UAH 1.356 billion (156.35 million Euros). Originally, in November 2010, Bank Pekao announced that it was seeking a buyer for the entire share capital, or 653.508 million ordinary shares, in its UniCredit Bank unit.

The ranking is followed by an acquisition conducted by San Paolo IMI SpA (SI) of Italy, which acquired an 80% interest in Tirana-based American bank of Albania (AB), from the US state-owned Albanian-American Enterprise Fund (AE). Concurrently, SI was granted an option to acquire the remaining 20% stake, which it did not already own, in AB. The two

transactions were meant to have a combined value of 14.593 billion Albanian leke (124.475 million euros). The transactions were subject to Italian and Albanian regulatory approvals. Originally, in October 2006, AE announced that it was seeking a buyer for its AB unit. Agricultural Bank of Greece SA and Raiffeisen International Bank-Holding AG, a unit of Raiffeisen Zentralkbank Oesterreich AG, were named as potential bidders. The last Italian acquisition in the ranking was done by the Banca Carim-Cassa di Risparmio di Rimini SpA. It acquired Credito Industrial Sammarinese SA, a Serravalle-based bank, from Banca Antonveneta SpA, for 111 million Euros. The transaction was subject to regulatory approval.

## **German cross-border banking M&A – historical facts II**

Table 12 presents the ranking of the largest German cross-border banking M&A in the period between 1985 and 2017. The first ranked transaction made by the German bank HypoVereinsbank (HVB) was a merge with Bank Austria AG (BA) in a stock swap transaction valued at 107.453 billion schillings (7.809 billion Euro). HVB offered one ordinary share for every BA share. Based on HVB's closing stock price of 942.57 schillings (68.5 Euros) on July 21, the last full trading day prior to the announcement, each BA share was valued at 942.57 schillings (68.5 Euros). In an initial move, BA was to combine all its business operations into a new subsidiary which was then sold to HVB in exchange for 114 million new shares. BA, now a holding company with a 22% stake in HVB, was folded into the latter by exchanging its stockholders' shares for the newly issued HVB shares. Following the deal, AVZ Savingsbank, Allianz AG and Munich Re held 5.1%, 13.7% and 5% of HVB respectively. The second largest acquisition was conducted by Commerzbank AG (CA), when it acquired a 60% interest plus 1 share in the Kiev-based Bank Forum JSC (BF). The total deal was 2.942 billion Ukrainian hryven (429.12 million Euros/\$600 million US). The transaction was approved by the regulatory authorities. Concurrently, CA was granted an option to raise its interest to 85% from 60%, by acquiring a 25% stake in BF. In the second place of the list, the German Deutsche Bank acquired Credit Lyonnais Belgium (CLB), a unit of French majority state-owned Credit Lyonnais SA (CL) for 20.597 billion Belgian francs (593.812 million Euros) in cash. Originally, in July 1998, French majority state-owned CL disclosed that it was seeking a buyer for its CLB subsidiary. CL was required to sell assets in exchange for a French state rescue plan. Upon completion, CLB was renamed Deutsche Bank SA/NV. The following third place in the list is also occupied by Deutsche Bank who acquired Banca d' America e d'Italia from BankAmerica for 828.3 billion Italian lira (503 million euros). BankAmerica sold the unit to raise cash and to exit the retail banking business outside of the United States. The divestiture was part of a restructuring plan that thwarted First Interstate Bancorp's attempt to merge with BankAmerica. BankAmerica sold off several billion dollars' worth of assets, cut costs, and announced a plan to raise \$1 billion in new equity. First Boston advised BankAmerica on the sale of Banca d'America.

Table 12: Ranking with the largest deals made by German banks

Acquirer Nation:									
Germany									
Acquirer Name	1986	1989	1998	1999	2000	2007	2008	2017	Grand Total
Target Nation									
Target Name									
Germany (deals >100€m)									
Bayerische Hypo-und AG					5,927				5,927
Austria					5,927				5,927
Bank Austria AG					5,927				5,927
Commerzbank AG						486			486
Ukraine						486			486
Bank Forum JSC						486			486
Deutsche Bank AG	488	1,200	484	47		120	770	39	3,148
Belgium			484						484
Credit Lyonnais			484						484
Italy	488								488
Banca d'Italia	488								488
Netherlands							770		770
ABN AMRO							770		770
Turkey						120			120
Turkiye Bankasi						120			120
United Kingdom		1,200							1,200
Morgan Grenfell		1,200							1,200
Grand Total	488	1,200	484	47	5,927	606	770	39	9,561

Source: author computation. Eikon Thomson Reuters M&A database

In third place, Deutsche Bank AG (Deutsche) acquired the business unit Netherlands (BU) of Amsterdam-based ABN-Amro Holding NV (ABN), from Fortis Group NV, for an amended EUR 700 million in cash. Originally, Deutsche offered EUR 709 million in cash. The transaction included two corporate client units, thirteen commercial advisory branches, parts of Hollandsche Bank Unie NV and IFN Finance BV. Originally, in April 2008, ABN announced that it was seeking a buyer for its BU. ABN was a majority-owned unit of Royal Bank of Scotland Group PLC. Ahead in the list Deutsche Bank AG also acquired the institutional cross-border custody business of Istanbul-based Turkiye Garanti Bankasi AS, for 191.912 million Turkish liras (108.505 million Euros). The last transaction in this top list was conducted by Deutsche Bank when it acquired Morgan Grenfell via a 550 British pence per share (5.58 Euros), or 950 million pound (1.28 billion Euro) bid. Earlier, Banque Indosuez agreed to raise its stake in Morgan Grenfell from 4.4% to 24.8% by acquiring 31.6 million shares from Willis Faber for a total of 137.4 million British pounds (204 million

Euros), but tendered its 24.8% stake to Deutsche Bank. Grenfell, which had been unenthusiastic about Indosuez' interest, agreed to Deutsche Bank's offer. Baring Brothers advised Morgan Grenfell, and Kleinwort Benson advised Deutsche Bank.

## **2.2 Basic terms of M&A strategy**

An M&A is a mean to achieve a certain business strategy. The process of an M&A includes a complete sequence of activities ending in the transfer of ownership from the target to the acquirer. Having a defined process does not mean that the overall M&A activity will become more time-consuming or have extra workload when a new investment opportunity appears. It means that all the M&A investments, whether planned or opportunistic, will have a perfect fit to the overall business strategy of the bank. Having a well implemented M&A process will enable a faster and more efficient decision making process with informed stakeholders. The M&A process described in this thesis has two main phases: A) before the decision of the deal is accepted and done, and B) after the decision is taken with all related integration activities. The complete process-phasing waterfall of an M&A may be structured in ten steps: 1<sup>st</sup> business plan, 2<sup>nd</sup> acquisition plan, 3<sup>rd</sup> search for potential targets, 4<sup>th</sup> Approach strategy and pre-agreement, 5<sup>th</sup> The confidentiality agreement and term sheet, 6<sup>th</sup> Letter of intent (LOI), 7<sup>th</sup> Negotiation, 8<sup>th</sup> closing, 9<sup>th</sup> integration implementation, 10<sup>th</sup> evaluation of the deal post-integration. We focused on the first seven phases.

### **The Business plan**

A business plan (BP) shall be made including extensive research addressing markets, industry, and economic areas. A business plan framework may be developed with the following components: external and internal analysis, mission statement, objectives, business strategy, implementation strategy, functional strategy, and strategic controls.

### **Acquisition plan**

Once the senior management of a bank decide to proceed with an M&A as a vehicle to achieve the business goals, the acquisition plan shall start. First, various documentation and elements shall be aligned and collected. This preparation of the plan may include several criteria and guidance taken from the business plan to be fully aligned with the goals of the bank. In addition, the acquisition planning may integrate the goals to achieve, the financial resources, the process, the responsibility for the acquisition, the main stakeholders involved, post-integration framework, and a timeline. The key to success at this stage is to bridge the business plan with the acquisition plan as follows:

- **Financially:** If the BP of an acquiring bank has objectives to achieve rates of return equal or exceeding the cost of equity or cost of capital in 5 years, the acquisition plan shall include selling banks that would have minimum return exceeding the equity or capital hurdle rates. If the BP requires a minimum ratio of debt/equity or debt/capital of

xy% during the following 5 years, the acquisition plan must reflect the selection of banks with these ratio requirements, and with cash flows exceeding the minimum excepted capital thresholds.

- **Growth, size, diversification of income:** a bidding bank sets the objective in the business plan to grow the annual revenue by x%, the earnings per share EPS by y%, and the operations cash flow by z%. The acquisition planning shall select target banks with at least x€m revenue, y% EPS, and z% cash flow growth per year. In addition, the screened target banks shall be able to attract new customers resulting in more xyz€m per year during  $n$  years. If the acquirer sets the goal to reduce the income seasonality in x%, the selling bank shall have the income periodicity uncorrelated with the buyer.
- **Technology, flexibility, R&D:** the target bank shall hold a unique FinTech product, patent, or license. The selling bank shall have the flexibility of servicing customers with a flexible financial portfolio. The acquired bank will have started innovative R&D solutions to digitalize the financial platforms accounting to x% of the yearly revenue (e.g. blockchain, digital CRM, E-Auction factoring, among others).

### Searching for feasible target candidates

This phase assumes that the business plan and the acquisition plan are already fully completed. Considering that the business plan may have summarized that a cross border acquisition of a new bank is required to meet the yearly targets, and the acquiring plan has already collected important inputs to make it viable, it is time to search for a target. In the first step to initiate the search for potential suitable candidates, it is necessary to define: a) the maximum amount to pay for the transaction (e.g. cash, stock, or both); and b) the ideal country or European region (west or east). The second step consists of making a list of prospective candidates to be acquired which would fit with the determinants of the acquisition. For this purpose, the most common way is to research an analysis through several websites providing specific financial information relevant to the evaluation of their fit. Several websites provide this information such as Thomson Reuters, Bureau Van Dijk, Capital IQ, Dun & Bradstreet, among others. Consulting firms, investment banks or brokers may also be able to provide this list with targets charging their advisory fee respectively. This research phase would end with a short list of eligible candidates having potential to be a good fit to help to reach the long term business plan of the acquiring bank.

### Approach strategy and pre-agreement

- **Approach Strategy.** The preparation for the first contact made with the short listed banks may be a crucial breaking point in the future success of the whole transaction. The approach to each target has to be made with a tailored strategy according to several factors. The first contact shall be prepared in advance, individually taking into consideration factors such as: ownership (private or public), size, existence of personal relationships with the board, among other factors. The first contact has to be made with

the highest level of the target bank, if possible in private to ensure confidentiality, and include an attractive rationale of the intention. If convenient, the ideal is to use an intermediate company to mediate the transaction such as an investment bank, a broker, a consulting firm, or if existing a common shareholder (Renneboog, Zhao, 2013). Confidentiality and discretion are very important especially with publicly traded banks. A simple rumour made public of a prospective deal would be likely to start a series of speculation affecting both bidder and seller, with an unpredictable impact in the price of the stock going forward (Ishii, Xuan, 2014).

- **Pre-agreement.** During the initial contacts or beginning of the discussion process it is also a procedure to issue a proposal for a confidentiality agreement, and a letter of acquisition intent (LOI).

### **The confidentiality agreement and term sheet**

The confidentiality agreement is a legal agreement binding all the involved parties to confidentiality, it shall include clauses for disclosure of information. The agreement may be specific about the information that each party has to make available for the other and have a reasonable time limit. The term sheet is an attachment to the agreement and it outlines the price range that the buyer is willing to spend in the deal. The sheet also includes a list of assets and stock that are being purchased, and a no-shop legal provision. The no-shop clause aims to prevent the buyer going to other eventual parties interested in acquiring the bank and trying to make an auction of the deal for its own individual benefit.

### **The letter of intent (LOI)**

The letter of intent may include the confidentiality agreement and term sheet, or even simply not exist. In contrary to the previous two documents, the LOI may not be acceptable to all the parties because it also may include complex conditions. The LOI describes the rules and responsibilities in the process for all the involved stakeholders, specifies the payment methods, and a high-level structure of the transaction. It shall bind both parties to the deal with conditions such as the allowance of each party to perform respective due diligence on each other, specifying the terms and conditions of the assessments, and the financing mix of debt /equity planned to use to pay the deal.

### **Negotiation**

The negotiation phase includes four phases: I) due diligence, II) valuation, III) funding design, and IV) deal structure.

- I. **Due diligence.** From the perspective of the buyer, due diligence serves the purpose of validating the initial valuation or identifying risks or opportunities that may impact the initial assumptions. The goal is to go through three areas of vital interest for the valuation: operating synergy, financial synergy, and control synergy. The operation

synergy will identify potential sources of value in functional areas, productivity output improvements, scaling of purchase and volume discounts, facilities management, and organizational realignment. The financial synergies will also be analysed by identifying all sources of existing debt, accounting flaws, tax optimization, by identifying potential new access to lower cost of financing, and by improving the working capital management. Other topics may be assessed during the due diligence process in the areas of control, marketing, production, among others. The due diligence may be performed in threefold reviews. The acquirer will try to spend as much time as possible going through the seller's documentation. The seller may want to assess the capacity of the buyer to financially conclude the deal and meet its senior liability commitments. The lender financing the transaction, the advisors of both parties, and the banks, may all undertake due diligence.

- II. Valuation:** For informed decision making on buying or walking away from a bank acquisition, knowing the value and what the determinants of that value are is essential. The valuation assumes that exist premises that combined allow to make acceptable estimations of the true value of assets and their expected economic benefits. A well done valuation will enable a realistic price of the deal reflecting the cash-flows. There are three main approaches to valuation: a) intrinsic valuation, b) relative valuation, and d) contingent claim valuation. The intrinsic valuation connects the value of a bank to the present value of the expected future cash-flows. The most common denomination of this approach is the discounted cash flows model. The main drivers of a valuation calculation are: a) asset lifecycle or period, b) cash flows during the asset lifecycle, c) discount rate applied to the cash flows to calculate the present value, and e) growth rate. The relative valuation estimates the value of a bank related to the value of other comparable banks using variables like earnings, book value, revenues, among others. The multiples have underlined the fundamentals of valuation behind the calculation. There are several multiples used extensively across the financial industry, and these are some of the most commonly applied: Price/Earnings ratio to determine growth, pay out and risk, the Price/Book Value ration to determine the Return On Equity, to name just a few. Contingent valuation. This approach is also called Option valuation and is used to derive value from a payoff on a call/ put option, and it occurs when the value of an underlying asset is different from the exercise price (Aswath Damodaran, 2015). The value of the M&A shall not be openly disclosed during the pre-discussions and information about the price could be referred to using a range. The range can have the form of a total sum range, or also in terms of an earnings multiple.
- III. Funding design.** The last subpart of the negotiation phase is about the development of the financing mix used to support the deal. This assumes the elaboration of a balance sheet, a profit and loss, and cash flows forecast for the banks. These financial statements shall contain the price of the deal, and all costs and revenues incurred during and after the transaction is completed. These statements will also be used to formalize the final financing request to the lenders, and include all payments methods whether in cash, stock, securities, or a combination of them.



- IV. Deal-making.** The deal making component of the negotiation consolidates the deal structure into several parts like legal entity to be formed, payment method, accounting and tax requirements, acquisition vehicle, post-closing integration, and financing.

### **M&A announcement process and strategy**

The announcement of an M&A is a central part of the empirical research included in this study. It plays an important part of the communication in the deal strategy. The communication process starts with the preliminary stage of an idea generation and goes all the way through to the final stage of a post business integration. There are three main pillars to succeed in the overall M&A announcement strategy: I) people, II) planning, III) communication (Sehgal, Banerjee, Deisting, 2012). People are the soft part of the process however, in reality, they are often the most complex part. Variables such as culture, expectations and behaviour cannot be valued in the balance sheet, however they are the key integration locks of an acquisition that may enable positive synergies. The planning involves the whole prior preparation and execution of the deal, starting with the idea generation, the structuring of the transaction, the valuation of the target, the negotiation of terms, the execution of the deal, and the business integration.

The communication pillar is related to both the people and the planning stages. The purpose of the communication plan is to manage the expectations and share the deal strategy externally. Communication streamlines the planning stages with the people that will execute them. Since the starting moment when an investment manager brainstorms an M&A strategy with his team, up to the key phase of the transaction announcement, a high-quality communication plan includes all the involved parties. The top down stakeholders of the communication pillar are shareholders, institutional investors, activist investors (who typically have a strong influence over the management board), regulators, analysts, employees in both organizations, and competitors. The success or failure of an M&A is dependent on how the expectations of investors are managed, and the announcement of the deal is the key event across all communication phasing stages. Managing expectations means that the information flow before, during, and after the transaction will be a key determinant of the M&A outcome. The existing main shareholders are normally briefed at an early stage by the CEO about any relevant acquisition in the short-term outlook. Through this bilateral communication the acquiring or target bank can get feedback to refine the strategy before the announcement is made public.

Concerning the employee's key stakeholders, communication helps to mitigate uncertainty about the deal across the organization by addressing fears and concerns that might arise with the change or ownership. An efficient communication strategy considering people will make it easier to integrate both organizations involved in the deal. Regarding the institutional investors for publicly listed banks, the communication should begin in the very early stage of the idea formulation phase because they may be able to simply block the M&A transaction in later stages. Having full awareness of deal disclosure laws, the relevant banking activities related to acquisitions or divestures shall be communicated to large investors in advance, as a part of the corporate strategy.

The investors can become easily alienated if banks decide unilaterally to considerably shift the activity or size. To avoid this turning away by investors, they should be briefed ahead of the M&A announcement time. Thus, a confirmed public announcement of an M&A will not be considered unexpected, hence a shift in the strategic direction. Institutional investors, portfolio managers or large investment funds do not have to know all the detailed information about prospective deals, however, it is important to systematically brief them and discuss the key strategic decisions to refine the corporate strategy accordingly. Large investors that are not well informed during the official announcement date of a deal may react negatively and gather other potential investors to rally against the bank offering.

The activist investors commonly address a broad range of issues related to poor governance, together with financial and business underperformance. They engage in active positions that often go against the status quo, and may seek to persuade the management board to give-up an M&A that may be risky, or eventually make the bank lose a significant amount of value. The key to deal with activist investors is to keep the communication in a close manner, to manage the relationships with full attention, and to take activist views and requirements into consideration. The timeline for the communication strategy shall consider: I) idea formulation, II) the pre-deal phase, III) the deal announcement, and IV) the post-deal phase.

- I.** The idea formulation takes usually around 12-18 months to be concluded. In this first phase, the communication shall keep the key stakeholders abreast of any relevant development. In this initial phase a bank may typically screen about 150 different potential targets to be acquired using a series of multiple ratios. Afterwards, the analyst narrows the analysis to a short version with just the prospective suitable 5-6 banks that would fit into the M&A strategy. The name of the potential targets that may be acquired may not be disclosed internally to all investors, however, the strategy and the direction that is being followed to proceed with the transaction shall be shared with a few key stakeholders.
- II.** Secondly, the pre-deal phase lasts between 1 and 6 months, and is when the M&A narrative is built. This is the period when the bank engages in conversation with the other party that may be acquired, the due diligence is performed, and when the negotiation process starts. This is the phase when the important topics that are being identified relevant to the transaction will be collected and communicated to the public during the announcement communication. The public relations (PR) team and external advisors are hired for both bidder and acquired banks, and the contingency leak plan is prepared in case an unplanned leak happens. The leak plan shall be prepared in case of any information about the deal becomes public before the planned announcement date. This is a very important preparation part because a leak may influence negatively the value of the stock during the event window period.
- III.** The deal announcement is the key date of the event study methodology applied in this research. The announcement includes the timing of the transaction, the initial press release, it shall manage the overall expectations, and communicate externally the expected synergies. In the announcement, the investors will have access to the detailed

information related to the value of synergies and react accordingly. Their reaction will have an impact on the price per share following the event date.

The announcement shall be aligned with both sides of the transaction, and the message shall be consistent. In the middle and long run, it is also important to keep aligned with all stakeholders in terms of communicating the successes and milestones achieved. Together with the strategy, the communication of synergies shall justify any premium paid for the target in a clear manner. It shall also answer the following main questions: A) will the target be fully integrated or kept as a separate entity? B) what is the expected timeline to accomplish the deal? C) what is the business model change after the control is taken over? D) when will the costs have the transaction paid-back?

The timing of the public announcement is a cornerstone of success in a transaction. The M&As announced before the start of the trading day were more prompt to become successful and completed than the deals announced during the trading day. Deals announced before 9am had a completion rate at the level of 87%, while the deals announced after fell to 64%. This rate is linked to the assumption that deals announced during the trading day are a response to an unplanned leak or rumour about the deal. On the day of the announcement, the content of the press release is critical and it will set the tone to any proceeding media news.

The initial impressions spread across the media are crucial to set the expectations of the investors and new prospective shareholders. After the first announcement of the deal, the communication throughout the event day must be kept under control internally and externally to keep the sentiment about the transaction continuously under control. When the announcement is made as planned, then all the conditions are in place to lead the deal to success. However, when a leak about the transaction is externally perceived, the bank shall be prepared to immediately release a contingent announcement. There are intentional and unintentional leaks.

The unintentional leaks may destroy the shareholders' value because they often carry misinterpretations and lack key points that explain the rationale of the deal and the premium paid. Banks are usually prepared for these pre-deal information leaks with a plan to quickly counter a leaked unofficial announcement, and to readjust the true nature of the deal. Otherwise, the longer a leak is spreads externally, the more damaging to the stock value it can become. The best strategy to prevent these leak events is to prepare a statement well in advance that can be rapidly released to the media coverage, thus addressing efficiently unaware investors. Leaks can be an effective strategy during the pre-deal negotiation period, and when intentional, are often regarded as a means to progress in the negotiation process. This strategy is mainly used when one of the parties is not satisfied with the progress of the deal making. The targeted bank may use intentional leaks to force the bidder to speed up the due diligence analysis or to create a more competitive bidding environment. The acquirer may also leak confidential information on purpose to force themselves out of the deal, or if the outcome of the due diligence becomes less attractive.

- IV.** The post-deal phase includes the integration plan. It may last a period longer than 100 days. In this phase, the main milestones of the deal are communicated, and the entities are under tight scrutiny. This is the time that both organizations try to work together and become a lean structure enhancing the efficiency gains communicated during the announcement date.

### **2.3 Statement of the problem**

After the financial crisis in 2009, the banking system in Europe suffered from tightening budgets and unprofitability. In order to be able to strengthen the financial solvency ratios, banks had to raise substantial amounts of capital to improve the profitability and liquidity. This slow increasing of financial resilience is a reflex of the positive jump in the equity tier 1 capital (CET1) from 7% in the year 2007 to 14% in 2017. Despite currently the overall banking system is solvent, there are existing raising concerns in relation to the low profitability during the last decade (Daňhel, Ducháčková, Radová, 2016).

Regarding the bank valuations, there is still a significant gap between the average price-to-book ratios, which across Europe presents the average of 0.77 ratio, comparatively to US with 1.26 ratio points. These ratios reflect the subdued profitability in the banking system in Europe, and can be explained by the slow recovery pace in several countries, by financial cyclical factors, and by the political-economic challenges and structural reforms in Europe. The current return on equity (ROE) ratio cross European banks is slowly decreasing year-over-year reaching a staggering 3% in the year of 2016, while in comparison with other peers: US with 8% ROE, Nordic banks with 10%, and Swedish banks with 12% ROE. All of the latter countries have in common negative interest rates which are, on average, lower than the average of European economies.

The overall profitability of banks decreased continuously during the years 2016 and 2017, mainly due to factors related to economic cycles and to the outdated structure of European industry. The current cycle that banks are passing through revealed weakened revenues, and often negative interest rates. The main factors affecting profitability stem from the remaining inventory of non-performing loans (NPL) still on the balance sheets of many banks since the financial crisis in 2008. Furthermore, there are also challenges in managing efficiently the structural costs, and the surplus of capacity in relation to market demand.

The sum of these factors related to the banking profitability, opened the way to the M&A consolidation opportunity as a means of improving efficiency and strengthening structural redundancies. A well managed M&A could deliver significant cost synergies, efficiency gains, smaller general and administration expenses, improve revenues and lower credit costs. This necessary transformation would change the existing long-lasting unprofitable banks into high profitable resilient entities, with larger scale and international reach.

This research will primarily examine the fundamental relationship between the banking cross-border mergers and acquisitions in Europe, and the respective value creation for the shareholders. The value creation will be analysed by observing the abnormal returns during the event study. Secondly, this study will identify the determinants fostering the cross-border European M&As, and the wealth effects to the bidder, to the target, and to the combined entity after the banking consolidation is announced. This research topic adds value to the existing literature because it summarizes recommendations to overcome the persistent lack of profitability among European banks. The study also reviews the regulatory pan-European framework, and suggests improvements to enhance the profitability in the industry. Despite the existence of several prior studies about the determinants and value of synergies in M&A transactions, most of the existing research was made with the focus solely on the financial assessment and outcome of the transactions. This dissertation contributes to a solution to the lack of liquidity in the European banking system, and to prevent the existing growing risk of insolvencies; transforming the banking industry into a resilient and profitable ecosystem.

## **Base Theory**

After the last European M&A wave between the years 1998 and 2007, the financial system configured a new era of growing levels of consolidation, transforming the prior fragmentation into a new system of national oligopolies, however with few cross-border large scale players (Teply, Starova, Cernohorsky, 2007). Despite further consolidation in the banking system being expected, the financial crisis severely hit the economy and changed the legal and financial landscape in Europe. The financial crisis triggered the decline of the previous M&A wave due to the new constraints of liquidity, the tightening of Basel regulations, and the epidemic financial fear among institutional investors that invaded Europe.

In this study, we verified if the European cross-border banking M&As created value to the shareholders during the event period. The topic of mergers and acquisitions was extensively analysed in the literature from the perspective of wealth effects (Ruback, Jensen, 1983), among other more comprehensive competitive reviews (Netter, Brickley, Jarrell, 1988). Concerning the wealth creation effect after the announcement date, the main consensus has been that M&As do create abnormal returns to the shareholders of the acquired firms (Schipper, Thompson, 1983). While for the targeted banks the M&As had a positive effect, for the shareholders of the bidding banks there was no evidence that the wealth effect is negative or positive (Firth, 1980), consensus widely accepted until 2008.

## **M&A Key EC Regulations**

The European Commission (EC) implemented several legislative regulations addressing M&As, containing the major rules primarily for the assessment of competition and concentration, and secondly to regulate the procedural steps that should be taken to trigger an application. The EC also published notices, guidelines and best practices concerning the relationship between parties during the application for consolidation process, as well as published models and guidelines for divestiture commitments and for trustee mandates.

The legal base released by the council regulatory board with the procedure for controlling merger and acquisition transactions between entities has this legal nomenclature: EC No 139/2004. This procedure outlines the succeeding compulsory steps that have to be followed to submit a cross-border European M&A transaction: notification of concentration, initial examination by competent authorities, decision (article 6 and 8), and the possibility to make a process review. The procedures under the EC mergers regulation include the core provisions of the treaty under articles 101, 102, 106 of the TFEU. The general rules related to mergers included in the legislation framework on the control of concentrations between undertakings (EC, No 139/2004 of 20 January 2004), and the implementation regulation (EC, No 802/2004 of 7 April 2004) form the base for the necessary information concerning commitments and notifications required from the concentration pursuant. The necessary notice for the purpose of community competition law (OJ C 372, 9 December 1997), and the regulation on the assessment of horizontal and non-horizontal mergers (OJ C 265, 18 October 2008), together make the central guidelines regulating the restrictions related to mergers.

### **ECB policy initiatives to enhance consolidation**

During the last decades, the European banking system has grown significantly, however, since the financial crisis, the banking industry has become significantly smaller. Since the year 2008, the number of banks in Europe has decreased by 20% to an actual total number of nearly 5,000 entities, while the number of employees in this industry has shrunk by around 300,000 to a total of about 1.9 million employees. The consolidated value of total assets among European banks reached a peak in 2012 of around 340% of the aggregated GDP, however, since then the current ratio has fallen to 280% of GDP. Despite this downward trend, in the US the total amount of banking assets is comparatively much smaller with 88% of its GDP. This reality also represents the weight that the capital markets have in the US financing of its economy. Taking this benchmark in consideration, it is possible to assume that there is an overwhelmingly higher number of banking institutions in Europe than in the US. This lack of scale in the European banking system also has a negative impact on the individual profitability of each bank, and on their capacity for earning returns above the hurdle rates respectively. Taking into consideration the advanced maturity stage of European banks, the high ratio of banks in comparison to the peer regions, and the low profitability, the banking system is leaning towards the path of wrong-functioning or even to generalized insolvency. As a solution to bring stability to the economy, many governments used taxpayers' money to provide liquidity to the markets, financially rescuing many banks that were insolvent and aiming to signal a certain climate of confidence and restructuring. This financial aid also had a side effect of leveraging the moral hazard across failing banks while helping them to avoid bankruptcy.

One of the newly created main structures to effectively tackle banks that do not have capacity to prevail, is the creation of the Single Resolution Mechanism (SRM), which during the year 2017 had already successfully saved several large banks.

## **M&A and European banking profitability – way forward**

To revert the trend of increasing unprofitability and likelihood of failure in the banking system, the solution defended by the ECB, several authors, and by this study lays out the concept that more favourable conditions for cross-border consolidation should be created. The banking consolidation will enable the capacity for enhanced financial resilience and industry profitability. High levels of banking consolidation would also create more resilient funding resources, increase the credit liquidity, stabilize the economic outlook, improve the operational efficiency, and decrease the financial risks. At the supervision level, the consolidation also would set the baseline for the creation of an entity with European scope to control the activities. With more cross-border banking M&A, the sector would become more profitable and efficient, gaining from the economics of scaling up the operations and diversification of portfolio. Despite this commonly accepted assumption, the number of cross-border mergers has been declining since the year 2008, reaching the lower level in terms of value and quantity of deals since in the new millennium (Sutorova, Teply, 2013).

There are several reasons explaining this downward trend. The consolidation through M&A is typically a risky, uncertain, expensive, and tangled activity. From the balance sheet perspective, when a bank screens potential partners for consolidation there is a clear uncertainty about the true quality of the assets on the balance sheet and in the capacity for generating net profits. In Europe, many banks still have an excess of non-performing loans, lacking transparency, and with difficult access to external diligence assessments with quality. From the business model perspective, banks seem to be uncertain regarding the best way to go forward in terms of expansion. From the regulation point of view, ten years has passed since the Basel was concluded, and the banking system still has an irregular environment with an adverse climate to enhance cross-border consolidation. At the tax and legal level, the differences between countries remain substantial, obliging the expanding banks to have the administrative flexibility to adapt locally to country. Hence, this financial environment leads to a situation where cross-border acquisitions become less interesting due to the increased complexity and the uncertainty of obtaining synergy benefits. Assuming the existence of all these uncertainties, individual banks would become more likely to pursue a cross-border M&A when the legal and fiscal European regulatory framework would be more favourable.

## **Study Significance and Scope**

The low rates of value creation in cross-border M&As are widely accepted and extensively researched by many authors. The average rate of failure is around 70% across industries, regardless of the existence of multiple studies describing how to create value gains from synergies and control (Homburg, 2006). These studies show the mechanics of how to increase the value with integration in organic areas, for instance in tax efficiencies, credit access, scale up of operations, among other efficiency gains (Danhel, Duchackova, and Blahova, 2013).

This study adds a valuable and unique approach to the topic because of its unique theory. It defends the theory that cross-border banking M&As are the main feasible solution to increase value and enable profitability in the financial system. There exist a limited number of authors

that also advocate the theory that cross-border M&As in the banking system highly benefit from consolidation. In fact, the contextualization of the economic momentum during each economic period will define if the likelihood of creating value holds true. Moreover, this study suggests that a more comprehensive understanding of the economic lifecycle, competition environment, regulatory framework, legal, and taxation obligation will be advantageous determinants of value creation in cross-border banking M&As. The results of this thesis add value to the existing research and to the banking system, setting the baseline to pave the way for the banking sector through further cross-border consolidation.

Due to the large scope of economic impact that a cross-border banking M&A has in people's lives and business wealth, this study is of special significance. The study of fundamental changes in the structure of the European banking industry, which has shown increased granularity since the financial crisis in 2008, will encompass a significant impact on value creation and economic performance. This study therefore advocates that banking cross-border M&As enhance shareholder value gains and profitability, as well as the quality of people's lives, because of larger profitability in the banking system. Furthermore, even though the literature suggests that there is no clear evidence that consolidation creates value, this research argues that there are external factors that affect this widely accepted assumption. The reasons leading to the erosion of shareholder's wealth and poor banking profitability are related to the unbalanced large number of financial players in the market, to the balance sheets still overloaded with non-performing loans, and to the complex European legal framework. The main importance of this study is to find evidence that supports the concept that the only way to solve the unprofitability and lack of value creation is through an increased number of cross-border M&As.

A number of authors have recently supported the new wave of thought that M&As are perceived to be the most feasible solution to overcome the lack of banking profitability. Recently, Nouy, Lautenschlager, and Angeloni (2017), collaborating as executive members of the supervisory board of the ECB, also advocated the need for change from the old status quo saying that M&A did not create value in the banking system, to a new era of active cross-border consolidation (European Systemic Risk Board, 2014). The empirical findings of this research, and a wider scientific discussion about the topic, shall certainly contribute to opening the path to a new financial environment where banks will become encouraged to proceed with necessary cross-border mergers. This study defends the theory that banking cross-border M&A consolidation is the only way to improve the profitability and financial resilience of the financial system in Europe going forward. This solution is considered in this study as the main possibility to avoid the current high likelihood of insolvency and failure across the European financial industry. This line of conclusion is supported by the overwhelming unprofitable number of competing banks in the market. Taking into consideration the essential role that banks play in the whole European economy, the unprecedented degree and importance of its consolidation and integration prospects delivers an exceptional level of interest. This study was built up in the existing theory, however, it adds the concept that cross-border M&As in the banking system do create value. The empirical findings are limited to short term event study results related to the transaction



window period of the announcement, and does not examine the long-term impact on the European economy.

## **Literature review**

This study analyses how cross-border M&As in the European banking industry impact the shareholder's wealth. Specifically, it examines the interconnections between consolidation with stock gains, and the economic determinants that may lead to an environment which would enhance an increasing number of M&As. Consolidation takes effect as a result of mergers and acquisitions between players across markets. The M&As are usually driven by the willingness of shareholders and boards to gain as much weight as possible in the market, to acquire competitors with a competitive advantage, to increase the value per share for shareholders, and to more effectively and efficiently manage scarce resources. Certainly, the level of consolidation has an effect over the European financial system. The exclusive role banks play in the economy is seen by law makers and governments as a system stabilizer, as a financial resources provider, and the main economy pillar.

Banks systematically seek higher levels of liquidity to provide enough financial resources to the economy. To this end, a consolidation strategy via an M&A is often chosen, and the primary targets observed from the perspective of becoming a future acquisition are the commercial banks, brokerage services, activities covering areas of insurance, private equity, fund management, and securities (Musílek, P., 2012). When banks expand their activity through M&As they are likely to reduce their exposure to external crises due to the increase of scale, earnings, and profitability. In addition, the wider range of markets available to the operations of a bank is likely to significantly reduce the risk of insolvency by the increasing diversification of income sources. The growth of operational scale gained through M&As opens the access to governmental guarantees and safety nets exclusively available to banks that play a significant role in the economy. The study of banking cross-border M&As has relevant importance because of the impact that they have on the lives of European people. The specific nature of banking and its capacity to provide liquidity to the economy reinforces the importance of this topic.

## **Banking concentration, competition, and financial stability**

The growing international competition operating at a global scale imposes large pressure against the smaller banks that do not have enough capacity to play a significant role at a regional level. Taking into consideration the successful global expansion of several banks worldwide, the growth through consolidation relies on how well the business strategy and integration models are designed (Deltuvaite, Vilma, 2012).

There are relevant studies in the field of banking concentration and its relation to the stability and efficiency of the banking sector, and the systematic risks arising from acquisition activities. The interconnections between banking concentration and financial stability were extensively covered by scientific literature. The consolidation processes in the banking industry and the importance that it has over the economy was studied by Jesiene (2011). Notwithstanding, there

are authors that have contradictory outcomes and views about the positive impact that consolidation has over the financial stability (Levin, 2003, Ruiz-Porras, 2008, Heimeshoff, 2009). There have been several researchers supporting the school of thought of “concentration-stability” which advocates that M&As do create value and stability, such as Thakor (2000), Boyd (2004), Park (2007), Allen (2000), Beck (2006), Meon (2005). The approach defending that banking concentration poses high levels of financial stability is also supported by Vives (2000), Meon (2005), and Lenvin (2006). The second school of thought called “concentration-fragility” supports the approach that higher levels of banking concentration leads to increased vulnerabilities in the system and was followed by the researchers Uhde (2009), Beck (2006), Miskin (1999), Cetorelli (2007), De Nicolo (2003). Furthermore, there is also a third school of thinking that argues that there is not any existing relationship between the financial stability and the banking concentration, (Ruiz-Porras, 2008).

The literature about banking M&As is quite recent. The majority of authors were mostly concentrated on the effects of consolidation over the financial stability, rather on the value creation to the shareholders of the bidding and target banks. There were studies which were made to quantify the abnormal returns of the bidder and acquired banks separately, and other studies made looking at the total change on the wealth of shareholders (Asimakopoulos, 2009). The event study methodology is conducted by many authors to observe the overall M&As stock performance, while taking into consideration the respective market expectations. The core of this methodology is based on the assessment of stock price change, and dividends, against the market, which is represented by a group of representative DAX stock. The event study methodology dominates the literature, being the most used technique to identify the value created to banking shareholders (Bruner, 2002). The abnormal deviations on stock returns during the period anterior and after the deal announcement are calculated taking in consideration days or weeks’ time or the so called “window period”.

There were several event studies in the literature that varied in terms of sample size, number of M&A announcements, time length over which the event study model is estimated, and the period in which the abnormal returns are observed and calculated respectively. The sample sizes across literature ranged from a small sample with 11 (Pettway, 1985), to larger samples of 138 (Hawawini, 1990), or even with larger population. The time length period during which the models were estimated varied significantly from a smaller number of 41 days (Wall and Gup, 1989), to longer period with 238 days, or even 108 weeks (Neely, 1987). The period concerning the abnormal return observations varied from the day before the event and lasted to the day after. Other observations had an amplitude from -50 to +20 days (Dubofsky, 1989), or longer. While some studies included extended periods before and after the event, other studies just considered the days immediately before and after (James, 1987), and (Fraser, 1992). A great number of existing literature applying the event study approach solely considered the one-step standard return calculation to the model, and only a very few made market adjusted returns or the also called mean adjusted market returns (Hawawini, 1990). In addition, many event studies included daily stock returns, and just a minority applied the weekly stock returns.

During the period between 1989 and 1996 the abnormal stock returns from twelve European countries were included in an event methodology study based on a sample of 56 bidding banks and 17 acquired banks (Rad, 1997). The evidence of value creation from the combined entities researched by Tehranian (1992) are mixed, while Zhang (1995), found evidence of positive wealth effects to the combined entities during the period of M&A announcement. Another study made with cross border US banks also supported the results of creation of value. In 2002, Amihud made a study exclusively with cross-border acquisitions using the event study methodology, and the spotlight of the research was on the conceptual value of control. To select an eligible bank to study this topic, a minimum of 51% of ownership transfer was required to be selected to the sample in analyses. The period reviewed was between 1985 and 1998 and the sample had 214 deals. The results revealed that across the period of 12 days around the merger announcement (10 days before and 1 day after), the bidders accumulated negative losses of about 1%. The consolidated value of entities after the merger was concluded was also negative with the value of -1.27%.

In general, until 2007 the consolidation results transversely in Europe did not show consistency in terms of value creation measured by abnormal returns to combined entities after the deal. These findings were not necessarily incongruent with the perspective of investment bankers when defending the argument that M&A in banking creates value and operational efficiencies. Both views shall in fact be correct because the methods to analyse the creation of value differs. As an example, while the economists would claim that gains in value arise from the decrease in expenses against the value of total assets, the bankers would mainly look at the percentage of costs cut after consolidation. In conclusion, most of the reviewed findings existing in the literature show that cross border consolidation in the banking system through M&As do not create significant value to the bidding shareholders, while on the other hand the vast majority create gains in value and efficiency to the target company, and neutral wealth gains to the combined entity.

## **Determinants of value**

The value of an asset is determined by the sum of its expected cash flows during a period, the growth of that asset value, and its riskiness or discount rate. This means that the value of an asset is represented by the net present value of the expected cash flows, during the lifetime  $N$ , and a discount rate  $r$  represents the mix of debt incurred to fund the asset acquisition (Tichy, 2001).

$$\text{Value of an asset} = \sum_{t=1}^{t=N} \frac{E(CF)^t}{(1-r)^t} \quad (1)$$

If these are generally accepted assumptions to value an asset, the valuation of a company also incorporates the growth of the cash flows in the future. The cash flow estimation shall be after tax and reinvestments. The other way to calculate these cash flows is to measure the reinvestment ratio to after-tax operating income.

$$\text{Free Cash Flow to the Firm} = EBIT (1 - t)(1 - \text{Reinvestment Rate}) \quad (2)$$

The expected growth in the operating income is a significant input in valuation. The variables applied to determine the growth rate when the control changes are related to working capital (inventories, plus receivables, minus payables), earnings forecasts, and capital expenditures (Kaplan, Weisbach, 1992). The asset life from a publicly traded company does not have a finite life, therefore a period should be defined in the valuation of synergy. The most common approach used to compute the terminal value is the discounted cash flow model, assuming that cash flows will grow at a constant rate beyond the terminal year.

$$\text{Terminal Value} = \frac{EBIT_{n+1}(1 - t)(1 - \frac{g_n}{ROC_n})}{(WACC_n - g_n)} \quad (3)$$

The variables used to calculate the value creation at the end of an asset's life are: stable growth rate, the cost of capital at that time, and the return of capital (Linn, McConnell, 1983).

### **Earnings Per Share (EPS)**

The earning per share metric sets out how to calculate both basic earnings per share (EPS) and diluted EPS. The calculation of basic EPS is based on the weighted average number of ordinary shares outstanding during the period, whereas diluted EPS also includes the dilutive potential of ordinary shares (such as options and convertible instruments) if they meet certain criteria. Several researches have proven that the EPS metric is used most frequently to evaluate M&A performance, despite the existence of several opponents. There are two types of earning per shares: EPS accretion is the total profit allocated per each outstanding stock, and EPS dilution is applied if all convertible securities are exercised (Meeks, 1977).

$$\begin{aligned} EPS \\ = \text{Net profit or loss attributable to ordinary shareholders during a period} \\ / \text{by the weighted average number of ordinary shares in issue during the period.} \end{aligned} \quad (4)$$

### **The value creation of synergy and control in banking M&A**

Often banking M&A deals are justified with the assumptions that they create synergy, and will pay back the investments involved in the transaction. The synergy may be broken-down into two types of synergies: operating and financial. The banking M&A data examined was selected with the aim of identifying if there is any evidence of value creation in European

cross-border transactions. Prior literature assessing the value of synergy tested the value sensitivity of the potential acquisition when calculating different case scenarios (Bhide, 1993). In a M&A, synergy is the additional value that companies expect to create when combining all the opportunities to add value that otherwise could not happen independently (Bradley, Desai, 1988).

There are two main schools of thought regarding the worthiness of valuating synergies. One school argues that it is useless to value it because there is little evidence that it is possible to attach any value to synergy, taking into consideration so many different assumptions and variables. If the former school of thought is correct, companies should not pay such large sums of premiums to synergies if they cannot value it. The latter school of thought is the one that this thesis supports, and it assumes that it is possible to make synergy estimation despite the fact that assumptions are made with an unknown future. Even though the valuation process of synergy accounts with growth expectations and cash-flows with questionable certainty, it is possible to measure the expected effect of synergy (Moreira, Janda, 2017).

### **Financial Synergy**

The financial synergies are seldom related to the use of cash capacity, financial diversification, tax benefits, and higher debt capacity (Healy, Palepu, Ruback, 1992). Tax benefits can be assumed to increase value, if there is the possibility to explore certain legal opportunities and joint financial synergies. The most common situation is when one company is losing money and the other has significant income. The merger of both can be used to offset tax burdens and deductions contributing positively to tax efficiency. Some countries allow companies to receive additional tax deductions as a claim regarding the rate of return from equity book value. The companies eligible for this specific tax benefit after the M&A is concluded, may claim the tax deduction at the same level of the given tax rate, which will respectively increase the present value of cash-flows by the related interest tax savings. Other types of tax savings can arise from writing up assets, however this option depends on the legal framework of each country (Hong, Kaplan, Mandelker, 1978). Another tax synergy contributing to start an M&A is related to the favourable treatment granted by tax authorities when a bank is allowed to reflect higher market value of its assets, and claim depreciation from these upward revaluated assets.

Debt capacity is another financial synergy often resulting in an increased valuation. Several researchers investigated the benefits of increased debt ratios. Lewellen (1971) analysed the effect of more balanced cash-flows after conclusion of the M&A deals in terms of risk rating and debt capacity. The authors developed a framework to explain the larger debt capacity after the entities are combined, and how this debt power may affect the wealth of equity stockholders. Other studies argued that the debt capacity is always positively increased after the M&A deal is made (Stapleton, Subrahmanyam, 1981). The assessment of cash strength in an M&A is done by calculating which projects could be taken just using the scarce cash capacity. The opportunity cost of losing these projects is the value to be taken in consideration to the value creation of the combined firm.

## **Value of control in cross-border banking M&A**

The value of control derives from the assumption that the acquiring bank would be able to operate the new entity more efficiently and effectively than before. The dimensions related to the value of control are related to the decisions of the managers, or how a change of managers can affect the value of a bank, considering that it is possible to change the existing management policies (Damodaran, 2005).

These are the four operating key inputs in the value creation process:

- Cash-flows arising from cost savings and economies of scale.
- Growth rates as an effect of increased reach and market expansion.
- Growth period assuming higher competitive advantages.
- Debt capacity taking into consideration lower cost of capital.

The value of control is determined by the business and administration decisions that managers make related to where the investment resources are applied, how to fund these investments, and how much money is returned to shareholders. A cross border M&A may increase the value of a merged bank after the consolidation by three main factors: increasing the cash flows from existing operations by prolonging the growth period, by increasing the growth rate, as well as by reducing the aggregated costs. Notwithstanding, none of these factors are possible if strong management is not in place. The first assessment to be made when banks consolidate is the valuation of the investments in existing assets, and the correlation with the respective hurdle rate. The most common tool that managers have at their disposal to increase cash flows from assets in place may be clustered in the following segments:

- Operational gains: The management of the bank institutions may take advantage from operational inefficiencies and transform them in opportunities translated in value creation and optimization of resources. The gains in operational efficiency and effectiveness shall have a positive impact on the capacity of generating positive cash flows.
- Legal optimization: the largest opportunity arising from a cross border M&A in banking is related to the possibility of moving the legal operations to places where the tax framework is beneficial. It may also be possible in multinational financial institutions to smooth the earnings across regions.
- Disposal of assets: the managers may dispose, scrap, or redeploy the assets with poor performance whether by reallocating their use to a function that could generate higher value, or by selling the asset and cash in the transaction.
- Working capital and reinvestment maintenance: the amount of money reinvested in the post merged entity may often be decreased due to the scale up the business size.

The managers of a consolidated bank with negative or low cash flows may increase the growth rate during the fast growth period, and the drivers of this quick growth may be made in two main ways:

- 1) Higher reinvestment rates with a higher return on capital may result in an increase of the merged banks value. However, the reinvestment value shall increase up to the

extent that will not reduce the cash flows at a faster pace than the increase in value creation.

- 2) The control of the entity after the transaction may create value through the prolongation of the high growth period. The growth rate shall increase at a higher pace than the economy growth rate where the bank operates. On the other hand, if the bank is operating in a very competitive environment, the competing banks are also likely to have the same high growth. In this case, altogether they would become the new market growth benchmark. This possibility reinforces the need of banks to earn an excess of returns above their respective cost of capital.

The acquirers of a bank have the chance to optimize the cost of financing and the strategies related to de rebalance between the cost of debt and the cost of equity. The discounted cash flows have embedded the respective hurdle rate. If the discount factor decreases, the cash flows increase respectively, thus the value of the merged bank also increases. Managers have these main strategies to improve the financing ratio between debt and equity:

- The proportion of fixed costs in a bank related to the equity or capital will determine the volatility of the cash flows over time. The higher these fixed costs are, the larger the risks and costs of equity and capital will be.
- A financing strategy using a complex spider net of interconnections is a factor that may increase the probability of bankruptcy, therefore negatively affecting the future cash flows.

Managers may also create value in the period post-merger with a more efficient management of the non-operating assets, for instance with marketable securities or cash. The use of cash is linked directly with the capacity of the bank to make investment decisions or other acquisitions that earn poor net present values (NPVs). The value of control measure by abnormal stock returns after M&As has been studied by Gorton, Gary & Metrick, Andrew, (2012), and these authors developed an index to measure the corporate governance performance of managers on an index with 24 factors for 1,500 firms. The outcome of this study showed that companies with a strong leadership would have an increase in stock returns of around 8.4%. The author Kim (2001), was in line regarding the correlation between poor management and low stock returns and identified that during the Korean crisis in 1997 most of the banks held by families had less resilience to overcome the financial turmoil than banks that were publicly owned. This evidence was justified with the weaker performance that family owned companies usually have in comparison with other firms managed by strong corporate teams. When assessing the value creation of a M&A, the premiums paid related to the value of control are frequently high. The main question that prior literature tried to answer is related to the estimation of value attributed to the change of control in a company after being acquired (Jensen, Ruback, 1983). The variance of the valuation attributed to a bank may have a wide range of pricing according to the board managing it. Investors usually consider that there is a value attached to each management team because they can operate differently and improve the performance of the entity. This is called the “status quo value.” The difference of value between an optimal management team and a less optimal one is the status quo value that can be considered to value the control of a company after an M&A. There are two main dimensions to consider when measuring the effects of a

change in control: firstly, the new corporate policies that will be applied by the new management, secondly the expected likelihood that the new policies will be successfully implemented. In conclusion, the general determinants of valuation are related to the investment decisions taken by managers, the strategy to fund the investments, and the value of dividends returned to the stockholders.

## **2.4 Identification of the research gap**

An observation after going through most of the literature is that it refers to the assumption that banking M&A in most outcomes whether they are value accretive to the target, value dilutive to the bidder, and to the combined banking entities neither gain or lose significantly on average. However, not much attention is paid to the possibility of an exogenous relationship between banking consolidation and the profitability of the financial system. This is a relevant topic especially when observing the increasing number of insolvent banks being rescued by the governing institutions responsible for managing tax payers' money. This thesis contributes to the literature with an innovative topic because there is a research gap in the study of value creation in cross-border banking M&A literature. The vast majority of studies did not find conclusive evidence regarding value creation during the period after the transaction is done. This research directly addresses this topic, and defends that further consolidation in Europe creates value and in fact is the most feasible solution to avoid the increasing number of European banks falling into insolvency or bankruptcy. There are not many authors that supported in the past this value creation ideology, however there are currently several economists that also support this idea such as Vitor Constancio (2017), among others. This is an important research area because it sets the path to the creation of an improved European financial and regulatory review enhancing pan-European M&A deals, with a positive impact in the banking profitability, and hence in people's lives.

## **Research Question**

The study will examine the European value creation of cross-border M&As in the banking industry during the period 1985 and 2017, by analysing the abnormal stock returns and applying the event study methodology. Specifically, the main question is if there is any evidence of value creation in European cross-border banking M&As. The emphasis of the study is focused on the correlation between the key findings from the event study, and the correlations with the consolidation of the banking system and its profitability. The base of the methodology assesses the stock returns of bidding and acquired banks based on price changes and dividends, against the performance of a relevant group of stock representing the market. This variation in returns of the acquirer and acquired banks relative to the market returns is calculated from one day to the rest of the days until the event of the transaction announcement. With this approach, it is possible to find if there were abnormal returns during the announcement day of the M&A event, compared to the performance of the rest of the stocks on the market.



## **Contribution**

There is a lack of empirical research of prior cross-border European banking consolidation. Such studies previously conducted are limited in terms of finding evidence of value creation to the shareholders of both bidding and target firms, as well the impact of banking M&As in the financial system. Furthermore, most of the literature considered that M&As measured by event studies mostly do not create value, and in the few cases that value creation existed it was on the side of the acquired firm at the expense of the acquiring company. This study argues this theory defending that combined M&As do create value in the European Banking industry. This study discusses the empirical findings with the macroeconomic, legal, and financial cyclical factors. These factors will support further research topics and discussions in relation to the levels of consolidation in the banking system, the overall profitability, and the decrease of the likelihood of insolvency.

### **3. Methodology and Research Hypotheses**

#### **3.1 Data sources**

The research was conducted using data related to mergers and acquisitions in the European banking system obtained from Thompson Reuters database, Capital IQ, European Central Bank, Bureau Van Dijk, and from existing literature.

#### **3.2 Methodology adopted**

The event study methodology was used to assess the wealth effects to the shareholder of a cross-border M&A announcement, during a window period. The results of the event study represent the expectations of stock investors regarding the value creation of an M&A (Murgia, 2000, Schiereck, 2001, Maslennikova, 2008, Teply, 2007). There are a few contradictory event study empirical outcomes across the existing literature related to the observation of abnormal stock returns to the bidding firms (Mullins, Asquith, 1983). Some studies suggested that the optimum approach to measure the outcome and motivation for M&As is the method of payment used mainly in the industrial organization literature. These studies gather the methodology used in event surveys with microeconomic foundations (Halpern, 1983, Carleton, 1983).

The model presented by Hansen (1987), studied the M&As payment method according to the value and bargaining power of each party under information asymmetry. This method was called payment method signalling hypothesis. The model was developed to assess the value creation of an acquisition when the acquirer has a lack of information about the acquired firm. When this situation happened, the acquiring firm preferred to pay with stock because of its contingent-pricing characteristics that were proven to be a safer solution than a settlement made with cash.

The studies made by Kim and Asquith (1982) about the positive abnormal returns earned by the acquired companies, are supported by several other studies found in the banking industry. The main outcome of this research supported the theory that abnormal positive returns are only possible to shareholders from acquired banks if other stakeholders become worse off with the transaction. They also found also evidence that the only group gaining from a M&A is the shareholder from the acquired company, and every other security holder loses. In the study, they assessed the relationship between the shareholder's gains and the bondholders returns. The outcome of their research found evidence that within efficient capital markets in the long run, any abnormal value creation discrepancy will become even again.

Keown et al (1985), provided evidence that despite the existence of a rule of law forbidding the trading of non-public information before the announcement day of a transaction, the confidential documentation is statistically proven to be poorly held and the secrets related to the deal are systematically leaked. The author found that relevant inside information was becoming selectively known to the public up to twelve trading days before

the initial M&A announcement. This situation carries legal issues, as well as financial contingencies when applying the abnormal returns methodology. In the studies made by Davidson (1985), the theory that there is only value creation to the shareholder returns from the acquired company, lacks the big picture which a final conclusive value assessment requires. According to this author, the slightly different methods of reporting the figures or pulling up the numbers may also be translated in different endings and conclusions.

The research carried out by Smirlock (1985), identifies the stock gains arising from tax efficiencies after the M&As are concluded. This author considered the tax efficiencies to be the main driver for value creation in banking consolidation. To this author, the main trigger of an M&A is related to tax benefits. Multiple studies highlighted the importance of selecting the right market and financial ratios to explain the large premiums paid in the cross-border acquisition of large banks. Philips (1986) correlated the price paid for target banks with the market demographic effects and financial ratios.

Rhoades (1993) compared the previously existing studies using the “Operating Performance” and “Event Study” methodologies in banking to measure the performance of M&As. The summary and conclusion are staggering in terms of results. After going through thirty-nine studies about the gain effects on efficiency, profitability, and shareholder’s wealth after the merger are concluded, there was very little evidence of performance improvements. Within these studies were included nineteen cases about operating performance that indicated that most of the examined mergers did not create gains in profitability or efficiency. The remaining twenty-one analyses used the methodology event studies, and the rest used mixed methodologies. Their results strongly indicated that if any gains existed they were accrued to the shareholder’s target side after the M&A announcement. In relation to the studies made using both methodologies, the results were mixed and therefore not showing clear evidence about value creation, either on the side of the bidder or on the target side. The author considered two caveats in the conclusion. The first is related to the event study methodology itself. The reason behind is related to the statistical significance of the results. He concluded that despite no findings of profitability or efficiency gains in banking mergers, the results did not mean that some of them had not in fact yielded improvement and positive economic results. Adding to the first argue about the insufficient statistical significance of the results, the author fairly resumed his concerns related to the period of the selected sample which solely had deals before 1989. This means that other transactions made afterwards in different economic cycles, or time periods, could have yielded different results.

There are mainly two separated approaches to measuring stock gains. One developed by economists, has the focus on the efficiency effects of an M&A measured by the ratio of expenses per total assets. The other concept, typically developed and applied by bankers, is focused on the value gains or cost cuts that may follow a merger. In the latter, if an entity would become smaller, a banker would simply recognize it as an efficiency gain.

Shawky, Kilb, and Staas (1996) examined the merger premiums paid for acquisitions in 320 banks between 1982 and 1990. The results showed evidence that higher values were paid to smaller targets with a higher return on equity ratios, and in transactions carried out through the exchange of stock. The studies conducted by Andrade, Mitchel and Stafford (2001), showed

that deregulation in the financial sector was the most important driver towards an increase of cross-border M&A activity. These authors focused on clarifying the mechanics involved in the long-term effects of mergers, as well as on the determinants of value creation. Their main conclusions were in line with the results drawn by the studies performed by Jensen and Ruback (1983), Jarrel, Brickley and Netter (1988). In relation to the transferring of gains to the target company, they found that shareholders from bidding banks came closely to solely subsidize the transaction. The event study conducted by these authors assessed the stock swaps financing M&A transactions, and the impact of the payment vehicle on value creation. Their findings were consistent with the existing literature, stating that the payment method has no direct impact on the wealth creation to the shareholder returns.

Bruner (2002) summarized the empirical findings from a collection of more than 100 scientific studies during the period between 1971 and 2001 observing M&A deals. The overall summary suggested that target shareholders earn positive returns and acquirers mostly receive no returns, plus both parties combined earn neutral returns. One of the most significant methodologies applied to measure the M&A profitability was the event study. It was one of the most commonly applied statistical approaches to examine the stock returns to the shareholders during the period around the announcement of the transaction.

The variables included in this methodology were the returns in one day, measured by the change in the share price and any dividends paid, divided by the closing share price on the day before. The abnormal return is simply the return less a benchmark of what investors required in the event period. This benchmark is typically the return value calculated by the performance of the capital asset pricing model (CAPM). The other benchmark commonly used is the return on a relevant large market index such as DAX or KBX. It was also true that most transactions were non-consistent with very optimistic outcomes in terms of gains, because synergies, efficiencies, and value creation seemed difficult to achieve.

### **3.3 Research Hypotheses**

The existing research in the field of value creation within the banking M&A scope have shown that there is no existing consensus among the different authors. The objective of the event study methodology is to test these hypotheses:

Hypothesis I:

HA: The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 created wealth effects among the bidding banks.

Hypothesis II:

HA: The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 created wealth effects among the acquired banks.

#### Hypothesis III:

HA: The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 created wealth effects among the combined bidding and acquired banks.

#### Hypothesis IV:

HA: The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 on average created more value to the targeted banks in Western Europe than in Eastern Europe.

### **3.4 Design strategy**

The design of the research is built on the related research and preceding empirical findings from Teply, Starova, and Cernohorsky (2007). This study has several experiments and hypotheses which will be tested using statistical time series, to find evidence related to abnormal stock returns in the period around the announcement of a banking M&A.

The methodology applied in this research to analyse the wealth effects of cross-border M&A in European banking industry, is widely referred to in the literature as “event study”. In accordance with the research question, this chapter provides an overview of the topic, alongside a complete empirical analysis, a thorough discussion, and a detailed description of the sampling and statistical tests. The research design will contain a description of the methods and strategy of the analysis within the context of prior scientific literature. The following part will have a comprehensive presentation of the adopted empirical methodology, as well as a description of the population and the respective methodology constraints. The limitations of the research will also be defined and recommendations for further investigation will be presented.

To accurately judge the stock variation and the efficiency of the market during the transaction announcement, the abnormal returns will include the reactions of the stock returns on the date of the announcement, and several days before and after the event. In efficient stock markets, the price shall adjust to the M&A value, therefore the return is abnormal if during the event window exists a variation larger than the statistically expected “normal” returns. In this study, the strategy is to highlight the abnormal returns during the period before and after the event. In the analysis there will be calculated multiple observations about the performance of stock returns of bidders and acquired banks, against the performance of the market index in the European banking industry. The stock variations will be compared to the market index to find the abnormal returns in the equity prices. Furthermore, this research will assess the prospective value creation across the banking M&A sample in terms of deal size, and geographic area. The significance of the results will test empirically the presence of abnormal stock returns around the announcement of a bank M&A.

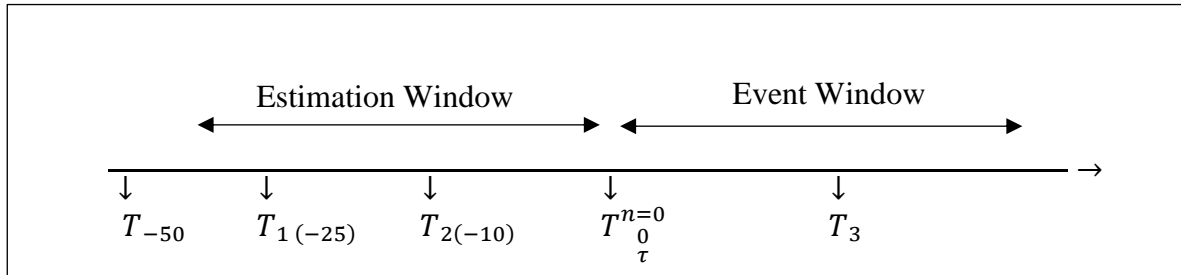
The null hypothesis is divided in the alternatives ( $H_0$ ) and ( $H_1$ ) as follows:

$$H_0: E(R_i|y_i) - (R_i) = E(\varepsilon_i|y_i) = 0 \quad \forall y_i \quad (5)$$

$$H_1: E(R_i|y_i) - (R_i) = E(\varepsilon_i|y_i) \neq 0 \quad \forall y_i \quad (6)$$

The  $R_i$  represents the stock returns of the security  $i$  during the event period. The variables  $E(R_i)$  determines the expected return of the stock  $i$ , and  $y_i$  represents the announcement information that may impact the stock  $i$  during the event window. The expression  $E(R_i|y_i)$  is the expected return of the stock  $i$  dependant on the announcement reaction in the event window. The hypothesis  $H_1$  indicates that it has no impact when the abnormal stock return  $i$  is different than zero. The strategy to test the hypotheses is to cluster homogeneous samples, apply the previously defined model analysis, and test the abnormal stock returns during the event study. Following the initial part of the study observation of the average abnormal stock returns, there will be an analysis of the cumulative abnormal returns. This second part supports the calculations to find evidence of value creation to the shareholder's wealth. Figure 2 summarizes the timeline of the event study methodology.

Figure 2: Representation of estimation and event window



The events studied are time series with the reference  $\tau$ . The  $\tau = 0$  is the event date when the announcement is made, and the notations  $\tau_1 \leq \tau_2 \leq \tau_0 \leq \tau_3$  express the start and the end of the studied period. When the announcement of a banking M&A is known, the event study analysis is focused on that point in time within a set of time series intervals. The goal is to identify abnormal returns in the interval range corresponding to the observation of abnormal returns. If there is an extraordinary return variation motivated by the announcement of the transaction, it is evidence that a correlation exists between the M&A information and an increase of returns to the shareholders. The abnormal returns consist of a difference between the expected stock returns in the absence of an announcement, and the returns after the transaction is made public. The variation of the stock returns during the “estimation window” is compared with the performance of the market index during the same timeframe. This combination of factors is denominated “market model”, and through the statistical method regression analysis the variance of stock returns will be measured in relation to the index

performance. The referred market model assumes that the expected returns are a linear function of the market index returns during the same time series period. The calculation of the model is described in this formula, where the stock  $i$  at the time  $t$  assumes the following expression:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (7)$$

The  $R_{it}$  is the return of stock of the bank  $i$  in the period  $t$ , where  $R_{mt}$  is the return of the market in the same date  $t$ , and the  $\varepsilon_{it}$  is the residual estimate regarding the predictor error variable of the model. The  $\alpha$  and  $\beta$  represent the regression ordinary least square (OLS) estimates for the bank  $i$ .

After the first “estimation window” is concluded, the second step in the methodology is to identify the abnormal returns during the “event window”. The expected outcome of this phase is to calculate what stock return the security should have during this period. If during this assessment returns are found above or below what they were expected to be during the “event period”, these excessive values are called “abnormal returns”.

$$AR_{it} = R_{it} + \hat{\alpha} - \hat{\beta}_i R_{mt} \quad (8)$$

The  $AR_{it}$  indicates the abnormal profitability of stock in the period  $t$ , where  $R_{it}$  represents the stock returns. The variables  $\hat{\alpha}$  and  $\hat{\beta}_i$  are the regression line parameters describing the market model related to the stock  $i$ . The  $R_{mt}$  represents the DAX market index returns in the period  $t$ .

$$\overline{AR}_t = \frac{\sum_{i=1}^N AR_{it}}{N} \quad (9)$$

The  $\overline{AR}_t$  indicates the average abnormal stock profits at  $t$  period concerning all banks in the sample represented by  $N$ . Where just  $t = 0$  relates to a single date observation, the rest of  $t = -25, +350$  includes the average of abnormal returns of all banks during the event window divided by the number of banks in the period.

$$\frac{\overline{AR}_t}{\hat{S}(\overline{AR}_t)} \quad (10)$$

The testing of the abnormal returns and its statistical significance is calculated by dividing its average by the estimated standard deviation, where:

$$\hat{S}(\overline{AR}_t) = \sqrt{\frac{1}{T_2 - T_1 - 1} \sum_{t=T_1}^{t=T_2-1} (\overline{AR}_t - \overline{\overline{AR}}_t)^2} \quad (11)$$

The studies made by Brown and Warner (1985) applying the event study methodology, indicated that if the results are independent and evenly distributed, the statistic  $t$  test is distributed within the null hypothesis range. The returns of the stock  $R_{it}$  and the index of the

market  $R_{mt}$  are both calculated with the following formulas, and this analysis is carried to identify the stock rate of return related to the market returns against the correspondent  $\beta_i$ .

$$E[R_{it}] = \frac{R_{it} - R_{it-1}}{R_{it-1}} * 100 \quad (12)$$

$$R_{mt} = \frac{R_{mt} - R_{mt-1}}{R_{mt-1}} * 100 \quad (13)$$

The estimation of  $\beta_i$  includes the historical dataset with the returns of the stock related to the variations of the overall market returns, and its performed using a regression analysis  $\alpha_i = R_{it} - \beta R_{mt}$ . The variable  $R_{mt}$  represents the returns of the DAX market during the period  $t$ . The two tests that will be made include the average cumulative abnormal returns and the nullity of abnormal returns on a daily basis during the window period.

Where:

$$\beta_i = \frac{cov(R_{it}, R_{mt})}{Var(R_{mt})} \quad (14)$$

Taking into consideration that the full impact for the shareholders of a bank during an event study may not be solely in one single day, the analysis will include the examination of returns during the event period. The expected returns around the M&A announcement will be compared with the actual returns during the event window. The difference between the expected returns and the actual returns during the window period is called cumulative abnormal returns (CAR) and will be calculated as follows:

$$CAR = \sum_{i=T_1}^{t=0} \overline{AR}_t \quad (15)$$

In the contingency that the CARs hypothesis is statistically different from zero, a two-step parametric test can be performed to evaluate the statistical significance of the deviations. The standardized cumulative abnormal returns (SCARs) may be applied for longer event windows to correct a series of abnormal returns for the same bank during the period. The SCAR calculation may be performed using the following inputs:

$$SCAR_i(T_1, T_2) = \frac{CAR_i(T_1, T_2)}{SD_i} = \frac{CAR_{i-EW}}{SD_i} \quad (16)$$

To calculate the  $SD_i$ :

$$SD_i = S_i \sqrt{k + \frac{k}{T} + \frac{\sum_{t=1}^k R_{mt} - k(\bar{R}_m)^2}{\sum_{t=1}^k (R_{mt} - \bar{R}_m)^2}} \quad (17)$$



The variable  $S_i$  represents the regression model standard error,  $k$  is the number of days in the event window,  $T$  is the quantity of observations during the estimation window,  $R_{mt}$  is the market portfolio return in the day  $t$ , and  $\bar{R}_m$  is the portfolio average return of the market also during the estimation period. Brown and Warner (1985), used two parametric statistical methods and one nonparametric to test the significance of the abnormal return average, applying the variance based on the estimation window:

$$\hat{\sigma}_{AAR}^2 = \frac{\sum_{\tau=t-235}^{t-30} (AAR_{\tau} - \overline{AAR})^2}{235-2} \quad (18)$$

$$\hat{S}(AAR_{\tau}) = \sqrt{\frac{1}{233} \sum_{\tau=t-255}^{t-30} (AAR_{\tau} - \widehat{AAR})^2} \quad (19)$$

$$T_{BW} = \frac{AAR_{\tau}}{\hat{S}(AAR_{\tau})} \quad (20)$$

The statistical test performed by Cowan (1992), compares the period affected by the event with the period unaffected. This test identifies if the abnormal returns during the event window are greater than the expected abnormal returns in the same period:

$$ZG = \frac{W - n\hat{p}}{n\hat{p}(1-\hat{p})^{\frac{1}{2}}} \quad (21)$$

Where  $W$  refers to the cumulative abnormal returns during the event window and  $p$  is the proportion of abnormal returns within the estimation window.

### 3.5 Aggregated returns

The literature has been studying the banking M&As from the perspective of value creation to the acquirer or the acquired financial institution. However, some studies go even further, weighting the wealth creation to the combined banking firms in the attempt of finding evidence of a positive value outcome as a sum of the parts after the transaction. The large majority of previous literature identifies a positive effect to the target bank and a neutral or slightly negative value to the bidder. The underlying reason to also observe the wealth effects to the combined entities is that the expected positive synergy effects will offset potential losses that may occur at the acquirer end. The abnormal stock returns for the combined banks can be calculated by summing the daily abnormal returns for both bidders and targets' shareholders. The calculation of the aggregated abnormal security return for an M&A transaction in day  $t$  is calculated as a weighted sum of their abnormal values as follows:

$$AR_{Ct} = \frac{TA_{At} \cdot AR_{At} + TA_{Bt} \cdot AR_{Bt}}{AR_{At} + AR_{Bt}} \quad (22)$$

The weights of  $AR_{At}$  and  $AR_{Bt}$  are the total assets of the acquirer and the acquired banks, before the announcement date and at the end of the period. The abnormal returns shall be averaged to all  $n$  securities included, and after aggregated to obtain the cumulative abnormal returns (CAR) for the entire time series within the event window.

### 3.6 Granger causality

The Granger causality is a statistical test applied to support a hypothesis and used to determine if a time series is useful in forecasting another (Granger, 1969).

$$X(t) = \sum_{r=1}^L A_r X(t-r) + \varepsilon(t) \quad (23)$$

The formula above represents a multivariate causality, combined with a regressive vector in the time series model. Granger causality is conducted by fitting a vector autoregressive model with time lags. Our observations did not capture or detect Granger causality across the computed time series.

## 4. Data analysis

The research is conducted with a sample of European banks that completed cross-border M&A transactions during the period between 1<sup>st</sup> of January 1985 and 31<sup>st</sup> of December 2017. The studied period allowed for examination of the stock performance post and ex-ante M&A announcement, and observe the cumulative abnormal returns after the transaction. The criteria followed to make the banks eligible to be considered in the sample are:

- The period between 1985 and 2017.
- The bidder and target banks are from Europe.
- The bidder and target banks are publicly traded.
- The transaction value is larger than 5€m.
- Only completed deals were considered.
- The maximum period between the announcement and completion of the deal is 365 days.
- The transactions considered were solely above the acquisition of 51% of shares.

The decision between choosing a long-term or short-term window period has an impact in the event study outcome. The long-term perspective implies that the stock information shall have a monthly periodicity and last with a range of several years before and after the announcement of the M&A. The choice of a shorter-term window period allows observation of daily returns which enables the opportunity to more clearly identify any abnormal return before or after the event. The relevance in the long-term may be weakened in terms of statistical testing and result robustness due to the fact that in periods far from the announcement day, for example after two or three years, a significant abnormal return could be attributed to any other externality rather than arising from the M&A event announcement. In our case, we made the option to select a window period from -50 days to +350 days. The reason for selecting -50 days is related to the stock effects that may occur before the announcement date due to an information leak to the external markets. The rationale behind choosing a period of +350 days after the announcement date is related to the synergy effects that start materializing during a one year period. We did not consider periods longer than one year because it would become difficult to assert the direct reasons behind the stock value flows or still to connect them with the M&A announcement impact.

### 4.1 Risk profile and stock delisting

The beta  $\beta$  is the measure of risk in the statistical regression calculation. In this case, it indicates the degree of risk that a bank has relative to the way that it is investing in new projects, and the expected returns on invested capital. Its calculation also incorporates the financing mix

profile, the period of growth, and the dividends returned to the shareholders. Taking into consideration that when a bank merges or acquires another peer an implicit associated transaction risk exists, it may influence the value creation measured by the abnormal returns methodology. The relationship between the coefficient  $\beta$  and the systematic market risk has been consistently explored in the literature by Connel and Conn (1993), and by Kiymaz and Mukherjee (2001).

## **4.2 Stock benchmark**

The stock index chosen to calculate the statistical regression have a relevant impact in the event study calculation because it will be the benchmark included in the analysis of the abnormal stock returns. The performance of the index will allow the identification of abnormal variations of the stock during the event period. The selection of the stock market index will be conditioned by the origin of the largest banks that completed cross-border M&A transactions. Taking into consideration that there were a large portion of banks from Germany that executed M&As during the window period, the DAX stock index will be used to control the abnormal variation between bidders and targets. In addition, the DAX stock index was also the only one with available data from the year 1985 up to 2017. This is a similar approach to the well-known and most used capital asset pricing model (CAPM). The scope of this research is limited by the availability of data related to the included banks publicly listed and the market model index.

## **4.3 Banking population and sample.**

The selected banks included in the population of the analysis, were solely chosen if they met the criteria determined in this study at the beginning of this chapter 4 in the section “Data Analysis”. The selection was limited by the European area, and by the specific nature of a cross-border transaction. The sample includes selected banks with characteristics that will also have a potential impact in the outcome of this study, and it excludes investment banks. The reason to exclude them is because of their business nature. While a commercial bank has organic motivations to pursue cross-border M&As, an investment bank will most likely make an investment in another bank for the sake of the deal itself, rather than for expansion reasons. The other reason for excluding investment banks concerns the difficulty in clearly identifying what a “classic” investment bank is, or a brokerage firm performing M&A activities in the banking industry.

## **4.4 Subsidiaries and controlling powers**

The data sample does not consider the acquisition of foreign minority subsidiaries because their impact in the shareholders’ value would be residual. This choice supports the assumption that a subsidiary, when acquired, would not lead to the control of the bank. The sample of banks selected to be included in the analysis solely considers acquisitions where the bidder gains

control over the target bank. If the non-controlled banks would be included in the sample, the results would become misleading because the shareholders would not have the capacity to change the previous management status quo and apply effective business improvements measures. Thus, considering that the main topic of this study is related to the cross-border M&A transactions, we have solely considered the deals that transferred the power of control to the new acquirer. The final sample was selected including banks that acquired at least 51% of the target.

#### **4.5 Degree of deal completion**

The deals included in the sample had to be 100% completed. The M&A process is typically long, and transactions may have different outcomes rather than a successful conclusion. The deals that presented status such as intended, pending, rumoured, or withdrawn were not included. The existing population in the database allows these statuses of accomplishment to be identified throughout the deal lifecycle, however, the inclusion of these uncomplete deals could weaken the robustness of the results. The event study methodology will generally assess the abnormal return impact of stock value, taking into consideration the announcement of an M&A deal. Hence, any other inclusion of a different status than completed would decrease the reliability of the event study when the transaction would become public.

#### **4.6 Detailed description of the sample**

Taking into consideration the prior high-level description of the population and data selection, this section will provide a deep dive into the sample constraints and a detailed explanation about the data constraints and validation of the event study methodology. The main methodological requirements setting up the eligibility of banks to be included in the sample are the following: firstly the bidder and the target have to be registered and licensed in Europe; secondly both acquirer and acquired have to be either commercial banks or holding companies; thirdly both banks have to acquire stock share at the level of at least of 51%, the M&A transaction must be considered complete during the event window studies.

A key variable in the analysis of an event study methodology is the accuracy of the event date and the context of this date. The M&A process is typically long, usually taking from 3 to 6 month to conclude the transaction and more than 1-2 years to fully integrate the bank. Taking this into consideration, any disruption in the period before and after the announcement will have an impact on the results and compromise the scientific validation of the outcome. If, for example, there was a relevant leakage about the deal a few days before the announcement, despite being illegal, the stock would incorporate the deviation of value arising from that information to the value paid by the bidder's shareholders. The strategy chosen to process the M&A also will have an impact on the value of the shares during the event window. During the process of a cross-border transaction banks may have to deal locally with related subsidiaries or holdings that may also be performing an acquisition at the same time, with different participants. If this situation happened in the course of the event window, all the different

transactions would be accounted taking into consideration the different degrees of conclusion time and value. If the acquiring company is in a period of different serial acquisitions during the event period window, it is likely that there may exist an impact of the share value therefore the event study results may be contaminated by this externality. If these serial acquisitions were detected during the selection phase of the sample, the banks in this contingency would not be eligible to participate. The sample of the banks was selected considering that a correlation cannot exist among the banking peers. The event study method only has statistical significance if the group of banks are not related to each other. The connection could be made by the form of self-interest, or even by a change in the management board directing each bank. The fact that the cross-border transaction is, by nature, not under the same overarching national regulations is an approach that contributes to avoiding the mentioned correlation.

The sample included in the analysis comprehends mergers and acquisitions from the first of January 1985 until 31st of December 2017. The initial data obtained from the database Bureau Van Dijk contained 2000 publicly traded cross-border banking M&A deals in Europe. Out of this larger sample, only 75 deals were considered in the final assessment due to the methodology constrains previously defined and described. The smaller number of banks qualified to the sample is smaller than the acquiring group because most of the acquired banks get delisted from the stock exchange after the transaction is concluded.

The event study calculation took into consideration both banks combined, with the aim of identifying if the cross-border M&As created abnormal returns during the event period and thus wealth creation to the shareholders. The distribution of banks across the European region is well spread, however, there is a concentration of higher activity within the geographical centre and western Europe. The higher number of deals included in the sample are derived from central-western Europe. This observation is explained by the higher degree of banking activity coming from a well-established financial environment attracting foreign investment, with a higher degree of financial transparency and accounting standards. The existing available data in the region, and the longstanding stability existing across this region, are explanatory factors.

The size of the sample available was defined by  $N \leq 75$ , and is considered by some studies as a factor with a sufficient likelihood of significance. There is prior statistical analysis that considered smaller samples applying the  $t$  – test, suggested that this size of sample has statistical significance. The present study estimate the Type I error and statistical power of the sample tests for normally distributed population. For distortions in terms of cluster size, different variances, and the combination of different clusters with specific characteristics, the statistical test methodology used is the  $t$  – test. Other possibilities existed to further investigate the strength of the results such as the Welch test. Notwithstanding, most of the literature considered that the Welch test has less power than the  $t$  – test. There are further studies that show that a paired  $t$  – test is feasible even with a very small sample if the connection with the pair is high. Taking these facts into consideration, it is assumed that  $t$  – test with small samples is scientifically acceptable in statistical inferences (Ioannidis, 2009).

A final cautionary note from a Bayesian perspective. A small sample size may lead to a lower degree of confidence and contribute to a false or inflated impact over the abnormal stock returns. The explanation for this statement is that the researcher may not know whether the null

hypothesis is true or false, and it may estimate the probability of an effect based on prior related researched literature. In other words, if the banking sample is small it is likely that the statistical findings will be false positive or vice versa. With regards to the sample selected and included in this study, it can be argued that if a banker observes a statistical significant effect based on a small sample size, his observations could probably be overestimated, because typically the stock returns in banking are rather small. Considering this assumption, a thorough literature review on the topic was also conducted. The observations arising from the analysis were made with critical thinking, and the investigation was performed in a way that tested the credibility of the results. The empirical findings were also compared with the existing evidence in the literature within the banking industry field.

Despite the preferred sample size would have been with unlimited resources, scientific research may also be conducted with small samples  $N \leq x$ . The  $t$  – test can be applied as long as the effect from the deal announcement would have an impact. Furthermore, in the case of unequal variances in the stock returns, unequal sample sizes, or in skewed population distributions, the  $t$  – test may be applied if the high false positive rates of one sample on non-normal data are considered. In this case, as already mentioned, the Welch test and the rank-transformation test are not recommended when studying small sample sizes (Zimmerman, 1992). This study is limited to the cross-border banking scope, therefore it might be difficult to apply the conclusions to any other industry out of this specific industry. Notwithstanding, if the empirical findings of this research would be applied in a similar banking M&A under the same population scope the results could be considered adequate.

The issue of dealing with smaller samples in mergers and acquisition in banking has already been explored and dealt with by, for example, Lobue (1984), which studied a group of 37 financial institutions traded on the NYSE or OTC. Desai and Stover (1985), selected from Moody's Bank and Finance manuals solely 18 banks listed, and focused the analysis only on the acquiring firm. Pettway and Trifts (1985), included 11 announcements to observe failing banks that FDIC assisted in a purchase and assumption merger listed on main exchange markets. Neely (1987), studied 26 deals with the stock of acquiring and acquired banks traded on NYSE, AMEX, or OTC. It attempted to distinguish between acquisitions of banks and BHCs in terms of stock price effects. Rose (1976), investigated 40 acquiring banks paired with a non-merged bank with a similar size and location. Triffs and Scanlon (1987), conducted a review of 17 acquired and 14 acquired banks with stock traded on NYSE, AMEX and OTC. Baradwaj, Fraser, and Furtado (1990), selected a sample of 23 hostile deals of publicly traded banks, with one third of which showing evidence of successful bids. Bertin, Ghazanfari, and Torabzdeh (1989), selected a sample of 31 acquiring banks involved in purchases of failing banks. The studies made by Cornett and Tehranian (1992) during the window period between 1982 and 1987, also included 30 acquiring firms publicly traded with stock return data from Moody's. The smaller samples also have a positive effect in terms of narrowing the scope of the research. For this reason, using a small sample with specific characteristics and proprieties enables the findings to be supported by concrete results, adding value to the existing research and serving as a baseline for future working practice application in the corporate banking world. In conclusion, the empirical findings of this research can undoubtedly be applied in the decision making of any bank planning to pursue a cross-border M&A in Europe.

## 5. Empirical Results

The existing literature related to the M&A wealth creation effects on acquiring banks has been a motive for ongoing discussions. There are several authors that found evidence of wealth creation for the bidders measured by stock returns, while other authors had the opposite results. Most of these studies were conducted taking into consideration the ambiguity of prior literature. Until 2007 the scientific community did not have a clear consensus about the value created to the shareholders of European acquiring banks.

### 5.1 Wealth Effects to the Acquirers

This chapter investigates the hypothesis I, and tests the wealth effects to the acquiring banks according to the following null hypothesis:

Hypothesis I:

$H_0$ : The European cross-border merger and acquisitions in the banking industry announced during the period of 1985 and 2017 have not created wealth effects among the bidding banks.

$H_A$ : The European cross-border merger and acquisitions in the banking industry announced during the period of 1985 and 2017 created wealth effects among the bidding banks.

The wealth effects will be measured by the cumulative abnormal returns before, during, and after the deal announcement within the window period. A regression analysis will be the statistical method to identify if there is an association between the independent variable (daily stock returns), and the dependent variable abnormal returns (AB). This linear regression will test if the coefficient for each predictor is significantly different than zero.

The primary objective of this study is to find positive wealth trend effects using the null hypothesis  $H_0: \beta \leq 0$ , against the alternative hypothesis  $H_0: \beta > 0$ . The statistical approach to test the null hypothesis in the study of  $H_0: \beta = 0$ , versus  $H_0: \beta \neq 0$ , is the t-statistics method. If the coefficient is different than zero, there may be an association between the predictor and the dependent variable. The null hypothesis is related to no association between the dependent variable and the predictor. Its possible rejection is done by evaluating the p-value. In this study the p-values are computed based on the values of the t-statistics.

The measurement of the wealth effects to the acquiring bank will be calculated considering the abnormal stock returns during the window period when the announcement of the transaction is made public. These abnormal stock effects will be analysed taking into account the average abnormal returns and the statistical significance of these returns. The calculation of these



average abnormal returns will be estimated applying two benchmarks: firstly the GDAX stock index, and secondly the BKX banking stock index. After extensive research, the GDAX stock index was the best suitable choice to include in our regression analyses.

The reasons to select GDAX were that Germany is the most representative European banking stock market, and with the longest stock data available in Europe. The BKX stock index was also chosen because it represents a group of the leading 24 publicly exchanged list of international US banks. This index is intended to provide a benchmark stock value in the banking industry, and has available data since 1991. Due to the international nature of these large banks with a long presence in Europe, the BKX stock index is widely used as a referral in the financial sector. The abnormal stock returns of each bank will be then estimated against these two stock indices, deriving data during the event period. The t-statistical methodology will assert the significance of these results.

In this section of the present chapter there will be summarized the findings related to the bidding banks in terms of abnormal average stock returns, and accumulative average abnormal returns. The statistical significance of the abnormal observations will be estimated using an one-step and a two-step analysis. The one-step analysis computes the significance of the returns against the GDAX index, while the two-step analysis estimates the significance against the aggregation of the GDAX and BKX stock indexes. Table 13 contains the descriptive statistics for each of the event periods included in this analysis. As is clearly noticeable from the table observing the t-statistic degrees of freedom, there are seventy-five observations included in this analysis. The findings summarized describe the cumulative abnormal returns, the average abnormal returns, the median abnormal returns, and the statistical significance of the results at a 10%, 5%, and 1 % level.

The cumulative abnormal returns are the compounding results of the difference between the real stock returns and the predicted returns calculated by the regression analysis. The mean represents the average of all the observations for which there is information available, and it indicates the middle point of the dataset without being affected by extreme observations. In interpreting the results presented in the column CAR AVG, it is possible to observe a small stock volatility across the whole event window. Thus, with a sharp decrease at the end of the period from the peak of 9.48% to the lower value at the end of 2.96%. The average abnormal returns show a slight decrease at the announcement date and during the days immediately after, however, the significance of this small deviation is residual and the flow of returns also do not show a consistent trend around the announcement date.

For the acquiring banks, the abnormal returns have shown a volatility not significantly different than zero during most of the event window. This result is in line with prior research by Beitel and Scheireck (2001), and Teply, Starova, and Cernohorsky (2010). The observations made during the windows of [-50; +100] and [-50; +250], have the same wealth effects according to the results found by Lensink and Maslennikova (2008). The statistical significance of the findings summarized in table 13 show that robustness of the results prevail at the end of the window period.

Across the window periods it is possible to observe that in the event windows [-50; +350], [-50; +300], and [-50; +250], the volatility of the abnormal returns was higher than before,

indicating the steep downward deviation that the CARs had before one year from the announcement data. The CAR trend line started to have a slow downward trend since [-50; -8] which may also represent that the average M&A gets leaked to the public around one week before the announcement date. This descendent trend of CARs kept the trajectory of losing average stock returns until the period [-50; +150]. The main reason for this upward increase in CARs is associated with the belief among investors that after the first five to six months the synergies and control derived by the new ownership will finally be a reality. The average stock returns during the periods between [-50; +150] and the period of [-50; +250] increased significantly. The CARs after reaching the peak in [-50; +250] started to decrease abruptly until the end of the event period of [-50; +350], from 9.07% to 2.96% CAR. This sharp drop in value is related to the negative reaction that investors have after one year from the announcement date after perceiving that the value of synergies during the integration phase will not be as significant as initially expected.

When analysing the underlying data behind the results summarized in this table 13, the banks that presented the largest losses in CAR during the period of [-50; +350] were: i) Commerzbank from Germany when it acquired the Bank Forum JSC from Ukraine on 18th September 2007 (-221.23% CAR); ii) AB Vilnius from Lithuania after acquiring the majority of assets from Bank Agio from Ukraine on 4th October 2004 (-220.66% CAR); iii) Sberbank from Russia when it acquired Denizbank AS from Turkey on 8th June 2012 (-167.09% CAR); iv) Credit Agricole from France when it merged with Enporiki Bank from Greece on 13th June 2006 (3rd acquisition -121.33%); v) and Mediolanun from Italy when it acquired the majority of assets from the Spanish Fibanc Banco de Finanzas e Inversiones SA on 24th July 2000 (-104.94% CAR).

In contrast, the banks that have gained positive stock returns above 100% during the event period were the following: a) Bank of Cyprus PCL when it merged the target bank Egnatia SA on 4th July 2006 (+233.17% CAR); b) Deutsch Bank after merging with Morgan Grenfell Group PLC from the United Kingdom on 27th November 1989. Figure 3 presents a clear sharp drop from the day 200 onward. The daily average abnormal returns show no clear pattern over most of the event window.

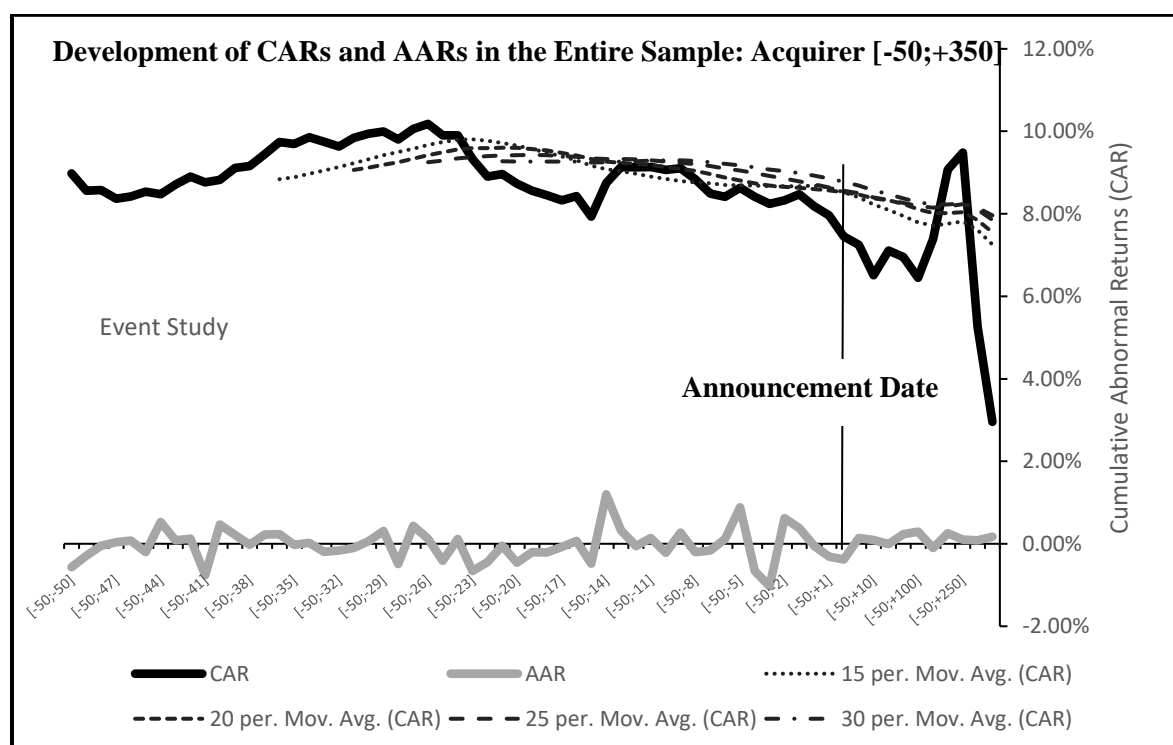
There is a steady drop from ten before the announcement date, which mean that the average transactions may have been leaked which negatively influenced the stock returns. The returns on the announcement day are not-significant, however, on the second day after the announcement the continuous drop was statistically significant. The authors found evidence that acquiring firms have positive significant average abnormal returns during the 10 days before the event, and negative significant average abnormal returns are experienced during the 50 days after the merger. This results are in line with Duplichan (1987), that studied the period of 1982–1985 analysing the wealth effects among 28 banking bidding M&As. Trifts and Scanlon (1987), after studying the period 1982–85, with a sample of 31 acquiring banks, observed negative significant cumulative abnormal returns during the 20 weeks after the announcement but no cumulative abnormal returns for the 40 weeks before the announcement.

Table 13: CARs and AARs of the acquiring banks during the event period

Event Window	CAR AVG	AR AVG	AR Median	T-Stats AVG	Significance N=75		
[-50; +350]	2.96%	0.17%	0.33%	2.603	*	**	***
[-50; +300]	5.26%	0.09%	-0.15%	2.127	*	**	
[-50; +250]	9.48%	0.10%	0.17%	0.136			
[-50; +200]	9.07%	0.25%	0.22%	2.100	*	**	
[-50; +150]	7.39%	-0.10%	0.05%	-0.021			
[-50; +100]	6.45%	0.29%	0.39%	0.212			
[-50; +50]	6.96%	0.23%	0.15%	0.053			
[-50; +20]	7.11%	-0.01%	0.12%	0.071			
[-50; +10]	6.51%	0.10%	0.05%	0.022			
[-50; +5]	7.25%	0.14%	-0.11%	-0.050			
[-50; +2]	7.45%	-0.38%	-0.33%	-1.716	*	**	
[-50; +1]	7.97%	-0.31%	-0.02%	-0.098			
<b>[0;0]</b>	<b>8.18%</b>	<b>-0.05%</b>	<b>-0.01%</b>	<b>-0.380</b>	*		
[-50; -1]	8.47%	0.38%	0.01%	0.085			
[-50; -2]	8.33%	0.62%	0.20%	0.070			
[-50; -3]	8.24%	-1.03%	-0.05%	-0.037			
[-50; -4]	8.41%	-0.66%	0.01%	-0.025			
[-50; -5]	8.63%	0.88%	0.00%	0.061			
[-50; -6]	8.41%	0.11%	-0.13%	-0.026			
[-50; -7]	8.49%	-0.16%	0.01%	-0.090			
[-50; -8]	8.84%	-0.20%	-0.21%	-0.093			
[-50; -9]	9.10%	0.27%	0.03%	0.063			
[-50; -10]	9.07%	-0.21%	-0.19%	-0.026			
[-50; -11]	9.13%	0.14%	-0.02%	0.043			
[-50; -12]	9.13%	-0.06%	-0.03%	-0.021			
[-50; -13]	9.13%	0.33%	0.16%	0.156			
[-50; -14]	8.75%	1.20%	0.41%	1.304	*		
[-50; -15]	7.93%	-0.48%	-0.12%	-0.132			
[-50; -16]	8.43%	0.07%	0.01%	0.043			
[-50; -17]	8.33%	-0.08%	-0.16%	-0.070			
[-50; -18]	8.45%	-0.21%	-0.11%	-0.030			
[-50; -19]	8.56%	-0.20%	-0.16%	-0.005			
[-50; -20]	8.73%	-0.46%	-0.29%	-0.027			
[-50; -21]	8.97%	-0.05%	0.01%	0.001			
[-50; -22]	8.90%	-0.45%	-0.28%	-0.160			
[-50; -23]	9.33%	-0.66%	-0.11%	-0.176			
[-50; -24]	9.90%	0.12%	-0.08%	-0.062			
[-50; -25]	9.91%	-0.41%	-0.27%	-0.138			
* significant at 10% level, ** significant at 5% level, *** significant at 1% level							

Source: author computation. Eikon Thomson Reuters M&A database

The abnormal stock returns did not find any significant wealth effect during the 30 days before the announcement or after. James and Wier (1987), considered the period of 1973–1983 and included 79 acquisitions in the study. The results showed that acquiring banks have positive significant abnormal returns on the day before, and during the announcement day. Lobue (1984) studied the stock of acquiring firms traded on the NYSE. This author analysed abnormal returns acquiring firm stock relatively to the market return. The calculation of abnormal returns was based on a log-transformed standard market model estimated over an unspecified period. Abnormal returns relative to the market were analysed between 24 months before and 18 months after the effective acquisition date. The wealth effect results of this study show that, on average, acquiring firms have positive cumulative abnormal returns. Pettway and Trifts (1985) focused on failing banks that were financially rescued. The Figure 3, shows that the computation of the wealth effects to the bidding banks during the event of an M&A announcement are consistent with the studies from Diaw (2014), Teply, S., Cernohorsky (2008), Jaber (2004), Andrade, M., Stafford (2001), Baradwaj, D. & Fraser (1990), Dodd (1980), among others. These authors found evidence of a small negative market valuation during the announcement date, but most of the results were not significantly different from zero. Figure 3: Cumulative abnormal returns to the acquiring banks



Source: author computation. Eikon Thomson Reuters M&A database

The black trendline shows a clear negative CAR at the end of the window period, consistent with the studies from Diaw (2014), Teply, S., Cernohorsky (2008), Jaber (2004), Andrade, M., Stafford (2001), Baradwaj, D. & Fraser (1990), Dodd (1980), among others. These authors found evidence of a slightly negative market valuation during the announcement date, but most of the results were not significantly different from zero. In conclusion, the wealth effects to

the bidding banks during the event of an M&A announcement have not created value among the bidding banks, therefore we accept the null hypothesis ( $H_0$ ).

## 5.2 Empirical Findings of CARs to the Targets

This chapter presents the findings related to the wealth creation to the shareholders from the target banks during the announcement event of a European cross-border M&A. Across the existing empirical literature, it is widely accepted that target firms are likely to create value after the M&A event. The shareholders of acquired and merged banks have a positive effect measured by stock positive returns. The empirical evidence of wealth creation to the target is summarized in the Figure 4. It shows the CARs and AARs of the target banks during the event window, as well as the moving average trend lines during the announcement date of the M&A. The wealth creation to the shareholder is expected to be positively related with the event of an acquisition. In this section, we test the following second hypothesis:

Hypothesis II:

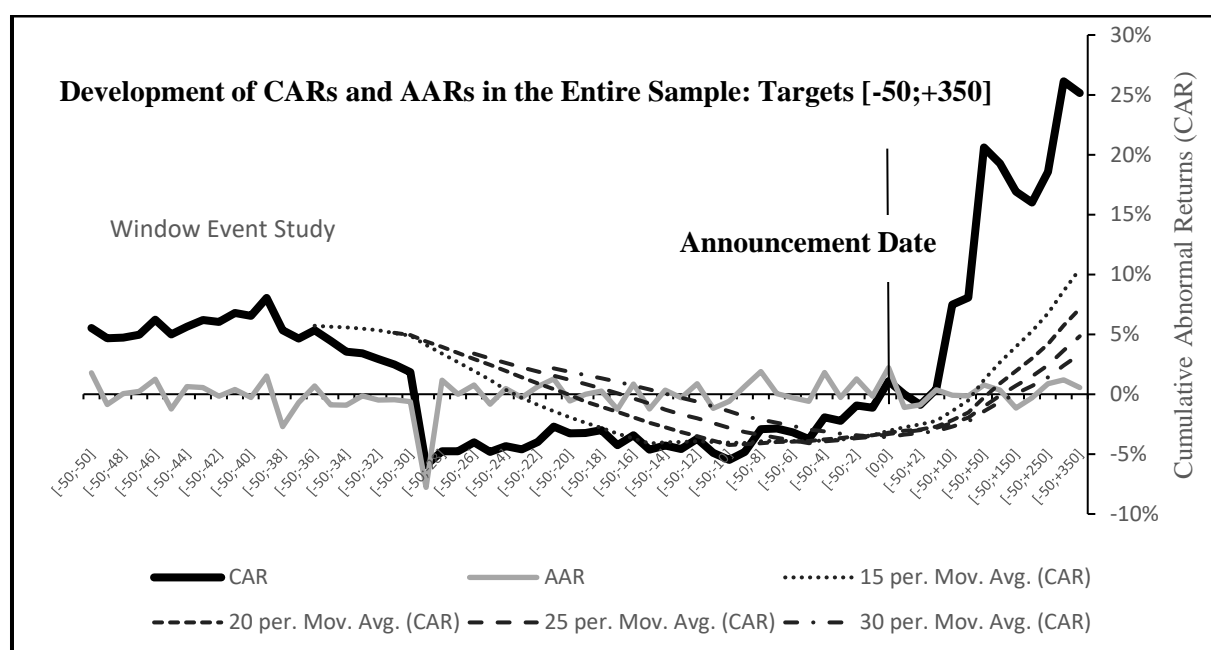
$H_0$ : The European cross-border merger and acquisitions in the banking industry announced during the period of 1985 and 2017 created wealth effects among the acquired banks.

$H_A$ : The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017 did not create wealth effects among the acquired banks.

Overall, the existing literature concerning the cumulative abnormal stock returns to target banks suggests that this analysis will lead to the acceptance of the null hypothesis. That is to note that we theorize that a cross-border M&A in the banking industry should induce the value creation to the shareholders of the acquired banks. In the Figure 4, the black solid trend line provides a very strong evidence that the abnormal stock returns, accumulatively, are in excess of 2% during the event day. Based on the existing sample, the results of our analysis contribute to the existing literature presenting strong evidence of positive returns to the target bank.

Furthermore, the magnitude of the excess returns after the fifth day expanded dramatically to 26% at the end of the window period, leading to the conclusion that over the multi-day event study, acquired banks experience positive cumulative abnormal returns. These findings are in line with the studies conducted by Teply, Starova, Cernohorsky (2008) which found 12.68% CARs, with Andrade, Mitchell, Stafford (2008), and with the results from Jaber (2004). There is a wide consensus concerning the effects of M&As about the positive effects to the wealth of shareholders. Rhoades (1986) studied a group with 413 banks that were acquired during the period between 1968 and 1978, and found statistical positive stock returns during the announcement date.

Figure 4: Cumulative abnormal returns to the target banks



Source: author computation. Eikon Thomson Reuters M&A database

From our results outlined in Figure 4, it is possible to conclude that cross-border European banking M&As generated aggregated positive wealth effects to the target. In particular, when analysing in detail the sample underlying our empirical study, There were a few very successful deals. As an example, the acquisition made in Czech Republic of Komerční Banka AS by the acquirer Societe Generale SA, from France, achieved 270% CARs during the first year. The bank Societe Generale SA, acquired a 60% interest, or 22,805,911 ordinary shares in Komerční Banka (KB), from the governmental Finance Ministry (FM), for 1,754.617 korunas (52 Euros) per ordinary share, or a total value of 40.015 billion korunas (1.185 billion Euros). The FM planned to use 20 billion korunas (592.72 million Euros) raised in the sale to pay off existing state debt. Originally, in November 2000, the FM disclosed intentions to split 60% interest in KB. The acquisition was announced on 28th July 2001 and was successfully completed at the end of 2001.

Another example of a successful transaction was the acquisition of the majority of assets made by Credit Europe Bank NV from Netherlands, a unit of Fiba Holding AS' Credit Europe Group NV. The Bank Credit Europe NV acquired a 95% interest in the Istanbul-based Millennium Bank AS (Millennium), from Millennium BCP Investimento of Portugal (BCP), a wholly-owned unit of Banco Comercial Portugues SA, for 128.294 million Euros. Originally, in January 2009, BCP announced that it was seeking a new buyer for Millennium. The literature specifically focused on European banking M&As is scarce, however, the few studies that investigate this topic do support the results that acquired banks do have positive gains after the deal announcement.

### 5.3 Empirical Findings of CARs to the Combined Target and Acquirer

The two previous hypotheses show evidence related to the wealth creation for each of the M&A parties individually – the acquirer and the target. Furthermore, this study has found significant results that, on average, the acquirers have wealth deterioration after the M&A announcement, and the target groups have shown convincing results of wealth creation for the shareholders in the same time window. Testing of the results show significant evidence for the bidding banks in terms of confirming the abnormal returns flow against the market stock benchmarks of DAX and BKX. Considering that a transference of economic synergies and economic benefits is likely to exist during the integration phase of an M&A, the consolidation of results between the bidder and the target have a stronger statistical combined result. The dynamic transfer of value between the bidder and the target accounts for the joint wealth gains. The intent of this section is to test the following hypothesis III related to the combined wealth effects of an average transaction during an event period.

Hypothesis III:

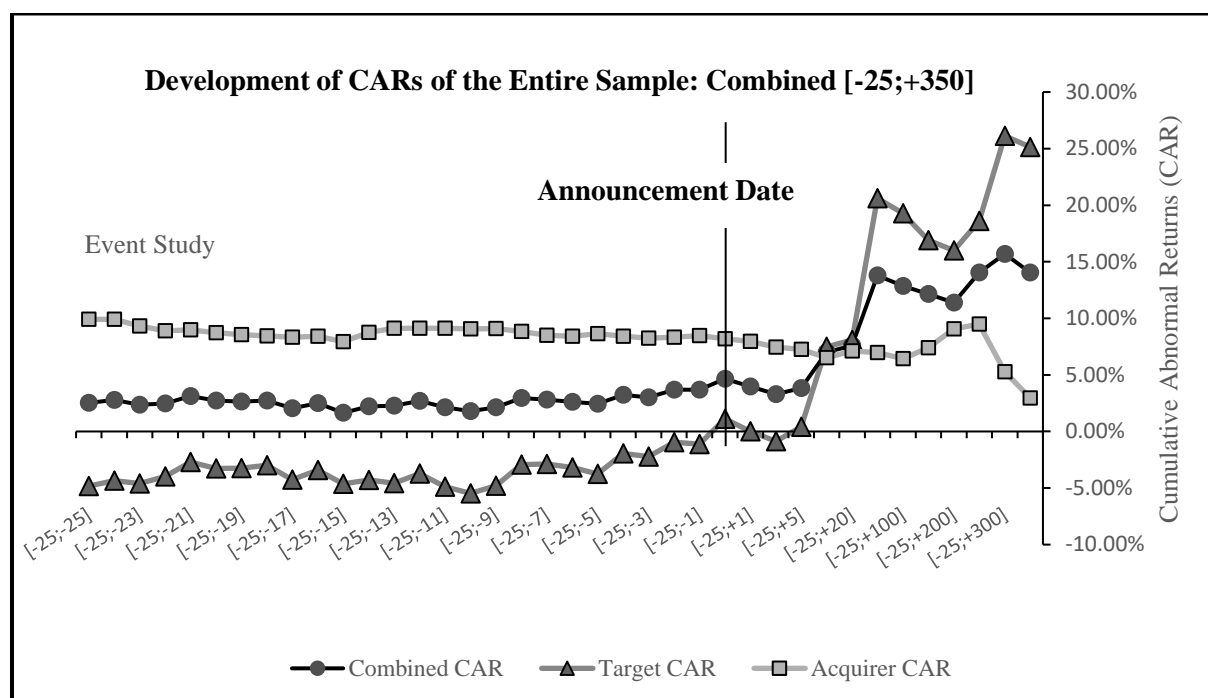
$H_0$ : The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017, created wealth effects among the combined bidding and acquired banks.

$H_A$ : The European cross-border merger and acquisition in the banking industry announced during the period of 1985 and 2017, did not create wealth effects among the combined bidding and acquired banks.

The methodology replicated the same archetype applied to test hypotheses I and II. Firstly we collected the daily stock returns from each bidding and acquired bank in the sample. We then calculated the average abnormal returns validating the results using a one-step and a two-step analysis against the stock market DAX and BKX respectively. The statistical significance of the results was computed considering the t-statistics with seventy-five degrees of freedom at a 1%, 5%, and 10% significance level. The computation was deployed taking into consideration the shortage of data that often follows a delisting of a bank after its merger or acquisition by a third party. After conducting the event study analysis, we summarized the aggregated results of the average abnormal returns, the average of cumulative abnormal returns, the average of the t-statistics, and the consolidated significance tests.

Against most of the literature anterior to the year 2007, we accepted the null hypothesis. This means that cross-border M&As in the banking industry shall lead to a positive wealth effect to the combined entity. Figure 5 provides a summary of the findings from the combined computation of the combined acquirer and target abnormal returns. Across the whole multi-day event window, the cumulative average abnormal returns are found to be positive and with a solid degree of statistical significance.

Figure 5: Summary with previous empirical findings to the M&A combined banks



Source: author computation. Eikon Thomson Reuters M&A database

The multi-day gains had a variation delta ranging from +1.64% up to 15.69%. One of the key findings is the slight decrease of CARs during the announcement period  $[-0, +0]$ . This small downward v-shaped variation is likely to indicate the scepticism of investors when the transaction was announced. Finally, it is worth observing the sharp peak of abnormal returns gains after the first five days of the announcement, with a steady increase magnitude of 7%, 13%, and 15% at the end of the window period.

The results of the event study for the entire sample are summarized in the plot trend lines in Figure 5. They show the cumulative abnormal returns of the target and the acquired bank individually, as well as the combined parties together. The results are consistent with the few contemporary scientific studies where the shareholders of the targets earn significant returns. Thus we can conclude that currently cross-border M&As in Europe are a successful strategy to the average banks targeted. Regarding the bidding banks, there are no significant abnormal returns during the days immediately before and after the announcement, however at the end of the first year shows a significant decline of abnormal stock returns from 9% to 2%. The results for the combined entities between the acquirer and target show significant positive wealth effects determined by cumulative abnormal returns. Hence, we consider that cross-border M&As in the European banking system during the last three decades were value accretive to the shareholders of the combined entities. The Figure 5 aggregates the cumulative abnormal returns for the combined banks. These results are relevant from the economic and politic point of view because the evidence of value creation for combined banks does not represent solely a transference of value from the shareholders of acquiring banks to their targets. From a macroeconomic perspective, we consider that cross-border banking M&A in fact creates value for European economy. This finding is of the utmost significance from the political and



regulatory perspective because it could be the main part of a solution to improve the financial resilience in Europe.

Our results for European cross-border banking M&As are aligned with the findings from prior studies made by Cybo-Ottone and Murgia (2000), which observed +12.69% CAR in  $[-1, +1]$ , Beitel and Schiereck (2001), finding +1.40% in  $[-1, +1]$ , Andrade, Mitchell, Stafford (2001) +1.50% in  $[-1, +1]$ , and Teply, Starova, Cernohorsky (2008) also found +0.63% in  $[-1, +1]$ . There are also similar results found in US-focused studies conducted by Allen and Cebenoyan (1991), and Fraser (1990). When comparing our finding from analysed data between 1985 and 2017, with other studies made in other smaller periods, the results are both positive, however, the scale of the CAR values is different (Cybo-Ottone and Murgia, 2000). While our CAR in the announcement date had 4.64% abnormal returns, the CAR results from Cybo-Ottone and Murgia had 12.69%. These differences for combined entities may either result from changes in the sample structure, or from another economic externality during the maturity curve of some countries at the time they performed the announcement of an M&A. The studies of Silvia Merler (2018), and Alexander Lehmann (2018), considered that the need of risk reduction in the European banking system has reached a crucial momentum. In this regards, we consider that our findings related to the value creation of banking M&As could be a feasible solution to solve the lack of profitability and liquidity in the banking system. Under the current regulatory banking framework dealing with insolvent financial entities, the resolution and liquidation of banks are a last resource solution used to provide critical function to the economy, or when the liquidation may threaten financial stability. Thus, a revised regulatory and fiscal framework that would enhance cross-border banking M&As would potentially prevent a bank from falling into insolvency. Currently, if a bank is declared by the ECB to be insolvent or likely to fail, and the precautionary recapitalization option is not available, the remaining choice is between liquidation or resolution. The EU law regulations related to the use of public money in resolution and liquidation can lead to very different outcomes for the acquiring bank, for the tax payers, and for the creditors. The choice between whether a resolution or liquidation will be applied is mainly based on public interest. If the insolvency would threaten the financial stability, the EU Single Mechanism to support entities in the event of financial failure may be triggered. In contrast to resolution, insolvency is regulated at national levels, creating several discrepancies on the treatment applied in each situation (McCormack, 2014). The resolution mechanism is governed by the EU Bank Recovery and Resolution Directive, which leads to a tight scrutiny of the use of public funds. In conclusion, considering our findings related to M&As value creation to the combined entities, we conclude this solution to be a suitable answer to avoiding the event of generalized insolvency, lack of profitability, or to prevent governmental financial rescue using tax payer funds.

#### **5.4 Empirical Findings of value creation with respect to the geography**

One of the most common strategies to expand operations to foreign countries is a successful cross-border M&A. An accurate selection of the target is one of the factors to the success, and another important element is selecting the region with the larger likelihood of obtaining future economic benefits. In the anterior section describing the empirical findings related to the

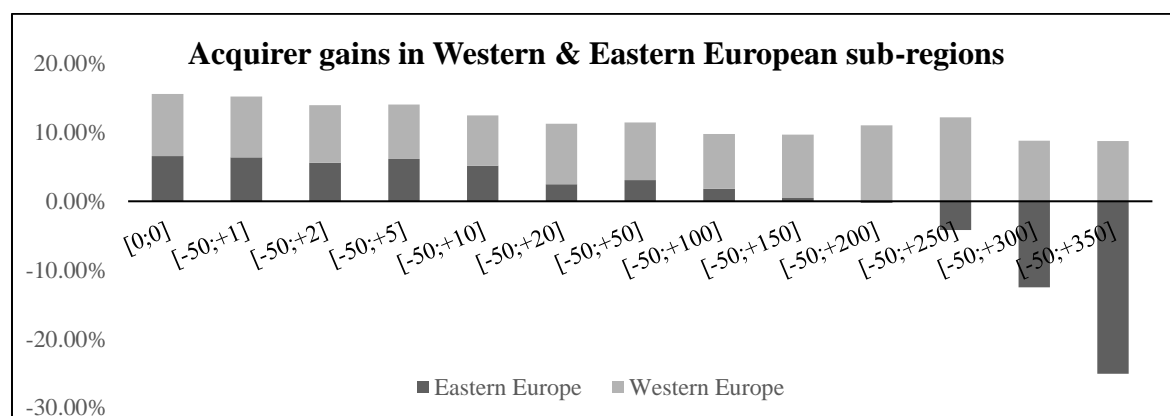
bidder's cumulative abnormal returns, the results presented showed that, on average, the bidders observed a significant value drop after one year from the announcement analysis. This current section aims to test Hypothesis IV and identify which of the European sub-regions had the largest average stock gains.

Hypothesis IV:

$H_0$ : The European cross-border merger and acquisitions announced during the period of 1985 and 2017 in the banking industry did not on average create more value to the targeted banks in Western Europe than in Eastern Europe.

$H_A$ : The European cross-border merger and acquisitions announced during the period of 1985 and 2017 in the banking industry on average created more value to the targeted banks in Western Europe than in Eastern Europe.

Figure 6: Breakdown of gains to the acquirer between Western and Eastern Europe



Source: author computation. Eikon Thomson Reuters M&A database

Considering that the opening of the Eastern European markets to the mature Western economies happened after the year 1989, we would expect significant positive returns in the cross-border acquisition of banks located in transition economies. Based on the aggregated sample of 75 acquirers, Figure 6 shows strong evidence that the Western region has maintained a stable level of returns across the last three decades. On the other hand, the acquirers located in the Eastern region have a consistent slight downward slope until the window period [-50, +200] from 5% to 0% returns. In addition, from this point onward in the window time, the decrease of returns became sharp until the end of the period [-50, +350] with a deviation percentage falling dramatically from 0% cumulative abnormal returns to -25, 08%. This is a relevant finding due to the 1% level of statistical significance. In conclusion, the findings of our analysis provide clear evidence to reject the null hypothesis. These results correspond to the prior findings from Tourani-Rad, Beek (1999), and Teply, Starova, and Cernohorsky (2010).

Moreover, we can accept with a consistent degree of confidence that cross border M&As in Europe during the last 30 years created higher cumulative abnormal returns to the bidders geographically located in the western region. The larger CAR verified among the bidding banks are consistent with the stronger and more resilient financial markets.

## 5.5 Summary of results

This section confronts the estimation results with the first three-hypothesis tested in this chapter and summarizes if we reject or not reject them. The estimation results are compared with the results of previous empirical researches and the results summarized in the previous points 5.1., 5.2., and 5.3.

**Hypothesis #1 – not rejected:** The wealth effects to the bidding banks during the event of an M&A announcement have not created value among the bidding banks, therefore we accept the null hypothesis ( $H_0$ ).

**Hypothesis #2 – not rejected:** In the Figure 4, the black solid trend line provides a very strong evidence that the abnormal stock returns, accumulatively, are in excess of 2% during the event day for the target banks. Based on the existing sample, the results of our analysis contribute to the existing literature presenting strong evidence of positive returns to the target bank.

**Hypothesis #3 – not rejected:** Against most of the literature anterior to the year 2007, we do not reject the null hypothesis. This means that cross-border M&As in the banking industry shall lead to a positive wealth effect to the combined entity. The Figure 5 provides a summary of the findings from the combined computation of the combined acquirer and target abnormal returns. Across the whole multi-day event window, the cumulative average abnormal returns are found to be positive and with a solid degree of statistical significance.

**Hypothesis #4 – rejected:** our results show strong evidence that the Western region has maintained a stable positive level of returns across the last three decades. On the other hand, the acquirers located in the Eastern region have a consistent downward slope of stock returns during the same event window period.

The Table 14 presents the comparison of estimation outcomes with the respective results from previous papers. The sources and methodologies slightly differ in terms of sample size, geographic location, dataset structures, the bank types, as well as the underlying motivation for the M&As. Considering these conditions, the selection of previous research was done solely including papers that had features aligned with the present thesis. Our estimations in the second Hypothesis brings similar results for the target bank during the event period, hence shows evidences of value creation. On the contrary, our results concerning the Hypothesis I and III differ considerably from the previous literature. We found clear evidences of wealth dilution among the bidding banks at the end of the event window with statistical significance at the level of 1%, 5%, and 10% level.

Table 14: Summary with empirical findings to the M&A bidding, target, and combined banks

	M&A Study	Year	Period	window	CAR (%)	(n=)	t-stats
Previous studies to the bidding	Dodd	(1980)	1979-1977	[0, -1]	-1.0%	60	-2.98***
	Asquith	(1983)	1962-1976	[0, -1]	0.2%	196	0.78*
	Eckbo	(1983)	1963-1978	[0, -1]	0.1%	102	-0.12*
	Desai & Stover	(1985)	1976-1982	[0, -1]	0.9%	18	2.18***
	Baradwaj, D. & Fraser	(1990)	1973-1987	[0, -1]	-0.4%	159	2.38***
	Fatemi & Furtado	(1987)	1974-1979	[0, -1]	2.1%	117	0.75*
	Doukas & Travlos	(1988)	1975-1983	[0, 0]	0.1%	301	0.84*
	Andrade, M., Stafford	(2001)	1973-1998	[-1, +1]	-0.7%	3688	n.a.
	Jaber	(2004)	1962-2001	[-1, +1]	-0.9%	25	-1.79**
	Teply, S., Cernohorsky	(2008)	1998-2007	[0, 0]	-1.3%	52	5.58***
	Diaw	(2014)	1990-1999	[0, 0]	-0.2%	45	-0.68*
	<b>Moreira</b>	<b>(2018)</b>	<b>1985-2017</b>	<b>[0, 0]</b>	<b>-0.1%</b>	<b>75</b>	<b>-0.38*</b>
Previous studies to the bidding banks	Dodd	(1980)	1979-1977	[0,-1]	13.4%	71	6.2***
	Asquith	(1983)	1962-1976	[0,-1]	6.2%	211	23.0***
	Eckbo	(1983)	1963-1978	[0,-1]	6.2%	57	9.97***
	Andrade, M., Stafford	(2001)	1973-1979	[-1, +1]	16.0%	598	n.a.
	Andrade, M., Stafford	(2001)	1980-1989	[-1, +1]	16.0%	1226	n.a.
	Andrade, M., Stafford	(2001)	1990-1998	[-1, +1]	15.9%	1864	n.a.
	Andrade, M., Stafford	(2001)	1973-1998	[-1, +1]	16.0%	3688	n.a.
	Jaber	(2004)	1962-2001	[-1, +1]	21.7%	17	19.2***
	Teply, Cernohorsky	(2008)	1998-2007	[-1, +1]	12.6%	55	24.5***
	Diaw	(2014)	1990-199	[0,-1]	12.0%	45	2.4***
	<b>Moreira</b>	<b>(2018)</b>	<b>1985-2017</b>	<b>[-1, +1]</b>	<b>2.0%</b>	<b>74</b>	<b>2.0***</b>
Previous studies with combined banks	Cybo-Ottone and Murgia	(2000)	1988-1997	[-1, +1]	12.6%	126	2.81***
	Beitel and Schiereck	(2001)	1985-2000	[-1, +1]	1.4%	98	5.53***
	Andrade, M., Stafford	(2001)	1973-1979	[-1, +1]	1.5%	598	n.a.
	Andrade, M., Stafford	(2001)	1980-1989	[-1, +1]	2.6%	1226	n.a.*
	Andrade, M., Stafford	(2001)	1990-1998	[-1, +1]	1.4%	1864	n.a.*
	Andrade, M., Stafford	(2001)	1973-1998	[-1, +1]	1.8%	3688	n.a.*
	Teply, Cernohorsky	(2008)	1998-2007	[-1, +1]	0.6%	55	1.49**
	Diaw	(2014)	1990-1999	[0,-1]	0.6%	45	2.45***
	<b>Moreira</b>	<b>(2018)</b>	<b>1985-2017</b>	<b>[-1, +1]</b>	<b>4.6%</b>	<b>74</b>	<b>1.51**</b>
	* significant at 10% level, ** significant at 5% level, *** significant at 1% level						

Source: author computation. Eikon Thomson Reuters M&A database

## 5.6 Further research opportunities

To conclude this chapter let us first aggregate the open discussion topics for further research. They can be summarized into the following five points: the impact of banking consolidation on people's lives, M&As and systemic risk, M&As and profitability, the redefinition of banking institutions in Europe, and the enlarging the data analysis to a global scope

- **The impact of banking consolidation on citizen's wealth:** a further research opportunity shall focus on the effects of banking consolidation in the wealth of citizens. The proxies that may be analysed shall include indicators to assess if value creation in banking industry through consolidation have a positive effect on people's wealth creation or purchase power.
- **M&As and systemic risk:** we consider relevant further studies on the joint impact of banking concentration and systemic risk across the industry. We believe that these studies may reveal insights that may contribute to the strengthen of banking system. We hope that results steaming from these researches may have importance for enhancing the stability and performance of banking in Europe.
- **Banking M&A and profitability:** We believe in the relevance of studying further on the linkage between the root causes of banking profitability and its relationship with M&A consolidation.
- **The redefinition of banking institutions in Europe:** this topic constitutes an active ongoing discussion at all levels across European financial institutions. Despite is still premature to elaborate an extensive and solid assessment of the future developments in this regards, we consider to be an area of study that would be of great interest to public institutions, private shareholdings, among all related sectors.
- **Enlarging the data analysis to a global scope:** it would be also desirable to enlarge the data analysis and include a population with a global scope. In addition, it would also be interesting to study factors influencing the results overtime such as: i) interest rates in different geographic regions, ii) legislation frameworks and their impact on M&A, iii) macroeconomic maturity stages Vs M&A consolidation characteristics.

## 6. Conclusion

Although in the last thirty years there has been a significant research wave of studies focused on stock markets and its wealth effects, there remain questions about the value creation of banking cross-border M&As. The central topic of this research is to investigate the wealth effects to the bidding and target shareholders during the event window of a cross-border M&A. Taking into consideration that this topic did not provide much certainty in terms of positive or negative outcome until the last financial crisis in 2008, a thorough analysis of the abnormal stock returns is fundamental to the validity of the studied observations. The empirical findings presented here provide a statistically significant level of likelihood confirming the results. Our results regarding wealth effects in cross-border banking M&As show significant negative abnormal returns to the bidding banks after the announcement date, stock value creation to the targets, and significant positive abnormal stock gains to the combined entities. The underlying reasoning of our different results comparing with the existing studies until 2008, stem from the contrasting financial landscape after the financial crisis, by the consistent lack of profitability, and by the excess of existing small and medium size banks in Europe during the last ten years. The evidences found in this research are in line with the latest papers made by policy makers and scientific studies about European banking profitability and consolidation. There were a few authors and prominent law makers that lately studied the theoretical implications of wealth transference in the banking sector across Europe such as Constancio (ECB, 2017), Merler (2018), and Lehmann (2018). The main hallmark of these studies have the following overarching consensus: firstly the current banking system is not financially sustainable, secondly the profitability of the banks remains with a low value outlook, thirdly the non-performing loans are heavily undermining the balance sheets of the banks, fourthly the consolidation of the banking sector through cross-border M&A expansion is a feasible solution to improve the sector profitability, and fifthly it is necessary to review the current regulations ruling mergers and acquisitions. To the extent of summarizing the results of our analysis, we first conducted an extensive empirical and theoretical survey of the existing literature about M&A wealth effects in the European banking industry. The cross-border magnitude of this research required a complete review of prior studies in Europe and the US, due to the residual number of existing published works focused on cross-border transactions. This is also a delimiting factor regarding the availability of comparative data. Our research has unfolded clear positive wealth effect for the target banks across the Europe during the period 1985 and 2017. For the acquiring banks, the abnormal stock returns were slightly negative during most of the event period, and at the end of the first year it was possible to verify a sharp downward slope. The findings concerning the aggregated effect between bidders and targets had a conclusive positive outcome measured by abnormal stock returns offsetting the losses incurred by the acquirers.

The methodology of our studies has followed the event study approach. The two market benchmarks applied to the statistical model were DAX and KBX using a one-step and two-step regression analysis. The event window comprised a period of fifty days before, and three hundred and fifty days after the announcement day. The statistical robustness of the ordinary

least squares model was tested at 1%, 5%, and 10% significance. The findings related to the wealth effects to the shareholder during the M&A event window were primarily presented considering the bidding and target banks separately, and secondly presented considering both entities combined. The empirical findings concerning the I Hypothesis related to the wealth effects to the bidding banks were in line with the existing literature and did not reveal positive returns. The overall average abnormal returns during the last thirty-two years' period of our analyses have showed a slightly downward decrease, with a steep fall from 9% to values close to 1% at the end of the first year. Notwithstanding, we accepted the null hypothesis concerning the bidding banks due to the fact that the results of the model did not have abnormal stock gains during the announcement window. Adding to this observation, there was a slightly weak statistical significance of the analysis which meant that the results were not completely explained by the OLS assessment. Conversely, the II Hypothesis regarding the target banks, the results are considerably different generating significant positive wealth effects to the shareholders. The existing literature has an implicit consensus concerning the positive magnitude of the returns to the shareholders. One explanation for these abnormal returns is related to the premium paid to the target shareholders, and respective demand among investors that an acquisition triggers in the stock markets. The analysis showed strong evidence of abnormal stock gains to the target banks, therefore we accept the II Hypothesis with a high degree of confidence. In addition to the implications drawn from the wealth gains measured by abnormal stock returns, the value of control and synergy after the acquisition also contributes to the positive gains after the announcement event. These results are aligned with the majority of the reviewed contemporary empirical research in the US and Europe. Consequently, the shareholders of European combined banks which had been merged or acquired during the period between 2007 and 2017 earned significant positive cumulated abnormal returns. The value creation is the most valuable objective of a shareholder (Beitel and Scheireck, 2001), and this study aims to also create awareness of the necessity for European regulatory revision to effectively boost cross-border consolidation and enhance banking profitability. Nevertheless, we concluded that cross-border M&As in banking are value destructive to the bidder and value accretive to the target. When we tested the III Hypothesis related to the combined abnormal returns of the target and bidder banks across the European countries, we unveiled that there is a statistical positive significant market reaction during the window period between the announcement day and the end of the first year. The results of the IV Hypothesis show clear evidence that the Western region has had positive stock abnormal returns during the last three decades, while the acquirers located in the Eastern region have negative stock returns during the same period.

Our findings regarding wealth effects in cross-border banking M&As show significant negative abnormal returns to the bidding banks after the announcement date, stock value creation to the targets, and significant positive abnormal stock gains to the combined entities. We conclude that, from a regulatory European perspective, we recommend the establishment of a single European financial entity to promote cross-border banking M&As. Furthermore, the European authorities and regulators should verify if there are any obstacles that may still undermine a solid consolidation of the banking industry across-borders.

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