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**Antitrust legislation in the M&A field and the  
effects of transaction announcements on  
stakeholders' wealth: an empirical analysis for  
European Banks**

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*To my family, who has always supported me  
and to my supervisor for having followed  
me in the preparation of this paper.*

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## **Abstract**

Starting from the last decades of the past century, a rising trend in both number and magnitude was observed by researchers with respect to the occurrence of Mergers and Acquisitions in the European financial sector. It became quickly evident that a study relative to the economic consequences of those events was needed, and this paper tries to go exactly in this direction with the aim of understanding the effects of takeovers between banks in the European Union. Besides this, a first part relative to European legislation on M&As has been presented, with particular regard on the notification procedure and on the antitrust supervision enforced by regulations, treaties and guidelines valid at supranational level. The following part of the study tries instead to analyze, in a quantitative way, the effects that both shareholders and bondholders face if a transaction is approved by the competent authority. To study such effects, I implemented an event study on stock returns and CDS spreads. The results obtained in the former case are basically in line with previous academic conclusions since they generally display positive abnormal returns for acquirers and negative returns for targets. In the latter case, instead, no evidence of common and predictable results has been observed. To conclude, it might be interesting for future research purposes in this field to investigate all the economic features that might affect the perception of the event for both groups of considered stakeholders.

# 1. Introduction

Since during the last decades a consistent amount of transactions occurring in the European financial sector has been observed, not only for what regards small and local banks trying to diversify their supplied services but also for bigger groups aiming at increasing their market share in the industry, a study relative to the behavioral and the economic consequences generated for investors and, more generally, to involved individuals, became necessary. As displayed by Kane (2020), it directly derives from that aspect, that a system of regulation and supervision of this kind of activity was needed in order to preserve the smooth functioning of the involved sector and the protection of those categories that would potentially have been harmed. This latter point is fundamental in order to understand the present system of regulation and supervision that has been introduced by the European Union in order to identify, assess and eventually accept perspective transactions. In fact, a precise set of requirements relative to the notification procedure and to the antitrust issues that a bank has to respect were settled. The idea that lies behind the procedures described is clearly that of preserving and protecting the rights of involved and external entities and individuals.

With regards to the economic consequences generated by such a type of event, several different academic papers were published in an attempt to study the effects generated by operations of concentration and with the aim of identifying possible forecasting possibilities for future transactions. In this report we try to address exactly those tasks, giving importance to those transactions involving European banks in a timeframe of 17 years, ranging from 2000 to 2017. By proceeding in this way, we considered the most relevant takeover operations, whatever national or cross border, that took place in the European Union, and tried to estimate the generated consequences for involved stakeholders, especially with regards to bondholders and shareholders. In order to do that, a methodology equivalent to the one applied in previous research papers was carried out, that is essentially a set of procedures based on the computation of abnormal returns and cumulative abnormal returns. This procedure is relevant in a context in which economic events like mergers are involved because they display how investors are affected and react to the announcements of such events.

In line with what was previously discovered by researchers, we found out that for the case of shareholders the economic outcome depends on whether they belong to the acquiring entity or to the target one. In the former case, a decrease in returns on the underlying instrument is usually observed, whereas in the latter case an increase in the share price, and consequently in the returns is generally displayed. In addition to the analysis applied for the case of shareholders, a complementary one

referring to bondholders was also introduced. In this case, the reasoning behind the methodology used was slightly different in that we introduced another type of financial instrument, that is credit default swaps. Differently from what obtained for the case of shareholders, the results obtained were not always in line to what we expected, that is the same that occurred when we additionally considered the market share effect of the institution on its returns and the forecasting capabilities of the involved investors. The idea is that those latter results were often ambiguous and not always homogeneous, therefore no definitive conclusions could be presented in respect to those aspects.

As one might understand, the researches carried out and that we are going to present in this report are extremely important in order to assess the potential results a transaction like a merger or an acquisition could generate to the economy and to the involved stakeholders. Indeed, the possibility to predict those consequences is having an ever-increasing role, that is also studied in order to help European authorities to legislate, regulate and supervise the perspective mergers and acquisitions.

## **1.1 The relevance of M&A operations for firms**

Historically, in the economic sector, great importance and a relevant part of literature were dedicated to takeover operations among entities and economic players, independently of their nature and of the type of operations they carried out. This field has not only an ancient economic origin, but it has also undergone a process of continuous evolution and development that continues to the present day, highlighting an ever-increasing degree of complexity and articulation. The reason for this success is simple: the operations carried out have relevant economic impacts on both the involved entities and the public at large. As a matter of fact, whatever we are considering a spin-off of a branch of a company or an acquisition of another entity, there are some aspects that make the operation as a whole have a positive impact, sometimes even substantially so. Anyway, before analyzing this aspect in more detail, it is important to display what operations of fusion and fission between economic entities effectively are, and by which features they are characterized. First of all, these transactions are generally referred to with the term “Mergers and Acquisitions”, which indicates a type of transaction that can have different nature. Roughly speaking, a transaction of this kind involves one or more parties which are categorized as acquirers or targets and which’s aim is to grow and to exploit synergies that might arise from the consolidation of the entities.

It is commonly believed among researchers, that there are three main types of M&A operations, that of course are characterized by different features, but that essentially could be grouped into consolidations, mergers and acquisitions. With regards to the former term, we are referring to two

entities that merge and that simultaneously give birth to a new institution with a different name and different features from the generating ones. The second term, instead, is slightly different since it refers to the consolidation of businesses of two or more institutions, in which one unit remains operative whereas the others are excised. Last but not least, as pointed out by Fleuriet (2008), acquisitions are no longer consolidations in a strict sense of the term, like the former elements, but they are rather comparable to buyout transactions. In particular, the acquisition could concern the purchase of the assets of the target only, or alternatively it could concern the purchase of the shares of the target in order to get control over its assets.

Having briefly reported what M&A operations are, a new question might now arise: How are takeovers and mergers financed? In other words, which are the payment methods that are generally used by an acquirer to get control over the target? The answer is not easy to address since each transaction is studied and carried out on a case by case basis. However, two methodologies are usually considered: cash-financed transactions and stock-financed transactions. Basically, in a cash-financed acquisition, shareholders of the target company leave the scene with cash in exchange for their shares. On the other hand, in a stock-financed acquisition, selling shareholders join purchasing shareholders as owners of the acquiring company. This means that they receive shares of the acquiring institution in exchange for their shares in the target. As one might expect, the choice of payment method used can have a positive or a negative impact on the value of the transaction. In fact, a study carried out by Loughran and Vijh (1997) has highlighted the fact that payments in cash form usually generate a greater return than payments in stock. This obviously translates to the fact that payments in stocks are usually more expensive for acquirers than payments in cash and that companies that remunerate in shares are generally overpaying. Of course, this is not always the case since several different variables should be considered in the payment process and the aggregate value of the deal might therefore change too.

Despite the way in which companies aggregate or split, which we have addressed until now, another aspect is usually previously studied and analyzed, that is the set of several different reasons that bring an entity to acquire another one. The general term that is commonly used and that perfectly summarizes the rationales for M&As is known as “synergies”, and it considers the improvements and the value added by the takeover. In other words, we are referring to the study which considers the value created by the two institutions working together compared to the value of the two entities on a stand-alone basis. According to Brealey, Myers and Allen (2017), there are several different reasons for which two institutions might concentrate. Some of them have a consolidated and justified basis, while others are only apparently so and finally generate misallocations and inefficiencies rather than value creation. With respect to that fact, a relevant role is played by the tradeoff consideration of the

positive and negative aspects that might arise from the takeover. In the concrete, the parties involved in the transaction should carefully evaluate and make sure that the gains coming from the operation are of much higher value than the shortcomings. In such a context, the work presented by Ziva Rozen Bakher (2018) plays a key role since it investigates whether the merger and acquisition strategy per se, that is reflected throughout the whole M&A process, may bring to a hypothetical trade-off between the two main objectives, that is synergy success and efficiency gains, which could probably explain the consistent failure rate of concentration strategies. The link between this aspect and the reasons for carrying out a transaction is therefore a turning point in the decision-making process. Among the sensible motives for concentration we find economies of scale, economies of vertical integration, complementary resources, surplus funds, the elimination of inefficiencies and industry consolidation. A brief explanation of these elements is mandatory in order to better understand the rationale behind operations of M&A. The former reason is based on the fact that two entities together are capable of reaching a cost reduction on the production of goods sold or services provided that is not possible to achieve on a stand-alone basis. Achieving these economies of scale is an obvious goal especially for horizontal mergers, which could be defined as the aggregation of two firms in the same line of business. On the other hand, economies of vertical integration are reached when a company seeks to gain control over the production process by expanding back toward the output of the raw material or forward to the ultimate consumer. A common example of such a situation is provided by a firm that merges with a customer or a supplier. Going further, the third element which is worth analyzing in the group of the sensible motives for mergers, is given by the presence of the so called “complementary resources”. In this case, many small firms are often acquired by larger ones that could possibly provide the missing ingredients necessary for the small firms’ success. In other words, this means that some companies are not capable of producing or obtaining some resources that another company is instead able to produce. As a result, a clever operation for the former firm could be that of acquiring the latter one. More common is however the rationale of adopting surplus funds. According to this reason, companies operating in mature industries that display no investment opportunities are usually encouraged to direct their cash investments in other fields. Essentially, this means that firms with a surplus of cash and a shortage of good investment opportunities often turn to mergers financed by cash as a way of redeploying their capital. The last two elements listed by Brealey, Myers, Allen (2017) are probably the most important ones with regards to our study. In fact, eliminating inefficiencies considers the rationale according to which there are always firms with unexploited opportunities to cut costs and increase sales and earnings. Such firms are obviously natural candidates for acquisitions by other firms with better management. Slightly different is instead the case for industry consolidation. According to this motive for mergers and acquisitions, the biggest

opportunities to improve efficiency seem to come from industries with too many firms and too much capacity.

While this concept, involving bank mergers, will be of high interest during our work, it is now necessary to proceed with the analysis of the general dubious reasons for mergers that were previously cited. Among those reasons a prevalent role is dedicated to diversification, increase in Earnings per Share (EPS) and finally to lower financing costs. The former element is based on the fact that corporate diversification does not increase value in perfect markets as long as investors' diversification opportunities are unrestricted. Differently, the second element cited is based on the observation of slight increases of EPS for several years after the acquisition has been carried out. This also occurs even though there are no evident economic gains from the transaction. The rationale behind this aspect is given by the fact that after a transaction, earnings heavily increase, but at the same time the number of shares does not increase with the same magnitude. As a result, Earnings per Share increase and this is mainly justified by the commonly known "bootstrap game". The last aspect that is used to justify a transaction, but that has been classified by Brealey, Myers and Allen as non-generally effective, is given by the expected reduction in financing costs. In order to understand this point, an example is provided: if two entities act separately, they do not guarantee each other's debt. Therefore, if one party fails, the bondholder has no right to claim its money to the other party. On the contrary, after a merger has occurred, each enterprise does effectively guarantee each other's debt. The result is that the possible lower financing cost obtained is not due to the merger but rather to the fact that the mutual guarantee makes the debt less risky.

For all those reasons we could therefore conclude that the addressed rationales are apparently not explanatory and justifiable for most of the transactions that historically occurred.

## **1.2 The banking sector frame in Europe**

While the topics addressed until now are mostly peculiar features of common companies, in this work we will pay attention to a relevant industry in the economic framework, that is the banking sector. This means that we will essentially address and analyse the field involving banks and see how M&A operations have affected and changed this industry. With regards to this aspect, it is extremely important to understand what the role of banks in the economic scenario is and how their actions are regulated and supervised, both on a national and on a supranational basis. To put it in a simple way, as indicated by Armour, Awrey, Davies, Enriques, Gordon, Mayer and Payne (2016), a bank could be defined as a financial institution which is licensed to receive deposits and make loans, and which

has the role of connecting savers to borrowers in order to provide movements of funds from one party to the other and vice versa. What's more, some types of banks are usually also allowed to provide additional financial services to those they are originally licensed for; some examples of them are for instance currency exchange services, investment services, wealth management services, asset management operations, and safe deposit boxes.

Despite this, the banking system is however various and complicated, not only because of the type of services provided, but also because of the nature of the institutions, which are classified into retail banks, commercial or corporate banks, or finally investment banks. This aspect is of extreme importance with regards to the legislative and economic field of some countries. As a matter of fact, the forced separation of commercial banking activities from investment banking activities, historically had a great impact on the economic sector and was therefore a peculiar point of interest in most countries. A recent example of the adoption of such a strategy are Spain and Italy, which introduced this reform in order to stabilize the financial sector and decrease the spread of risk in the industry. Risk that is one of the most characteristic elements of the sector and that started to be firmly considered with the occurrence of the past financial crisis. In fact, in that moment it became evident that financial institutions were strictly connected among each other and that a change in the economic conditions of just one entity could generate disastrous consequences for the whole sector. This type of spread is therefore one of the most peculiar points object of studies and supervision in the financial sector and is nowadays commonly known as "Systemic risk".

Going back to the former point, the most relevant example of countries that developed and attributed great importance to the separation of Commercial Banking Activity from Investment Banking Activity are the USA. As a matter of fact, the first example of introduction of such a reform is the famous Glass-Steagall act of 1932, which's aim was basically to avoid the new occurrence of a financial crisis and of the disastrous outcomes that, for instance, arouse during the depression of 1929. Fundamentally, the separation of the institutions according to the nature of their operations prevented financial entities and investment banks from investing in non-investment grade securities, underwriting or distributing non-governmental securities and from affiliating with companies involved in such activities. An interesting study regarding this point and connected with mergers in the banking sector is given by the academic paper presented by Neuhann and Saidi (2018). The rationale behind their analysis is to use the stepwise retirement of the Glass-Steagall Act in order to assess the effects of deregulation in the financial sector on the performance of bank-dependent companies. By doing so, the authors tried to measure the value added by large universal banks as suppliers of financing to the real economy. The rationale behind this aspect is given by the fact that the increasing relationship between banks and firms reduced informational asymmetries and

increased the possibility to raise finance. This, in turn, enhanced economies of scope and relaxed constraints in the provision of external finance. As a result, the study displayed that universal banks usually finance firms with at least 14% higher sales-growth volatility, meaning that concentration has a positive effect since universal banks finance riskier but more productive firms.

Strictly connected to this point is the fact that banks are generally, but not always, regulated and supervised both nationally and by a supranational authority, depending on the national structure and on the types of international agreements that characterize each government. With respect to that point, the European Union is one of the supranational organisations which is characterized by international features and that is operative in the political and economic field. More in detail, nowadays it is made up by 27 different Member States and it has faced a continuously developing process which started with its foundation as European Economic Community with the Treaty of Rome of 1957. Starting from this point, the Union has faced a long process of integration, which relates to the fact that several different new Member States joined the organization and accepted the underlying treaties. On the other hand, the latest and maybe the most important part of this process, is given by the Treaty of Lisbon, which formally gave the name and the current structure to the Union in 2007.<sup>1</sup> The principal point of interest for our purposes, with regards to this topic, is especially given by the “Treaty on the European Union” and by the “Treaty on the Functioning of the European Union”. Both these documents provide an accurate description about the role, the structure and the functioning of the EU. In our case especially, they provide a detailed but complex hint regarding the institutions that play a role in the banking sector and their field of action. The administrative organs that is worth analysing in this framework, since they play a key role in the legislative and executive fields, are the European Parliament, the European Commission and the European Council. The first element is basically the legislative making authority of the European Union and, through its procedures, it is mainly addicted to representing and preserving citizens’ rights. The second authority is instead the triggering point of the whole legislative process. It is the subject that discovers the fields in need of regulation and that starts the decision-making process regarding how to overcome those gaps. On the other hand, the last of those three entities is the one responsible of representing the governments of the Member States of the European Union and that, together with the parliament, approves or rejects draft legislations.

Strictly connected to those points are the three legislation levels which are generally considered: legislation level 1, legislation level 2 and finally legislation level 3.<sup>2</sup> At the first level we usually find regulations and directives, which are different in nature and have different effects. In fact, while

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<sup>1</sup> European Union History: [https://europa.eu/european-union/about-eu/history\\_it](https://europa.eu/european-union/about-eu/history_it)

<sup>2</sup> European Union organization: [https://europa.eu/european-union/about-eu/institutions-bodies\\_it](https://europa.eu/european-union/about-eu/institutions-bodies_it)

regulations are immediately effective in all Member States simultaneously, without need of domestic reception, directives require to be transposed into national law in order to be enforceable and effective. In a second step, those regulations and directives are frequently supported by legislation level 2 elements, which basically aim at filling the gaps of technical legislation. In fact, from the first level we often observe the occurrence of a delegation of legislative power to authorities which issue the so-called Regulatory Technical Standards and the Implementing Technical Standards which are introduced in order to further explain legislative pieces. On the third level, instead, we see a clear print of the work of the European Supervisory Authorities that, like for the first level, produce and issue the so-called “soft law” legislative pieces. In particular, guidelines and recommendations are issued, especially to force financial institutions to comply with European law.<sup>3</sup>

With regards to the addressed authorities, which are strictly related both to the European Union framework and to the Banking Union, the main reasons for which those institutions have been introduced, is given by the fact that markets sometimes fail, and those failures generally have a negative impact on economic players. As a result of those failures, a complicated but effective system of regulation and supervision has been introduced in order to avoid negative economic impacts for entities and other players. Among the several different European institutions entitled of carrying out such a complex task, the ECB is for sure one of the most important ones. The role played by this entity has a double nature, that could be synthetized into “monetary policy tasks” and “supervisory tasks”. While the former element is about maintaining price stability by controlling inflation, which is of less importance for our purposes, the latter is considered a key point in our analysis since it displays the necessity of continuous cooperation between the ECB and the National Competent Authorities. In fact, while the ECB is responsible of prudential supervision, the NCAs are entitled of carrying out tasks related to conduct supervision. The difference between those concepts is clear, and it is displayed by Chiti and Santoro (2019): while in the first case we are addressing a vertical relationship between the financial intermediaries and the public authorities, in the second case we are referring to relationships between financial intermediaries, like banks, and customers, independently if they are private clients or businesses.

In addition to that, while article 4 of the Single Supervisory Mechanism, a building block of the Banking Union, provides indications relative to the tasks assigned to the ECB, what really matters for us is to understand which type of financial institution is under control of this entity and which instead is under control of the NCA. To our aid comes article 6 of the SSM, according to which there are some “significance criteria” that allow us to understand which type of financial entity, bank or

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<sup>3</sup> Regulations, directives and other acts: [https://europa.eu/european-union/eu-law/legal-acts\\_it](https://europa.eu/european-union/eu-law/legal-acts_it)

comparable, is under control of which authority. The criteria cited are the followings: size, economic importance, cross-border activities and direct public financial assistance. The size is considered relevant if the total value of the assets of the financial institution exceed €30 billion, while the economic importance is an arbitrary parameter that considers the relevance of an entity in respect to the economy of the country in which it is operating. The third criteria is instead related to the total value of the assets of the institution. If the value of them exceeds €5 billion and the ratio of its cross-border assets is more than 20 % of one other participating Member State, the considered player is regarded as significant. Last but not least, if the considered entity has requested or received funds from the European Stability Mechanism or the European Financial Stability Facility, then it is considered a significant institution. Those aspects are of extreme importance for our purpose since they provide us the necessary information in order to assess whether an entity is supervised by the National Competent Authority, so if it is not significant, or rather if it is under supervision of the ECB, and therefore considered a significant player. This is for sure a relevant aspect for possible M&A operations in the banking industry since the applied procedure might change according to the type and nature of the authority controlling the institution.

The system of supervision displayed is however part of a bigger and more complicated structure, which is commonly known with the name of “Banking Union”. As already cited, the Union was introduced in 2010 just after the financial crisis, and its aim is basically summarized into the assignment of banking supervisory competences between national authorities and European authorities. The rationale behind the creation of the union is simple, it has to avoid the new occurrence of periods of distress in the industry by introducing key requirements relative to capital, liquidity and assets. Moreover, the Banking Union has historically been considered as the most important step in the process of integration of economies and institutions of Member States in the EU since the creation of the Economic and Monetary Union.<sup>4</sup> In a nutshell, the Union essentially provides the fundamental framework for achieving financial stability and it also helps to build up crisis resilience and improve risk monitoring and assessment. In addition to that, the Banking Union also faces the fragmentation of financial markets within the eurozone and contributes to decreasing the negative feedback loop between bank debt and sovereign debt.<sup>5</sup>

Going further into our analysis, the general organization of the superstructure we are considering is basically made up of three pillars: the already mentioned Single Supervisory Mechanism, the Single Resolution Mechanism and the Deposit Guarantee Scheme, which is not effectively operative now

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<sup>4</sup> Oesterreichische National Bank: <https://www.oenb.at/en/financial-market/three-pillars-banking-union.html>

<sup>5</sup> Oesterreichische National Bank: <https://www.oenb.at/en/financial-market/three-pillars-banking-union.html>

and that probably will not be considered relevant anymore. On the base of the three pillars of the Banking Union we find the Single Rulebook and the Single Supervisory Handbook. The aim of the Single Rulebook is to provide a unique set of homogeneous and harmonised prudential rules which institutions throughout the Union must firmly respect.<sup>6</sup> In particular, the Single Rulebook was introduced in order to guarantee an as unified as possible regulatory framework for the financial sector, that would complete the single market in financial services. As a consequence, the most important result of this adoption will be the growth of a unified and unique single market, with all the advantages that this entails. This aspect is of extreme importance since it displays that one peculiar point that the European Union is aiming to carry out is the harmonization of legislative, economic and administrative fields which involves all Member States in order to have one common equal system rather than one for each participant. In such a context, considering the European Banking Authority, another relevant entity in the framework of the European Union that plays a key role in the harmonization process, it is worth analysing Regulation 1093/2010. In this regulation it is displayed that “The authority has to contribute to the establishment of high-quality common regulatory and supervisory standards and practices, in particular by providing opinions to the Union institutions and by developing guidelines, recommendations and draft regulatory and implementing technical standards”.<sup>7</sup> Therefore, this authority plays an important role in that it issues the common guidelines and recommendations that should be followed by financial institutions and by the relative hosting Member States.

With respect to this point, and in strict connection to what said for the Banking Union, it is therefore important to highlight that banks are subject to precise regulations and prerequisites, especially for what regards capital requirements, liquidity requirements, governance requirements and deposit insurance. The first point refers to the build-up of a buffer of asset value and reduces the risk of a bank becoming insolvent. It is evident that the larger the capital reserves are, the more losses the bank is able to sustain before being unable to repay its debts. Liquidity requirements, instead, prescribe to the bank that it should maintain a determined and fixed proportion of liquid assets in order to make sure to be able to face non-expected cash withdrawals. On the other hand, governance requirements mainly focus on the structure and processes that are fit and adequate for a bank’s function. Finally, the deposit insurance requirement is needed in order to be confident that an insurance scheme exists and to reassure existing and potential customers. All these elements are the true components of the first pillar of the Banking Union, whose task, as one might understand, has played a relevant role

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<sup>6</sup> Single Rulebook according to EBA: <https://eba.europa.eu/regulation-and-policy/single-rulebook>

<sup>7</sup> Regulation 1093/2010

since its introduction in 2010.

To sum up the relevant points, under the first pillar of the BU, the European Central Bank is responsible for the supervision of significant banks, that is of those banks on which the euro area's financial stability hinges in the first place, while non-significant institutions are under supervision of the respective NCAs.<sup>8</sup> On the other hand, the second and the third pillars of the Banking Union are not relevant in our context in that they are far from being attached to our main argument, that is the occurrence, the rationale and the effects of Mergers and Acquisitions in the banking sector.

In the first two sections addressed, a brief but complete analysis regarding M&A operations, in particular addressing what they are, what the rationale behind them is, how they are applied and what their consequences are, has been carried out. What's more, we also displayed the structure, the functioning, the regulation and supervision operations of the banking sector at a European level. In the next sections, those topics will be simultaneously considered in order to analyse and understand, from a legislative point of view, the dynamics and results of Mergers and Acquisitions for banks in the European Union.

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<sup>8</sup> Oesterreichische National Bank: <https://www.oenb.at/en/financial-market/three-pillars-banking-union.html>

## **2. Legislative concerns for bank mergers in the EU**

### **2.1 The merger-making process**

The occurrence of M&As transactions, as we have discussed them until now, misses to face an important aspect, that is the tradeoff of impacts that arise for the entities involved and for the industry as a whole. In other words, this means that takeovers, whatever their nature and their volume is, could affect either positively or negatively the industry in which the considered firms operate. As a result, given the importance of this kind of operations for the economy, a precise and developed system of regulation and supervision has been carried out in order to verify the feasibility of such actions and the eventual prohibition of them. With regards to this issue, the key point that we should bear in mind during the whole digression is that consumer protection is the most important and eventually unique purpose for authorities together with the preservation of the principle of free competition. Said differently, this means that the work carried out by national and supranational authorities is aimed at preserving competition and avoiding the generation of trusts in order to finally preserve consumers' rights.

In the next sections we will display what the general structure and the procedures to carry out in order to implement a transaction are and how this is organized for the European case.

#### **2.1.1 Institutional peculiarities of M&A in the banking sector**

Regardless of the socio-geographic peculiarities of the financial sector we are considering, there are some legislative, economic and organizational features that are common to most systems entitled of supervising M&A operations. In fact, the effective processes that are usually carried out in order to perform a transaction are often recurrent and therefore similar in some specific features independently of the size, the type and the value of the merger considered. It's therefore easy to understand that a system entitled of regulating, supervising and approving the perspective transactions is needed in all financial realities. From that, considering the case of the most important and well-known financial systems, it is worth mentioning that the starting point of the complex organizational structure is usually set by a package of treaties, legislations, rulebooks and handbooks, that since their issuance are subject of amendments and modifications in order to continuously adapt to the arising challenges

of the financial sector. Secondly, a set of authorities, entities and organizations are introduced. The organization, the purposes and the field of action of those institutions are precisely and meticulously displayed by the competent legislation documents, that not only set the rights but also the limits and the eventual solvency procedures to apply in case internal and external conflicts should arise. In addition to that, the interaction between those institutions is also further regulated in that it is surely important to highlight the relevance of communication among authorities willing to accomplish their tasks. A non-efficient connection between those authorities might in fact harm the whole system and therefore generate economic inefficiencies or even damages to the whole sector. It directly derives that the way in which the system is organized and regulated is of key importance for its well-functioning.

Not second for importance, a key role is played by institutions not belonging to the supranational level but rather to the national one. In fact, in Europe like in many other contexts, the already discussed system is a supranational organization which connects nations belonging to a common socio-political culture aiming at exploiting economic advantages deriving from cooperation. The most important point is therefore given by the procedures of cooperation that are carried out among member states and by member states with supranational authorities. By doing so, an efficient system of connection between member states and a likewise efficient supervisory system are introduced.

With regards to the operations involving mergers and acquisitions, instead, a peculiar set of procedures and institutions are usually introduced by the competent legislative documents. In fact, the several different steps that a financial entity has to accomplish with in order to carry out a takeover are usually under responsibility of more than one supervisor, and they usually begin with the notification procedure. This latter term is used to identify the announcement that a company releases in which it states its intention to merge. A preliminary analysis according to the feasibility of the procedure is therefore conducted, and if a positive judgment is issued, a second and more detailed assessment is carried out. Not less importantly, in this field, is the study conducted in order to identify and evaluate the perspective economic consequences for the involved industry and for the involved individuals. In this respect, the role played by national and supranational institutions is fundamental in that they are responsible of avoiding market failures and preserving those categories that are more subject of being harmed by the perspective operation.

Finally, having identified the pros and the drawbacks of the transaction, a definitive judgement regarding the feasibility of the merger is issued by the competent authority. If this results in a denial, the perspective transaction is blocked, otherwise a set of new procedures should be followed. Those latter ones are again followed by another set of authorities that are entitled of carrying out the merger procedure from a point of view that is strictly technical and no longer related to the macroeconomic

effects previously cited. After this work is done, the transaction is completed directly by the two involved financial institutions. We can therefore conclude that, usually, the role played by the superstructure is restricted in the assessment of the impact that such a transaction might have for the industry and the related groups of stakeholders, but it is not entering in the details concerning the economic results relative to the acquiring and the targeting financial institutions, that have in fact to evaluate those aspects on their own.

Having introduced those general aspects, which summarize the general features of most superstructures, in the next section we are going to analyze what just introduced in a more detailed way, in particular by addressing the role of the Banking Union in the M&As procedures.

### **2.1.2 The role of the Banking Union**

Relative to the occurrence of operations of M&A in the financial sector, it is important to make a step back and to consider what stated in the previous section in relation to the European case. As we displayed, the European Union comes to our aid for the most important issues, including for transactions that are considered to be relevant from the economic point of view, whereas for the less relevant ones, which are identified according to prearranged criteria, the national legislation is valid.

With regards to this fact, a key role is played by Regulation 139/2004 on the control of concentrations between undertakings (the EC Merger Regulation).<sup>9</sup> The present regulation, in addition to what we are going to present, gives importance especially to the double role played by National Competent Authorities and by European Authorities. In actual facts, it is discussed and displayed that the provisions and restrictions to be adopted in the considered regulation should apply not only to significant structural changes, which are identified according to turnover parameters, but also to the significant transactions that might impact on the market and that go beyond the national borders of the home Member State. Such concentrations are mandatorily reviewed at European level only, in compliance with the principle of subsidiarity, whereas, concentrations not covered by this regulation, are within the jurisdiction of the Member States, which could apply different standards among each other.<sup>10</sup> With regards to that fact, the powers of national authorities might be limited to cases where, after a failing intervention of the European Commission, free competition is heavily affected within the territory of a Member State and where competition of that Member State cannot

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<sup>9</sup> Regulation 139/2004: <https://eur-lex.europa.eu/legal-content/IT/ALL/?uri=CELEX%3A32004R0139>

<sup>10</sup> Regulation 139/2004, Section 8 of the preamble

be sufficiently protected by the considered regulation. Independently of this aspect, the argument that is mostly underlined in the legislation considers both the Commission and the competent authorities of the Member States, which are basically entitled of forming a system of public institutions which are forced to cooperate for pursuing information-sharing strategies with the aim of ensuring that a case is studied and addressed by the most appropriate authority.<sup>11</sup> This means that, independently of which authority is entitled of supervising the operation, it is important that the system as a whole reacts promptly and works through close cooperation and information interchange in order to provide support and services to the involved entities.

Having clear in mind those aspects, it is now mandatory to report and display the true content of the regulation since each entity willing to carry out a merger or acquisition has to follow those steps. First of all, it is important to understand which entities are object of the regulation and therefore which ones are considered of relevant nature according to the European standards. To our aid comes article 1 subsection 2, which states that “A concentration has a Community dimension where: (a) the combined aggregate worldwide turnover of all the undertakings concerned is more than EUR 5 000 million; and (b) the aggregate Community-wide turnover of each of at least two of the undertakings concerned is more than EUR 250 million”.<sup>12</sup> From that statement, it’s easy to understand that the key element that should be considered in order to identify a transaction as valuable of European interest or not is given by an economic measure, that is turnover. Furthermore, subsection 3 of the same article displays also other criteria that should be considered in case the ones of subsection 2 are not met. Also in the latter case, the decisional parameter is mainly identified with the realized turnover of the involved entities, but other secondary variables might also be considered in specific situations.

Having identified the transactions which require attention at international level, it is necessary to carry out an appraisal operation in order to assess and evaluate the concentration occurrence. With respect to that point, as displayed in article 2 of the regulation, concentrations within the scope of that legislative document should be evaluated in accordance with the objectives of the provisions with the aim of establishing whether they are compatible with the common market.<sup>13</sup> This means that there is one entity which is entitled of approving or rejecting takeover requests at European level, that is the European Commission. This authority must analyze, assess and decide on the requests presented by following the procedures displayed in the regulation. More precisely, article 2 subsection 2 displays that a concentration, which would not significantly impede effective competition in the common

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<sup>11</sup> Regulation 139/2004, Section 14 of the preamble

<sup>12</sup> Regulation 139/2004, Article 1, subsection 2

<sup>13</sup> Regulation 139/2004, Article 2

market, or at least in a relevant part of it, shall be declared compatible and therefore accepted.<sup>14</sup> On the other hand, a concentration which would significantly impede effective competition shall be declared incompatible with the common market by the Commission.<sup>15</sup> Before going further in the discussion of this aspect, it is worth addressing a relevant key point which is related to what we have discussed, and that is also faced in article 3 of the regulation, that is the definition and the explication of the features of the concentration concept. In particular, it is displayed that: “a concentration is considered to arise where a change of control on a lasting basis results from: (a) the merger of two or more previously independent undertakings, or (b) the acquisition, by one or more persons already controlling at least one undertaking, or by one or more undertakings, whether by purchase of securities or assets, by contract or by any other means, of direct or indirect control of the whole or parts of one or more other undertakings.”<sup>16</sup> But this is not the end of the story since, as previously indicated, to understand this article an explanation of the concept of “control” is also needed. This term basically consists in rights, contracts or any other means which, having regard to the considerations of facts or laws involved, confers the possibility of exercising decisive influence on an undertaking. With all those elements, one could easily understand what we are referring to when the term “concentration” is used.

The next relevant point that should be analyzed in order to understand the procedure for carrying out a transaction, is the so-called “notification process”. The rationale behind this process is clearly explained in article 4, subsection 1, according to which all the significative concentrations should be communicated to the Commission prior to their settlement and following the conclusion of the agreement, the announcement of the public bid, or the acquisition of a controlling interest.<sup>17</sup> In case the Commission realizes that a perspective concentration is of significant nature for the Union, it shall publish the notification received indicating not only both the undertakings and countries involved, but also the economic sectors considered. It is also responsibility of the Commission to forward the notification of concentration to all Member States without delay. The latter ones shall, within 15 working days of receipt of the submission, express their agreement or disagreement with regards to the request, providing a description of the reasons that conducted to their choice. As soon as the notification is received by the Commission, it is necessary to proceed with its assessment. The results of the evaluation procedure carried out could be different for each considered case, however, three main scenarios were identified. According to the first one, the Commission concludes that the

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<sup>14</sup> Regulation 139/2004, Article 2, subsection 2

<sup>25</sup> Regulation 139/2004, Article 2, subsection 2

<sup>16</sup> Regulation 139/2004, Article 3

<sup>17</sup> Regulation 139/2004, Article 4, Subsection 1

perspective concentration does not fall within the scope of the regulation, and therefore that finding is recorded by means of a decision of awarding the procedure to National Competent Authorities. The second identified scenario, instead, deals with notifications that do not raise serious doubts regarding their compatibility with the common market. As a consequence, the responsible authority should decide not to oppose it and shall declare that the M&A is compatible with the unified market. Finally, in the latter scenario the Commission finds that the concentration notified raises serious doubts with regards to its compatibility with the common market, and therefore it shall decide to initiate proceedings to block the takeover.<sup>18</sup> Whatever the final decision of the Commission is, the authority is allowed to attach to it conditions, guidelines or recommendations that should mandatorily be respected. In case those restrictions are not followed by the addressed entities, the Commission is allowed to take measures in order to restore or maintain conditions of effective competition, sometimes also by requiring fee payments.<sup>19</sup> In determined cases, and in respect of what displayed in the regulation, the competent authority may revoke the decision it has taken. This is a quite uncommon situation, that is however necessary to perform in cases where the integrity of the market and of the principle of free competition is harmed. Despite this, what is really important to be aware of is the fact that each operation, assessment and decision should be carried out by the authority in strict association with the responsible competent entity of the Member State. As a matter of fact, the Commission shall transmit to the competent authorities of the involved Member States both copies of notifications and, as soon as possible, copies of the most important documents related to or issued by the Commission pursuant to this regulation.

In addition to that, an appositely constituted advisory committee is usually introduced in order to advise the decision-making entity on complex and technical issues. As one might understand, in such a context, the role played by information sharing and by cooperation of authorities is fundamental for the smooth functioning of the procedure. In fact, in some situations, at the request of the Commission, the governments and competent authorities of the Member States are also forced to provide to the Commission all the information they consider necessary in order to carry out the duties assigned to them.<sup>20</sup> Clearly, it is important to point out that what said is not valid for common companies only, but for financial institutions too. In fact, the most important difference, with regards to this aspect, is given by the fact that the financial sector needs a quite more effective regulatory and supervisory system than other industries. Those requirements are needed in that the health of financial institutions

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<sup>18</sup> Regulation 139/2004, Article 6, Subsection 1

<sup>19</sup> Regulation 139/2004, Article 8, Subsection 5

<sup>20</sup> Regulation 139/2004, Article 11, Subsection 6

has an extraordinary importance since a change in it could generate relevant consequences not only to other comparable entities but also to other unrelated industries. This aspect is fundamental because it remarks the existing link between financial and real economy. In other words, this means that a distressed period for one entity could spread through the industry and affect other firms. This concept has been analysed by Bodie, Kane and Marcus, and is nowadays known as “systemic risk”. For all those reasons, and for many others that are strictly attached to the importance of the financial sector, like the already cited “market failures”, the industry has been targeted with additional legislative requirements which include also the field of M&As transactions. In actual facts, the Banking Union, as previously cited, was instituted exactly to face those issues, and the connected authorities play a key role in that way. Despite this, crucial in the field of our interest is, in addition to the Commission, the role of the European Central Bank. The ECB has indeed responsibility of supervision in the field of banks consolidation, depending also on the type of transaction the financial undertakings decide to carry out. What’s more, the authority plays a major role in those cases in which the transaction between banks implies a takeover of a relevant and qualifying holding (every acquisition of a participation in a bank that represents 10% or more of the shares and/or voting rights in that bank or crosses other relevant thresholds) or the settlement of a new bank, or finally if the merger involves significant banks and the law in their country gives the power to approve mergers to the supervisor.<sup>21</sup> Despite this, the transaction object of analysis will be reviewed, in any case, as part of the ongoing supervisory work of the institutions involved. In other words, this means that supervisors have to make sure that the banking group resulting from the transaction will continuously comply with all standards and requirements set in force at a community level in the foreseeable future. To this end, the ECB must examine not only the economic position but also the business model of the financial institution that will result from the transaction. In particular, in order to comply with the standards set under the Banking Union, it has to constantly verify that both the undertakings and the generated banks are maintaining the adequate required levels of liquidity and capital. What’s more, the ECB is also empowered of the task of assessing whether the bank has adequate governance, management team and if it is able to generate profits on a long-term basis.<sup>22</sup> From what we have discussed until now, one could easily conclude that the ECB’s involvement in a merger strictly depends on the legislation of the countries where the merging banks are headquartered. The reason for this issue is

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<sup>21</sup> ECB’s role in Mergers and Acquisitions:

[https://www.bankingsupervision.europa.eu/about/ssmexplained/html/bank\\_mergers\\_acquisitions.en.html](https://www.bankingsupervision.europa.eu/about/ssmexplained/html/bank_mergers_acquisitions.en.html)

<sup>22</sup> Regulation (EU) No 1024/2013, article 4: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1024&from=en>

basically given by the fact that mergers are not regulated by European law, but rather by national law. In the case in which the law of the country considered grants powers to the national supervisor in this regard, the ECB exercises those powers only when it comes to mergers of significant banks, which are therefore supervised directly by the ECB according to the significance criteria identified in the previous section.

To conclude, what we have discussed until now is the set of procedures a financial institution has to carry out in order to proceed with an M&A operation. The way in which this type of operation is regulated and controlled depends on whether the undertakings are under responsibility of the National Competent Authorities or under the responsibility of the European Union. In the latter case, the intervention of other authorities different from the European Commission, like the ECB, is necessary in order to supervise some aspects of the procedure which are not covered by the Commission itself. The whole operation reported is also subject to another aspect, that is the approval of the perspective operation by the competent antitrust authority, which basically aims at ensuring that the principle of free competition is respected. This point, given its importance, will be analysed and addressed in a more precise way in the following sections.

### **2.1.3 The case study of Banco Santander and Banco Popular**

Before going further with our analysis and addressing the topic relative to antitrust legislation in the European Union, it might be interesting to analyze a real case relative to the procedure displayed in the previous section, that is the notification process. In order to do that, we will consider the case of two financial institutions that officially completed their merger in 2017 and that we will consider again in the section relative to the empirical analysis of this report. Those institutions are Banco Santander and Banco Popular, two entities operating in the financial sector which started their operations in Spain while successively trying to spread and diversify by opening new branches outside their home country. In particular, through the implementation of operations of fusion and fission, Banco Santander realized, in a relatively short-time period, a group of credit institutions operating both in Europe and in America. Some of those institutions operate, since their foundation, under the original brand name of Banco Santander, while others are institutions that were acquired by the group, and that were then renamed in order to provide services under the acquiring company. But this is not the end of the story, since the institution is the first bank for size and assets in Spain, and the first in

Europe for capitalization.<sup>23</sup> On the other hand, Banco Popular Español was the sixth largest banking institution in Spain before it got acquired by Santander. As a consequence, we might refer to the transaction as being a mega-merger between entities operating in the same country and providing the same type of services. Formally, the two institutions announced their intention to merge on 07/06/2017 and subsequently started the notification procedure as displayed in Regulation 139/2004. Two months later, the European commission issued a formal document relative to the merging procedure that we are now going to analyze. The addressed document is available in electronic format on the EUR-Lex website under document number 32017M8553.<sup>24</sup> The first part of the statement is entirely dedicated to the disclosure of legal fulfilments and to the presentation of the two parties. In fact, the document begins in the following form: “On 14 July 2017, the European Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation by which Banco Santander S.A. ("Santander", "the Notifying Party", Spain) acquires within the meaning of Article 3(1)(b) of the Merger Regulation control of the whole of Banco Popular Español S.A. ("Popular") by way of purchase of shares”. Just from that sentence, we can identify the most important characteristics of the transaction, that is the undertakings involved, the type of transaction, and not less importantly, the way in which payments are pursued.

After having provided a brief but precise description of the entities, the section regarding the dimensions of the parties relative to EU standards is introduced. As we displayed when dealing with the turnaround’s requirements, there are some limits that should be reached in order to consider the transaction sensible of European interest. This arises in the following way, as reported in the document: “The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million. Each of them has an EU-wide turnover in excess of EUR 250 million, but they do not achieve more than two-thirds of their aggregate EU-wide turnover within one and the same Member State. The notified operation therefore has an EU dimension pursuant to Article 1(2) of the Merger Regulation.”<sup>25</sup> Said differently, this means that the two undertakings both match the turnover criteria set by the European Union, and therefore the whole takeover procedure will be carried out at European level rather than on national level.

Going further, the last section of the document is the one of greatest relevance and importance in that it analyses the market share that will be hold by the aggregate entity in both Spain and Portugal and that verifies whether potential conflicts regarding competition could arise. As a matter of fact,

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<sup>23</sup> Banco Santander: <https://www.bancosantander.es/es/particulares>

<sup>24</sup> Regulation 139/2004, merger procedure:  
[https://ec.europa.eu/competition/mergers/cases/decisions/m8553\\_573\\_3.pdf](https://ec.europa.eu/competition/mergers/cases/decisions/m8553_573_3.pdf)

<sup>25</sup> Subsection 2 of the merger procedure document

the report displays that “The Transaction results in a number of horizontal overlaps between Santander and Popular in Spain and Portugal. Depending on the market definition the Transaction leads to consistently affect both the Iberic and Portuguese national markets”. The situation will surely be clearer if we analyse Table 1:

<b>Spain</b>	<b>Santander</b>	<b>Popular</b>	<b>Combined</b>	<b>Caixa Bank</b>	<b>BBVA</b>
Retail savings account	[10-20] %	[0-5] %	[20-30] %	[10-20] %	[10-20] %
Retail Private banking	[20-30] %	[0-5] %	[20-30] %	[10-20] %	[10-20] %
SME deposits	[10-20] %	[10-20] %	[20-30] %	[5-10] %	[10-20] %
LCC deposits	[10-20] %	[0-5] %	[20-30] %	[10-20] %	[10-20] %
Loans to SMEs	[10-20] %	[10-20] %	[20-30] %	[5-10] %	[10-20] %
Loans to LCCs	[10-20] %	[0-5] %	[20-30] %	[10-20] %	[10-20] %
Domestic Payments LCCs	[10-20] %	[5-10] %	[20-30] %	[10-20] %	[10-20] %
Foreign paymesnts to SMEs	[10-20] %	[5-10] %	[20-30] %	[10-20] %	[10-20] %
Foreign paymesnts to LCCs	[10-20] %	[5-10] %	[20-30] %	[10-20] %	[10-20] %
Cash management to LCCs	[10-20] %	[5-10] %	[20-30] %	[10-20] %	[10-20] %
Debit Cards	[20-30] %	[0-5] %	[20-30] %	[30-40] %	[10-20] %
Leasing	[20-30] %	[5-10] %	[20-30] %	[10-20] %	[10-20] %
Car leasing	[20-30] %	[0-5] %	[20-30] %	[10-20] %	[5-10] %
Leasing to SMEs	[10-20] %	[5-10] %	[20-30] %	[10-20] %	[10-20] %
Leasing to LCCs	[20-30] %	[5-10] %	[30-40] %	[10-20] %	[10-20] %
Factoring	[20-30] %	[5-10] %	[20-30] %	[30-40] %	[10-20] %
Factoring - prepayment or advance on the value of the invoice	[20-30] %	[0-5] %	[30-40] %	[20-30] %	[10-20] %
Factoring - Invoice collection and sales ledger management services	[10-20] %	[0-5] %	[10-20] %	[20-30] %	[30-40] %
Factoring - credit insurance	[20-30] %	[5-10] %	[30-40] %	[30-40] %	[10-20] %
Full factoring	[20-30] %	[5-10] %	[30-40] %	[20-30] %	[10-20] %
Atm services	[60-70] %	[20-30] %	[20-30] %		

<b>Portugal</b>	<b>Santander</b>	<b>Popular</b>	<b>Combined</b>	<b>CGD</b>	<b>BCP</b>
Retail loans	[20-30] %	[0-5] %	[20-30] %	[0-5] %	[10-20] %
Leasing	[10-20] %	[10-20] %	[20-30] %	[10-20] %	N/A
Factoring	[20-30] %	[0-5] %	[30-40] %	[10-20] %	[5-10] %

*Table 1*

Market share for main Iberic and Portuguese banks

Source: Form CO.

First column represents the economic and accounting indicator, the three following ones represent the market shares for the two companies object of the analysis and their combined performance, while the last ones represent market share for competitive firms in the considered country.

It becomes evident that the combined entities will hold a huge percentage of market share in all sectors they are operating in, both in Spain and in Portugal. If we start addressing the Spanish case, we can notice that the biggest competitors of Banco Santander and Banco Popular are Caixa Bank and BBVA. Those institutions are basically the most important players in the Spanish financial market, and it is interesting to notice how the market share is split among those entities. In all sectors, the combined entity deriving from the merger holds a market share equal to approximately 20-30%, with spikes reaching 30-40% in fields like leasing and factoring. Competitive companies, instead, display a market share of around 10-20% for most sectors, with unusual spikes reaching 30-40% for debit cards and factoring. From those data one could conclude that, excluding minor players, the financial sector for Spain is dominated, as for 2016, by three main institutions that quite equally supply the market, with a small preference for the new constituted entity which hold a slightly more fat share of the market compared to competitors. On the other hand, with regards to Portugal, the prospective competitors are CGD and BCP bank. In this case the combined entity holds 20-30% of the market share with regards to retail loans and leasing, while it reached a 30-40% share for factoring concerns. Competitive entities hold in this case a smaller market share for all types of operations supplied, reaching in the best cases a 10-20% market share. This basically means that the Portuguese market is highly concentrated, and that the entity generated by the transaction is a leader supplier for that country. Overall, the operation will be of great importance for the considered parties in that a greater market share will be reached in comparison to a situation in which the two companies operate on a stand-alone basis. This is also reflected in the analysed table, which displays that Banco Santander holds a market share equal to 10-30% overall, while Banco Popular holds a market share equal to 0-10% depending on the segment we are considering. The general result of the transaction is clear, the combined entities will be able not only to supply a greater variety of products and services in both countries, therefore targeting a wider market share in terms of individuals reached, but they will also be able to strongly contrast competitors. In addition to that, and as we displayed in the first section, a strong cut of cost for services provided should be considered reasonable on the long term, while an increase on the amount of operations supplied will probably occur due to the larger amount of perspective customers.

As a conclusion, despite what already discussed, forecasts regarding the change in price of services provided remain dubious in that it is not clear whether there will be an increase or a decrease of the value of products supplied due to the merger and the lessened competition. This obviously depends not only by the effectiveness of the merger carried out and by its economic consequences, but also by market conditions set by competitive firms too. This latter fact is of extreme importance and concerns antitrust aspects that, due to their relevance, we are going to discuss in the next section.

## 2.2 Antitrust legislation

Having analysed the first steps that a firm has to carry out in order to undertake a takeover operation with one or more related entities, it is now time to discuss another aspect that is of crucial importance for the correct conclusion of the procedure, that is the judgement by the competent antitrust authority. While one might think that this is the last part of the process, this is exactly the other way around since constant control is performed to the addressed entities in order to avoid the outbreak of situations that might harm the principle of competition. What's more, this aspect is far from being easy to manage. As a matter of fact, antitrust legislation at the European level is quite fragmented, with that meaning that there are several different legislation pieces that address this topic; one of them in fact, which is Regulation 139/2004, has already been discussed in the previous section and it has been analysed that it provides some hints regarding the avoidance of situations which are in contrast with the concept of free competition and unified market. Proof of this fact is also provided by the European Commission, which displays that antitrust rules are contained in various legal instruments, depending on the strength and length of the standards set. In particular, the basic provisions are contained both in the Treaty on the European Union and on the Treaty on the Functioning of the European Union. Successively, a relevant number of regulations, which are part of legislation level 1, were introduced, either by the Council or the Commission. Some of them contain the general rules for the enhancement of the treaty provisions laying down, among other things, the investigative powers of the Commission. Finally, other regulations were introduced in order to deal with either particular types of conduct or with specific economic sectors.<sup>26</sup> In addition to that, the central authority object of our digression, that is the European Commission, has further developed various non-regulatory documents, which may take various forms such as notices, guidelines and recommendations, whose nature is of course that of not being binding for the addressed entity. What one can deduce from what has been said so far is that the subject is organized in a quite chaotic way, having several different pieces of legislation trying to regulate the matter.

Since this aspect is of crucial importance for the approval or denial of M&A transactions in the financial sector, it is worth analysing all those legislative aspects in order to have a better view of how the issues are carried out. Before doing that, it is however important to understand the rationale for which such a field has been heavily regulated. In actual facts, as reported by Betton, Espen Eckbo and Thorburn (2008), while on one hand, size-increasing and well planned mergers generally tend to

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<sup>26</sup> European Commission, Antitrust legislation: <https://ec.europa.eu/competition/antitrust/legislation/legislation.html>

have a disruptive consequence on the industry’s equilibrium product price, which heavily affects rival entities and that causes a negative industry wealth effect, on the other hand, news of new takeover transactions may reveal positive information regarding the value of the resources controlled by the rival firms. This means that the latter type of merger might reveal consistent increases in demand for resources owned by other companies, therefore generating a positive revaluation of these rivals. For instance, the increased demand for resources may lead to also increased expectations regarding the occurrence of future mergers, resulting therefore in a positive “in-play” effect on rival companies from the announcement of the initial merger.

Said that, having provided some hints regarding the basic functioning of the rationale behind the introduction of the antitrust legislation, it is now time to describe the procedures that are usually carried out in this framework. To our aid comes Volume 1 of the “Rules applicable to antitrust enforcement” of the EU, which provides a clear picture of how the decision-making process is implemented. Figure 1, displayed in the following lines, precisely depicts this procedure in which the starting point is represented by the already cited TEU and TFEU:

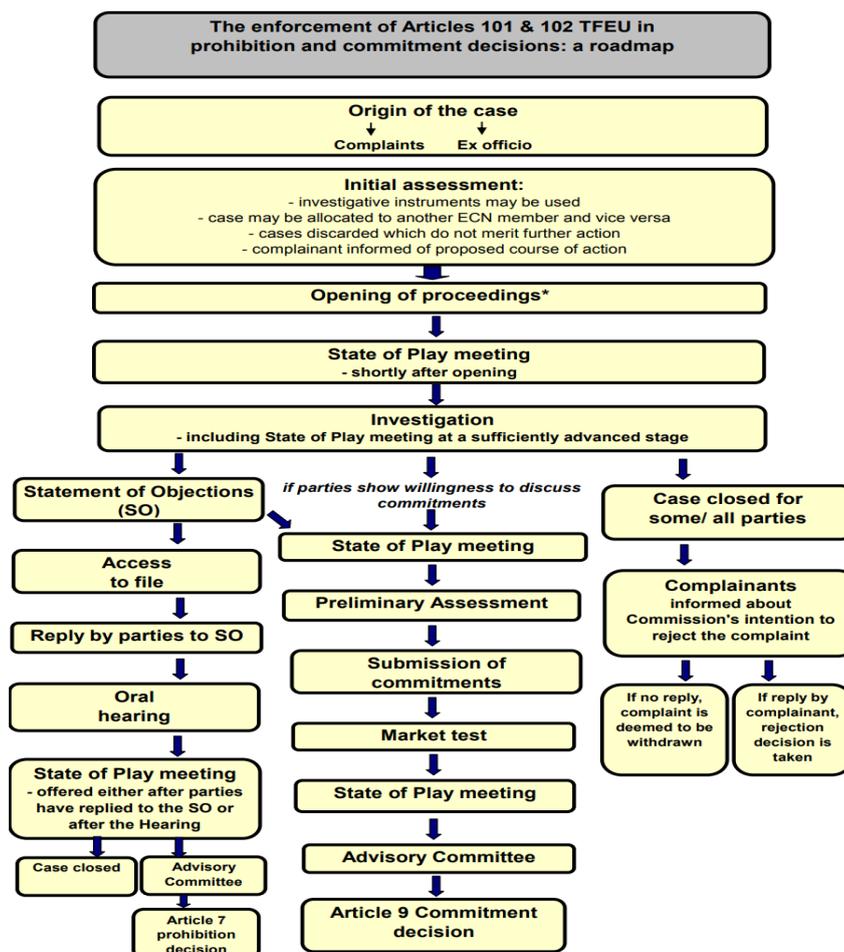


Figure 1

Authorities' procedure in case of antitrust issues.

Source: EU competition law: “Rules applicable to Antitrust enforcement”, Volume 1, General rules.

In particular, article 101 and 102 constitute the building blocks for antitrust legislation and, given their importance for this topic, we will now display their most relevant features. More in detail, article 101 states that: “The following shall be prohibited as incompatible with the internal market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market, and in particular those which: (a) directly or indirectly fix purchase or selling prices or any other trading conditions; (b) limit or control production, markets, technical development, or investment; (c) share markets or sources of supply; (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage; (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.”<sup>27</sup> From that, it is extremely important to point out that M&As, which are addressed in the article as “agreements between undertakings and decisions by associations of undertakings”, are prohibited when the result of the transaction is the prevention, restriction or distortion of competition within the internal market. The derived effect is that any agreement or decision prohibited pursuant to article 1 shall be automatically void. As a consequence, the main aim of the legislative piece we have addressed is to preserve the internal market from those operations which might harm its integrity by generating pressure on the price, quantity or even quality of products and services supplied. In such a context it is worth underlining that national authorities should cooperate with the ones at European level, and in particular this is stated in article 37, which displays what follows: “Member States shall adjust any state monopolies of a commercial character so as to ensure that no discrimination regarding the conditions under which goods are procured and marketed exists between nationals of Member States. The provisions of this Article shall apply to any body through which a Member State, in law or in fact, either directly or indirectly supervises, determines or appreciably influences imports or exports between Member States. These provisions shall likewise apply to monopolies delegated by the state to others.”<sup>28</sup> This basically means that each Member State has to act conformably to what stated by the competent legislation in order to provide a smooth and harmonized procedure that should be equally applied in all states of the Union. As a result, the internal market of the Union will be preserved and the principle of free competition respected.

What’s more, as we have seen for the procedure for carrying out a merger, also in this case the

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<sup>27</sup> Article 101 TFEU (ex Article 81 TEC)

<sup>28</sup> Article 37 TFEU (ex Article 31 TEC)

European Commission plays a key role. In fact, article 105 of the TFEU, subsections 1 and 2, displays what follows: “Without prejudice to Article 104, the Commission shall ensure the application of the principles laid down in Articles 101 and 102. On application by a Member State or on its own initiative, and in cooperation with the competent authorities in the Member States, which shall give it their assistance, the Commission shall investigate cases of suspected infringement of these principles. If it finds that there has been an infringement, it shall propose appropriate measures to bring it to an end. If the infringement is not brought to an end, the Commission shall record such infringement of the principles in a reasoned decision. The Commission may publish its decision and authorise Member States to take the measures, the conditions and details of which it shall determine, needed to remedy the situation.”<sup>29</sup> The relevance of the role played by the Commission is evident. It is not only the authority that is empowered of raising information and investigating possible infringements, but it is also the one that has decisional power and that assesses whether the undertakings are breaching Union law and therefore affecting the efficiency of the internal market. What derives from this aspect is the fact that the European Commission, in strict cooperation with the National Competition Authorities, directly enforces EU competition rules, that is articles from 101 to 109 of the TFEU, in order not only to make markets more efficient, but also to ensure that companies compete equally and fairly on their merits. This generates overall benefits for consumers, businesses and the European economy itself.<sup>30</sup>

In addition to that, it is also mandatory to cite how the Commission splits its tasks with reference to antitrust issues. In fact, the structure of this authority is rather complex but overall well-structured and this allows it to address its tasks in a more efficient way. In first place we find the Director General, who is flanked by the technical work of its chief economist. What’s more, the Director General can count on the support of three related figures, which are referred as Deputy Director General. Those figures provide assistance in three different fields, which are respectively related to mergers, antitrust and state aid. But this is not the end of the story, since each Deputy Director General is also supported by the work of teams that are particularly focused on one sector. Of course, the one referred to the financial sector is the one that is of greatest interest in the field of M&A transactions involving banks in that it is clear now that one section of the Commission is entirely dedicated to face this type of operations.<sup>31</sup>

Having analysed this aspect, that is the structure of the authority that is entitled of taking decisions

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<sup>29</sup> Article 105 TFEU (ex Article 85 TEC), subsections 1 and 2

<sup>30</sup> Competition Policy in the EU: [https://ec.europa.eu/dgs/competition/index\\_en.htm](https://ec.europa.eu/dgs/competition/index_en.htm)

<sup>31</sup> General structure of the commission: [https://ec.europa.eu/dgs/competition/directory/organi\\_en.pdf](https://ec.europa.eu/dgs/competition/directory/organi_en.pdf)

regarding antitrust issues, it is worth going back to the procedure displayed in Figure 1. The first step to achieve in order to start the procedure is to keep in mind and consider during the whole process what is stated in articles 101-109 of the TFEU. Going further, the case takes origin in two different ways, that is ex officio, therefore spontaneously by the Commission itself, or by complaint or signal of another entity. Once this is done, the case is generated, and an assessment procedure is needed in order to verify whether the issue is relevant and therefore worth of being analysed or not. To that purpose, investigations and information requirements could be pursued. If the first assessment displays the need of intervention, the case is officially opened, and a more accurate investigation is needed in order to verify the possibility of the occurrence of competition breaches. At that point, three possibilities arise: either the case is closed for some or all parties because the signal has been withdrawn, or the case is brought to the following step, that is the “state of objections” or the “state of play meeting”. The latter state occurs if the parties display the possibility to discuss about the commitment, and an assessment and market test follows. If needed, an advisory committee might also be consulted, and afterwards the procedure ends with the final decision: either the case is closed, or the addressed entity is considered responsible. In the second state, instead, a discussion takes place between the involved parties, in a first moment in written form and eventually later through an oral hearing. After that, having analysed all the information obtained, a decision is taken: either the party is considered guilty of affecting competition, or the case is closed. Of course, the whole operation should be carried out in form of strict cooperation between the Commission and the National Competition Authorities of the Member States, as indicated by article 11 of Council Regulation No 1/2003. What’s more, following the historical development of the subject, several different regulations were introduced in order to amend the ones that were considered in need of being redefined. Even though the complexity of the field required several new constraints, the general structure of the procedure didn’t change that heavily and therefore always remained in line with what we have displayed until now.

While what we have discussed until now are the general rules that are published in form of legislation level 1, that is regulations and directives, a huge amount of secondary legislative documents was introduced as notices and guidelines. While the former ones are of key importance because of the standards and indications provided, the latter ones are mere integrations to what already settled. For this reason, we will not go into details of what subsequently introduced. On the contrary, having analysed the legislation that is now regulating antitrust issues, it is now worth analysing what results have arisen according to academic literature. For this reason, in the next section we will display the most relevant considerations regarding antitrust aspects in the banking sector.

## **2.3 Economic evidences relative to M&As emerging from academic literature**

In the last decades, the financial industry has started to consolidate at an accelerating pace, no matter if we consider mega-mergers or the takeover of small regional suppliers, the integration of financial markets has blurred distinctions between activities such as lending, investment banking, asset management, and insurance. As a consequence, the concept of free competition has been harmed, at least partially, in some specific sectors, requiring therefore the intervention of the regulatory and supervisory competent authorities. If we consider mergers and acquisitions from the point of view of the European financial sector, the framework has changed tremendously in the past decade. Although assets of banks, expressed as a percentage of GDP, grew from 177.2% in 1985 to 244.2% in 1997, the number of European banks decreased from 12,670 in 1985 to 8,395 in 1999, which is a consistent difference if we consider such a short timeframe. As a consequence, according to Beitel, Schiereck and Wahrenburg (2004), the concentration of the European market measured in terms of market share of the five biggest banks, for what concerns total assets, consistently grew by 12% over the last 10 years up to 57.1% in 1999. What's more, to provide a comparison relative to the amount of financial institutions per 1,000 inhabitants in Europe, the authors state that it is almost twice as large (0.49) then in the USA (0.27). According to a report relative to mergers and acquisitions published by the European Central Bank (2000), this basically means that in the former case there are much more concentration potentials through M&A transactions in the near-term future then in the latter case.

According to Focarelli, Panetta and Salleo (2002), since they have been isolated for a long time period by protective regulations, banks are nowadays among the most active players with regards to concentration procedures. As a matter of fact, both technological innovations and development, and a thorough-going deregulation process have enhanced a wave of mergers in the banking industry throughout the world, starting in the United States in the eighties and reaching Europe in the nineties. More in detail, according to the authors, at each announcement of a new deal, the benefits in terms of cost reduction and growth opportunities are emphasized for all the involved parties. Curiously, however, the academic literature has failed to find convincing empirical evidences of these advantages and thus it questions the usefulness of mergers and acquisitions not only in the financial sector, but for all possible industries.

With regards to this aspect, a detailed review of the main results found by researchers in this field were displayed by Rhoades in 1994 and Berger, Demsetz, and Strahan in 1999. In fact, until the 20th century, the main results reached were dubious and often in contrast with regards to the efficiency effects emerging from the transaction. On the other hand, if we consider more recent researches in

this field, most of the studies on bank M&As refer to the United States; just few of them, instead, look outside the U.S.A, and almost none deals with European markets, if we do not consider the studies carried out by Vennet (1996) and Cybo-Ottone and Murgia (2000), but also these ones are quite ancient for economic purposes nowadays. For these reasons we will now have a look on the most important results of researchers in the field of M&As in the financial sector.

A good starting point for our digression is provided by MacKinlay (1997), which displays that typically mergers, like every major economic event, generate relevant economic consequences for the entities involved in the transaction and for all the stakeholders of the addressed companies. In particular, in the case of takeovers, positive and consistent announcement-induced abnormal stock returns for both bidding and targeting firms are usually generated. Those types of uncommon returns are often triggered by events, that do not always involve the studied entities, and that could instead include events like mergers and acquisitions, unexpected dividend payments, unpredicted earning announcements and finally litigations. As displayed by Betton (2008), a common interpretation, referred to the occurrence of abnormal returns for both targets and acquirers, is given by the fact that the so-called “wealth effect” is nothing else than the present value of future expected increases in the operating margins of the merging firms, that is the spread between future revenues and costs. Roughly speaking, the cited wealth effect could be defined as being a behavioural theory, valid in the economic sector mainly, that suggests that individuals usually spend more and more as the value of their assets, that is their wealth, rises. The idea behind this theory is given by the fact that consumers feel generally more secure about their wealth when their investment portfolio increases in value. As a consequence, they feel as if their wealth has increased, even though their income and fixed costs have not changed.

Given the importance of this aspect, we will now review whether the wealth effect is a result of cost reductions, which is usually referred to as efficiency effect, or rather is a consequence of revenue increases, which is usually addressed as market power effect. With regards to this aspect, as reported by Eckbo (1983) and Stillman (1983), two researchers that investigated the field of M&A, they developed a particular test approach which is based on stock prices analysis rather than on product price data, and that is used in order to infer anticompetitive significance of horizontal mergers. What’s more, the abnormal returns relative to stocks of the bidder and the target already described should not be used in order to discriminate between efficiency and market power hypotheses: in fact, these returns basically represent the result of expected cost reductions and revenue increases that we introduced while addressing the wealth effect theory. On the contrary, changes in perspective products and factor prices generated by the occurrence of a new merger, generally result into the generation of abnormal returns relative to stock prices of industry rivals. This means that the announcement of a possible transaction between undertakings could generate economic consequences

not only for the involved entities, but also for those firms which are operating in the same industry. Of course, this is reflected by the occurrence of abnormal returns, in a more evident way for undertakings that are carrying out the transaction, but also for those firms which are comparable in size, industry and services provided. In particular, it's worth highlighting the fact that a merger that results collusive and anticompetitive for the market is more likely to raise the price of products supplied, and therefore, as a consequence, it benefits also non-merging rivals as well. This basically means that the occurrence of a negative wealth effect of a merger announcement, that is the triggering point of the event, is not in line and results inconsistent with the merger having conniving, anticompetitive effects on the industry itself. On the other hand, a positive industry wealth effect is required in order to accept the collusion hypothesis previously cited. The reason behind this fact is essentially given by the wealth effect for an industry, in which an efficient merger occurs, and that might have either positive or negative value. For antitrust reasons, as we have displayed in the previous section, it is worth stressing that efficient merger transactions usually result in having a negative impact on the product price of the industry. This obviously affects rival players, but it also generates a negative wealth effect for the industry itself. On the contrary, a merger announcement might come along with positive information regarding the resources controlled by competitors. As displayed by Betton, Espen, Eckbo and Thorburn (2008), this means that the transaction might display an increase in the demand for resources in the industry, causing therefore a positive revaluation of competitors.

As a result of what stated until now, we can conclude that the efficiency hypothesis does not restrict the abnormal returns to industry rivals. This is a key point for antitrust issues since, by carrying out an analysis relative to abnormal returns, we found out that economic effects were displayed not only by the undertakings, but also by rival firms in the industry either with positive or negative magnitude. With regards to this aspect, an interesting analysis has been done by the authors which is provided, in form of Table 2, in what follows:

	Productive efficiency	Collusion	Buyer power
<b>Merging firms:</b>	<i>Positive</i> More-efficient production will result in higher infra-marginal rents to the merging firms	<i>Positive</i> Higher likelihood of collusion will result in increased monopoly rents to the merging firms (Eckbo, 1983)	<i>Positive<sup>a</sup></i> Lower input prices due to intensified competition among suppliers (Snyder, 1996)
<b>Rivals:</b>	<i>Unrestricted</i> <u>Positive</u> : information regarding industry-wide restructuring. <u>Negative</u> : more-intense competition in the industry due to a new, more-efficient combined firm (Eckbo, 1983)	<i>Positive</i> Higher likelihood of collusion will result in increased monopoly rents to rival firms (Eckbo, 1983)	<i>Positive<sup>a</sup></i> Lower input prices due to more intense competition among suppliers (Snyder, 1996)
<b>Customers:</b>	<i>Unrestricted<sup>b</sup></i> <u>Positive</u> : scale-increasing mergers. <u>Negative</u> : scale-decreasing mergers	<i>Negative</i> Restricted output in the takeover industry results in lower demand for suppliers' output	<i>Unrestricted<sup>c</sup></i> <u>Positive</u> : benefit from lower input costs for merging firms. <u>Negative</u> : supplier underinvestment
<b>Suppliers:</b>	<i>Unrestricted<sup>b</sup></i> <u>Positive</u> : scale-increasing mergers. <u>Negative</u> : scale-decreasing mergers and/or more-efficient combined firm	<i>Negative</i> Restricted output in the takeover industry results in lower demand for suppliers' output	<i>Negative<sup>a</sup></i> The increased buyer power of the merging firms will intensify competition among suppliers (Snyder, 1996)

<sup>a</sup>Efficient mergers can be of the scale-increasing or the scale-decreasing types (see, e.g. Eckbo, 1992; Andrade and Stafford, 2004). If the merger is expansionary in nature, it should benefit customers. Suppliers can benefit from a scale-increasing merger as long as the positive effect of expansion is not outweighed by the adverse effect of the increased efficiency of the combined firm. Finally, an efficient merger of the scale-decreasing type can hurt customers and suppliers.

<sup>b</sup>Snyder (1996) shows that by creating a larger buyer, a horizontal merger can result in more intense competition among suppliers, which will benefit the merging firms and their rivals at the expense of suppliers.

<sup>c</sup>Customers may benefit from the increased buyer power if some of the gains resulting from lower input prices are passed on to them because of competition in the takeover industry. Customers can also suffer if the increased buyer power induces suppliers to underinvest.

Table 2

Predicted abnormal returns to merging firms, rivals, customers and suppliers.

Source: Shahru (2005)

The table basically aims at displaying what the perspective abnormal returns are, not only for the merging entities but also for competitors, customers and finally suppliers. This means that it displays the consequences of such events for the cited categories in respect of antitrust concerns. In addition to that, three different conditions are also considered, that is the productive efficiency condition, the collusive condition and the buyer power condition. With regards to the first point, that is relative to

merging firms, the overall result is positive, meaning that perspective abnormal returns will have positive value. What's more, it is important to point out that according to Eckbo (1992) and Andrade and Stafford (2002), efficient mergers are grouped into two types, either scale-increasing or scale-decreasing. If the merger is expansionary, it has been proved that it should generate benefits for customers on an overall basis. On the other hand, suppliers generally benefit from size-increasing and efficient mergers only if the favouring outcomes of the transaction are not outweighed by the adverse effects of the combined firm. In addition to that, with regards to the size-decreasing type of merger, it is evident that an efficient transaction of this type can hurt both customers and suppliers differently.

Going further into the analysis, we consider also the work carried out by Snyder (1996), which displays in his academic paper that by creating a larger buyer through a horizontal merger, the overall result of the transaction is given by an increased form of competition among suppliers. This operation will finally benefit the undertakings and their main competitors, while suppliers will be the subjects facing most drawbacks from the transaction. What's more, with regards to customers, it has been studied that this category usually benefits from the increased power of buyers only if the obtained gains are passed on to them because of competition in the industry of the takeover. But this is not the end of the story, since it is feasible to think that customers might also suffer from the situation created. In fact, this occurs if the enhanced power of the buyer forces suppliers to underinvest. A comparable analysis has been provided by Hankir, Rauch, Ueber (2011), which addressed, in their work, the same topics already displayed but considered also the point of view of investors. The results of their analysis displayed that, overall, there are quite more investors who predict the occurrence of gains through the bleeding of market power by the consolidated firm rather than investors who believe in any of the other motives tested in the paper. What's more, the authors displayed that features related to market power usually go along with other remarkable features of the entities, that are the target size, the occurrence of intra-industry mergers and finally the increasing concentration of the market. All those aspects suggest a remarkable decrease of competition in the market due to M&A transactions.

In addition to all the aspects analysed until now, another research is worth being considered, that is the academic paper resulting from the work of Bolt and Humphrey (2008). According to the authors, a recent report of the European Commission, which regards retail banking, displayed that bank fees for client services often differ among member countries of the European Union. In particular, a remarkable spread has been noted between deposit cross-border account fees, credit card fees, interest rates on deposits, transaction fees, and other types of fees related to financial services. This aspect is consequently strictly related to the performances of banks, with particular regards to profitability and market concentration for the financial sector. In fact, it was clear among researchers that the arising

differences in costs and productivity for banks were just one of the reasons for the increasing spreads in value of fees and interests paid on deposits. Said differently, this means that concentrations have an economic impact on competition between financial institutions, which translates in changes in fees for services provided. As a matter of fact, commissions and fees on bank services are generally determined by three factors. The former one is relative to the level of operational costs of the institution, while the second one is relative to the productivity of banks in producing and cashing in from the supplied services. The latter factor, instead, and as already displayed, is connected to the level of competition in the considered market, which may eventually be a relevant point in that it permits to obtain enhanced revenues that exceed a normal return on invested capital.

Going further, we consider again the study carried out by Beitel, Schiereck and Wahrenburg (2004), which is considered to be one of the most important references in the field of abnormal returns calculation for what regards M&As for European banks. The methodology applied by the authors basically aims at investigating the variables, either economic or of different nature, which might affect excess returns to the shareholders for all the involved entities in the transaction. Those variables were identified thanks to previous researches that were aimed at identifying the factors that might affect the efficiency of a transaction in the United States. The first feature that was identified as being significant and therefore explanatory for the achieved success of the transaction was the “product focus”, a measure that is represented by the ratio of net interest income of a target to the total operating income of the same entity. In addition to that the remaining features that were exploited were the geographic focus, the relative asset size, the growth focus, the risk reduction potential, the profit and cost efficiency, the market performance of a target, the size, the experience of a bank, given by the number of years for which the entity has operated in the sector, and finally, the method of payment. All those factors have been discovered to be significant and explanatory for what regards the magnitude of abnormal returns. From that analysis it turns out that successful acquirers can be easily identified by investigating their prospective choice of the target. In other words, this means that the authors of the paper are able to tell which bidder will be successful depending by the type of target the acquirer will choose. What’s more, efficient acquirers usually decide to acquire smaller and faster growing targets with bad effective performances. With regards to that point, the authors found out a relevant difference in the cost efficiency between target and bidder. But this is not the end of the story, since they also identified an overall poor stock performance of the target entity before the occurrence of the transaction. Evidence of the existence of a functioning market for corporate control in the European banking sector was also discovered. In fact, shareholders of the target entity usually set, approve and do benefit from the transaction of corporate control, shifting away from a disruptive towards a better management team. On the other hand, for the European case mainly, but this is

generally true, it became evident that the results obtained for the acquiring banks were sometimes the exact contrary if compared to those discovered for the targets. It directly derives from this aspect that acquiring financial institutions tend to be more efficient, from an economic point of view, when they purchase efficiently managed targets, which at the same time generate synergies at a consolidated basis. With respect to that point it is important to remind that synergies are the core aspect that should be considered when an entity is willing to acquire another one, in that it forecasts the prospective gains arising from the transaction for the generated entity. It derives from that point that successful acquirers do not usually search for turnaround candidates, but they are rather interested in those entities which can increase the perspective synergies. The authors therefore conclude that the magnitude of abnormal returns, which basically derives from reactions of stock investors to M&A announcements of acquiring banks in the EU, can be forecasted with at least a certain degree of precision. This is extremely helpful especially for some types of stakeholders, which are for instance bank directors who are considering the possibility to carry out a takeover, or alternatively shareholders that simply need to assess bank M&As that might be useful in order to increase their personal wealth.

Last but not least, a final analysis that is worth considering is the one carried out by Beccalli and Frantz (2009), who study the effects of mergers and acquisitions in the banking sector for specific types of stakeholders, that are depositors, borrowers or investors, in other words clients. In actual facts, the paper tries to investigate whether the occurrence of such a transaction affects the efficiency of the involved entities, which could consequently reflect in economic improvements for clients of the financial institutions involved. They found out that M&As between banks are generally responsible of a reduction in not only return on equity, but also in cash flow returns and profit efficiency. At the same time, however, a marked improvement in cost efficiency has been noticed. For these reasons, the economic efficiency gained by the financial institutions appear evident, and usually it is directly transferred to bank clients.

Having analysed the most relevant studies concerning both concentrations of financial institutions in Europe and the generated impacts on investors, in the next section we will provide our own empirical analysis regarding the effects that a merger announcement, that has been approved according to the procedures displayed until now, might have for stakeholders with a particular focus to shareholders and bondholders.

### **3. The effects of transaction announcements on stakeholders' wealth**

Having provided a clear description of the functioning of the world related to Mergers and Acquisitions, that is having displayed what the reasons are, what the payment methods are, what the structure of the banking system is, what the players and the involved authorities are, both at European and National level, it is now time to present another aspect that is of key importance with respect to the occurrence of transactions in the financial industry. This means that we are now going to analyse what the economic consequences of the announcement of a transaction that has been approved are, not only from the point of view of shareholders, but also from the one of bondholders. This is theoretically possible only in case the procedures discussed in the first chapters, which consist in the notification and the approval from the European competent authority, are carried out with success.

Basically, what we are going to present is the direct consequence of what we have already discussed when referring to the work carried out by MacKingly (1997). In fact, the rationale behind the analysis that we are going to present is effectively based on the announcement of a corporate event that is of extreme relevance for the undertakings and that might have important economic consequences not only for the involved entities but for all the related stakeholders. As one might expect, the reactions of the involved parties are based on their own forecasts relative to the future economic wealth of the undertakings, and consequent actions are taken in order to exploit positive externalities or in order to avoid the negative ones. What's more, two types of methods are commonly used among researchers in order to carry out an empirical analysis of this nature, and they are basically aimed at researching the occurrence and magnitude of abnormal returns, for what regards shareholders, and the spread of credit default swap for what concerns bondholders. The former methodology is a state-of-art technique which basically consists in comparing stock price performances considering both the occurrence of the merger and the stand-alone basis. On the other hand, credit default swaps are security instruments whose spread is useful in order to assess the perception that investors have on the underlying bond, with that meaning that the spread reflects the risk and the yield of the underlying instrument.

Given the relevance of those aspects we will now try to address all these points with the aim of providing a clear and precise analysis of the economic impacts of merger announcements on the real economy. All these aspects will further be discussed in a more precise way in the next sections, in particular we will describe what the academic research in this framework has discovered, what the data used for the empirical work are, what the methodology used is, and finally, what the results of the study are.

### **3.1 Data**

In order to carry out the empirical analysis we have described, a wide set of data has been researched and modelled. In particular, a sample of 42 couples of banks has been selected, that means that between acquirers and targets a total of 84 financial institutions has been analysed. With respect to that point, it is worth indicating that all information collected, whether numerical or informational, were provided uniquely by the Bloomberg terminal in order to have just one, common source of information. Proceeding with order, we will firstly display the criteria with which the financial institutions have been selected. In fact, the first condition of inclusion into the sample is set by the membership to the European Union, that means that only European banks have been selected. In addition to that criteria, only banks that were involved in a M&A transaction, independently if national or cross-sectional, but always occurring inside the borders of the EU, were considered. What's more, the time range for the occurrence of such a merger was set as 2000-2017, with that meaning that the transaction announcement took place in that range of years. As a result of those criteria, the most relevant transactions fulfilling the analysed requirements are displayed, in form of list, in the table in the following page:

TRANSACTION	ACQUIRER	TARGET
1	Santander	Banco popular
2	Deutsche bank	Deutsche post bank
3	Caixa Bank/Banca Civica	Banca Civica
4	DZ Bank	WGZ bank
5	Bank of Cyprus	Cyprus popular Bank
6	BBVA	Catalunya Bank
7	Kutxabank	BBK, Kutxa and vital merger
8	Banco Sabadell	Banco Cam
9	CaixaBank	Bpi
10	Alpha Bank	Emporiki Bank
11	Caixabank	Banco de Valencia
12	Banco popular	Banco pastor
13	Banco de Sabadell	TSB Banking Group
14	Caixabank	Barclays Bank Spain
15	Sberbank	Denizbank
16	Commerzbank	Dresdner bank
17	Unicredit	Capitalia
18	Banca Intesa	San Paolo IMI
19	BNP	Banque de Paris et des Pays-Bas
20	KBC Bank	Almanij
21	Erste Bank	Slovenska Sporitelna
22	Erste Bank	Postabank Rt
23	National Bank of Greece	Bank Romaneasca
24	Societe Generale SA	Komercni Banka AS
25	Danske Bank A/S	Polsko-Kanadyjski Bank Sw
26	Skandinaviska Enskilda Banken	Vilnius Bank
27	Lloyds TSB Group Plc	HBOS Plc
28	RFS Holdings BV	ABN-AMRO Holding NV
29	Credit Agricole	Credit Lyonnais SA
30	Allianz AG	Dresdner Bank AG
31	Banco Popular Espanol SA	Banco de Credito Balear SA
32	Defpa BK Plc	Hypo Real Estate Holding AG
33	Svenska Handelsbanken	Lokalbanken Nordsjaellen
34	Unicredito Italiano SpA	Capitalia SpA
35	Unicredito Italiano SpA	Bank Austria Creditanstalt AG
36	Den Norske Bank	Gjensidige NOR ASA
37	Halifax Group PLC	Bank of Scotland PLC
38	HSBC Holdings PLC	Crédit Commercial de France
39	Bayerische Hypo-Vereins	Bank Austria AG
40	Banco Santander SA	Alliance&Leicester Plc
41	Crédit-Agricole SA	Emporik Bank SA
42	Banco Santander Central Hipano	Abbey National Plc

*Table 3*

Sample data

List of companies that were considered for the empirical analysis. The institutions are grouped in pairs, one entity that played the role of acquirer in the transaction, the other of target. A total of 42 transactions was considered.

In order to proceed with the computation of Abnormal Returns, for each of the considered institutions the stock price has been downloaded for the time period starting in 03/01/2000 and ending in 08/07/2020. By proceeding in this way, a total of 437.724 observations relative to stock prices has been gathered. In addition to that, it's worth saying that quite a relevant number of observations were missed, with that meaning that there are no available data for some institutions in some given time periods. This is mainly due to the fact that stock exchanges in different countries are open in some days while others are closed in the same days. As an example, we could consider public holidays. In fact, it became evident during the process of data-modelling, that some stock exchanges were open during days like 06/01 or 05/08, while others were closed. Of course, the banks belonging to the latter group will display some missing data for this reason. In addition to that, missing data are also explained by the fact that entities that constitute the target in the transaction were absorbed by the acquirer, therefore, from that time period, their stock prices are reflected in the one of the acquirer in that there is no more distinction between the two entities. Last but not least, another reason that might explain the lack of data for some institutions is given by the fact that they were not listed. As displayed by Bloomberg Lp, some financial institutions resulted effectively as not being listed, therefore it was impossible to download data for them. An example of such an issue is provided by Defpa BK Plc and Hypo Real Estate Holding AG. Other missing observations, which are not included in the reasons that we have discussed until now, should be considered as being due to the lack of data provided by the terminal. As a matter of fact, if we compare the data downloaded to the ones of other providers of financial information, we can see that some observations are missed. However, we always decided to select data for the empirical work just from one terminal in order not to twist them. For these reasons we think that the procedure carried out in order to select, filter and model data is the best one in order to obtain true and faithful results from the empirical work.

Another aspect that is worth analysing in respect to what considered, is the fact that all the operations studied in the empirical work have been approved by the competent antitrust authorities. This means that all banks that have been part of a takeover operation have fulfilled all the requirements set by the already addressed Regulation 139/2004. Just one transaction, that would have been relevant and interesting in our field of studies, was blocked by the European commission and therefore not included in our analysis. The transaction we are referring to is the one that was prospected between Credit Agricole and Societe Generale Asset Management. With respect to that operation, the authority stated that: "The Commission has received notification of a proposed concentration under Article 4 of Council Regulation (EC) No.139/2004 pursuant to which the Crédit Agricole Group ("CAG") will acquire sole control over the majority of the European and Asian traditional asset management activities of Société Générale Asset Management ("SGAM") as well as

a 20% non-controlling interest in SGAM's asset management subsidiary in the United States, The TCW Group, Inc". According to what reported in the official webpage of the European commission <sup>32</sup>, the transaction has been withdrawn. Despite this, some years after the two entities constituted a partnership and gave birth to a third party operating in the asset management sector, which was an alternative way to reach similar economic results to those of a transaction. However, what is relevant to our purpose is the fact that in a condition that could potentially have affected the market, the antitrust authority blocked the transaction by withdrawing the notification procedure in accordance to what displayed by Regulation 139/2004.

Having analysed those aspects, another point that might be relevant to address is the one relative to the nationality of the banks that were involved in M&A transactions of our sample. The results of such an analysis are displayed in the table in the following page and are easily understandable in order to have an idea of which countries were mostly involved in these types of operations:

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<sup>32</sup> Withdrawing of notification procedure by the European Commission:  
[https://ec.europa.eu/competition/elojade/isef/index.cfm?fuseaction=dsp\\_result&policy\\_area\\_id=2](https://ec.europa.eu/competition/elojade/isef/index.cfm?fuseaction=dsp_result&policy_area_id=2)

Target\Acquirer	Spain	Germany	Italy	France	UK	Denmark	Sweden	Norway	Netherlands	Scotland	Belgium	Austria	Greece	Cyprus	Russia
Spain	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Germany	0	5	0	0	0	0	0	0	0	0	0	1	0	0	0
Italy	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
France	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
UK	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Denmark	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Scotland	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Belgium	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Austria	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Slovenia	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Greece	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
Romania	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Czech Republic	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Poland	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Portugal	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

*Table 4*  
Nationality of Acquirers and Targets  
for each transaction

Number of transactions taking place in each country. Nationality of target companies are displayed in the first column; nationality of acquiring companies are displayed in the first row.

As one might understand, the graph displays the countries of the acquirer and of the target at the respective axis, while the inner part of the plot displays the amount of transactions that occurred for each pair of nations. The most evident thing that should arise is the fact that a great majority of the transactions occurred in the central territories of the EU, like Spain, Germany and Italy, while just few occurred in the northern and eastern ones. An interesting research could therefore be carried out in order to identify the reasons for which those countries were the ones protagonist of such a huge number of transactions.

Going further into the analysis, it is now worth describing the procedure carried out in order to select the required data for the following analysis, that is the one relative to bondholders, whose results will be discussed in the next chapter. With regards to this point, it is worth displaying that the data used have been downloaded again by the Bloomberg terminal by selecting 5 or 10 years CDSs. Secondly a check relative to the availability of those data in the date of the occurrence of the merger has been carried out. It becomes clear that this type of research has quite more issues, compared to the one previously described, in that stocks are more heavily traded and have a continuously recorded track of information. Swaps, in fact, usually display monthly or weekly observations only, rather than daily ones. In addition to that, it is worth saying that most of the banks considered in our sample of 42 companies did not even issue CDSs. In some other cases instead, data were available just for the latest swap, therefore it was not possible to download the information needed in the time period in which the merger occurred. As a consequence, a total of 14 companies was initially considered in that data for at least one swap was available, but finally the number reduced to 5, since most of the considered transactions occurred in the first decade of our century, and in that period just few data were available, if they actually were. This finally results in having a limited sample, that will therefore translate in the low reliability of the results obtained.

Last but not least, it is worth discussing also the index relative to those derivatives instruments that has been used as benchmark in this study, that is the Eur iTraxx. In particular, the iTraxx indices are a family of European, Asian and emerging market tradable credit default swap indices that trade at 3, 5, 7 and 10-year maturities. Since we were in need of an index covering a wider range of years, we obviously considered the one involving securities of European companies and we were able to download reliable data starting from 2007 up to the present days. By proceeding in this way, we were finally able to cover the need of that data for all the transactions occurring in this range of years.

Having provided that information, which has precisely described the type and quality of data selected, in the next section we will display the methodology used in the empirical analysis, its rational and the way in which it was applied in order to model the data.

## 3.2 Methodology

Having analysed what are the data which will be used in order to carry out our empirical analysis, it is now worth spending some time in order to show which methodology has been applied to that data in order to investigate the market reaction to transaction announcements. As should be clear, the main aim of our study is that of analysing what the economic consequences are that might arise for companies involved in a takeover after the announcement of the transaction has been made public. In particular, an investigation regarding the effects that could harm stakeholders' and bondholders' wealth is of relevant interest. With respect to that point, and as already introduced, a methodology that is commonly used by researchers is the one relative to abnormal returns, and due to its universal use, we will also apply this type of computations. The idea behind this concept is basically given by the fact that specific events having economic nature could harm and affect expected returns for an investment. In a more precise way, abnormal returns could be defined as being the difference between the actual returns of a security, which are effectively observed in the market, and the expected returns which were instead forecasted by existing and perspective shareholders. It's commonly believed, as already displayed and as has been reported by MacKingly (1997), that abnormal returns are often triggered by events having peculiar economic features. In order to compute their magnitude, the following steps have been carried out: first of all, for each financial institution of the sample, normal returns have been computed starting from the share prices of the entity. Secondly, in order to have a better idea of the trend and shape of the price and return fluctuations, a time-series plot has been drawn for both prices and returns.

Going further, the most important part relative to abnormal returns computation comes with the selection of the "event window" and of the "estimation window". The former element is basically a time period of a determined number of days, in which the economic event occurs. In other words, the event window is made up by a set of days, usually 5, of which 2/3 proceed the transaction announcement, while the remaining ones follow the day of the announcement. On the other hand, the estimation window is made up, as for the former concept, by a set of days that are selected before the occurrence of the event and that are used in order to forecast the value of returns during the event window. To provide a clearer explanation, the event window basically displays the actual returns that have been observed during the time period in which the intention to carry out the takeover has been made public. On the contrary, the estimation window is used in order to forecast and predict the value of the returns in the event window in a time period preceding the occurrence of the event publication. These aspects are fundamental in that they allow to understand which the value of the return for a

given entity are in two different scenarios: the first in which the transaction occurs, and the second in which the transaction does not occur. The difference between the forecasted returns observed and the actual returns finally provides what we have called until now with the name of “abnormal returns”. Of course, abnormal returns, in that they are a difference between returns at a specific date, are strictly connected to the time period, and more precisely to the date in which the event occurs. Therefore, it is fundamental that a correct time period has been selected for computation purposes.

In addition to that, the econometric part of the empirical analysis plays a relevant role in that it is made up by a linear approach which is commonly used in order to model the relationship between a dependent variable and one or more explanatory variables, which are also known as independent variables. In our case, the simplest type of regression, that is the case in which just one explanatory variable is used, has been applied. More in detail, the dependent variable that has been selected in our regression is basically the representative part for a given stock's return, that means that the returns of a bank are considered, while the independent variable that has been used to predict the returns is the value-weighted return of an index for whatever exchange the stock trades on. This means that the latter element has been used in order to verify its influence on the former one, and in order to investigate how returns are affected through the predictions-making process. In our case, the independent variable will be representative of the European stock index which is commonly known with the name of “Euro Stoxx”. In particular, the linear relationship that we have set up, occurs between the expected return of the stock of the given bank and the stock index just presented, and it may therefore be given by the following equation:

$$R_{it} = a_i + b_i R_{mt} + e_{it}$$

In this case,  $R_{it}$  is the expected return of share  $i$  at time (day)  $t$ , while  $R_{mt}$  is the return of the market portfolio  $m$  at time (day)  $t$ . On the other hand,  $a_i$  and  $b_i$  are the coefficients of the model, while  $e_{it}$  is the statistical error term having an expected value  $E(e_{it}) = 0$ , constant variance  $\text{Var}(e_{it}) = \sigma^2$  and  $E(e_i ; e_j) = 0$ , for every  $i \neq j$ .

Last but not least, having provided the general aspects of the analysis we have applied to the selected data, it is extremely useful to compute also the cumulative part of abnormal returns, that are simply known as cumulative abnormal returns (CAR). Basically, this indicator is the sum of the observed abnormal returns of a determined financial institution, but it is extremely important in that it displays in an aggregate way the results that are shown on a stand- alone basis by abnormal returns. To provide a mathematical hint of how the operations that were carried out look like, we can focus on the following equations that were reported by Asimakopoulos and Athanasoglou (2009) in “Revisiting

the merger and acquisition performance of European banks”:

$$AR_{it} = R_{it} - \widehat{R}_{it}$$

Where  $(AR_i)$  are the abnormal returns for each share  $i$ .

Abnormal returns must then be aggregated as shown in the following equation:

$$\overline{AR}_t = \frac{1}{N} \sum_{j=1}^N AR_{it}$$

where:  $N$  is the number of banks under examination.

Last but not least, cumulative abnormal returns are computed:

$$CAR_{[t1,t2]} = \sum_{t=t1}^{t2} \overline{AR}_t$$

where:  $CAR[t1, t2]$  is the cumulative abnormal return for period  $[t1, t2]$ .

For reasons of simplicity and organization, all those operations were applied to the data and performed using the Python software, a high-level programming language that is used worldwide in order to develop distributed applications, to carry out scripting operations, numerical computing and system testing. In a more detailed way, Python could be considered as a multi-paradigm language that has among its main objectives not only dynamism, and simplicity, but also flexibility. It basically supports the object-oriented paradigm, structured programming and many functional and reflective programming features. For these reasons, it was considered the best choice for our needs.

Similar to what has been done for the shareholder case just addressed is the procedure applied for the case of bondholders. The rationale behind the mathematical operations developed is in fact quite similar, with the difference that in this case we are focusing on the spread relative to another type of financial instrument. In fact, the spread of the CDSs describes the fluctuations in price of the instrument, with that meaning that we will consider again the role played by “returns”, considered in a broader sense, in that they intrinsically provide a hint relative to the change in price in a time period occurring one year before the transaction was carried out. In this way we will investigate the effects of the transaction on bondholders by simply analysing the differential value displayed by CDSs.

However, differently from what we have explained in the analysis relative to stocks' returns, the conclusions we will reach in this case are quite different from what was previously presented. This is basically given by the fact that, while the mathematical procedure carried out is quite similar for both financial instruments, the rationale and explanation behind the change in price, which we are going to discuss, is quite different.

Said that, in the next section we will discuss the main results which were obtained for the analysis relative to shareholders, while the one relative to the case of bondholders will be provided in a clear and precise way in the next chapter.

### **3.3 Results**

Having provided a clear description of how the methodology to model the data has been applied, it is now worth analysing the results obtained. Before doing this, it is however important to point out that the initially given data were separated and then grouped in order to form two distinct sections, one including only the acquirers and the other including only the targets. By proceeding in this way, the results were respectively diversified among the two groups, in that it is evident that market reactions differ among shareholders of one or the other section. As a matter of fact, we logically expect to see negative abnormal returns for acquiring banks overall, while, on the other hand, we expect to observe positive abnormal returns for target companies. The rationale behind this aspect, which explains the positive or negative nature of the returns, is given by the fact that when a merger is announced, stakeholders react to the new in different ways. More precisely, there is a common trend that usually results in the sale of shares by investors holding stocks of the acquiring company and the purchase of shares by investors in the target company. This economic aspect could basically be explained by a theory focused on expectations of the investors. In fact, the target bank will be considered of being in a profitable position from an economic point of view, while the acquiring bank, which is the one that is going to pay for the transaction, is uncertain with respect to the profitability of the operation.

But most importantly, with respect to that point, the explanation that usually counts the most in terms of differences in abnormal returns, is given by the occurrence of synergies. The rationale behind this point is given by the fact that acquiring companies commonly benefit from the synergies arising from the transaction only in a second moment, and not immediately after the conclusion of the transaction. In other terms this means that the transaction represents a huge cost for the acquiring

entity in the first stage, while it will commonly generate positive effects only in a second moment. This is clearly a risk, and therefore it is quite common to observe operations carried out by shareholders aiming at getting rid of the shares after the announcement. Consequently, this behaviour will affect the price of the traded shares and generate changes in relative returns that are categorized as being abnormal. The same procedure, observed from the opposite point of view, could be applied to target companies. In this case, shareholders will see the price of their shares increase in a consistent way for all the reasons displayed in the introductory part of this report. One among the others, is given by the fact that a premium is usually paid to shareholders in order to acquire the target entity and start to benefit from the synergies.

Having described until now what we might expect from the results of the analysis, it is now worth spending some time in checking the effective results of the empirical study and by trying to explain which the variables that generated those outcomes where. In order to do that, we consider the outputs generated by Python and displayed in Table 5 in the following pages. While at a first glance the tables might appear confusing, we will now display their structure and discuss the main conclusions one could reach by observing the data presented. First of all, it is worth saying again that the results have been split in order to distinguish acquiring companies, which are displayed in Panel A, from the target ones, which are instead represented in Panel B. Secondly, for both tables we can see that the column on the left indicates the name of the entity considered, whereas the five following ones represent the abnormal returns of each bank for the five days of the event window. The four following columns of both tables represent instead the results obtained for the cumulative abnormal returns of each institution, that are basically computed by summing up the abnormal returns considering a different set of days of the event window respectively. Those days are displayed at the top of each column of the cumulative abnormal returns' section. Going further, the latter lines represent the data relative to a regression that was carried out by considering the returns displayed by the table itself as dependent variable, and the mean return as a constant on which to regress those results. Finally, t-stats relative to the regression were displayed.

**Panel A**

BANK	EVENT WINDOW ABNORMAL RETURNS					CUMULATIVE ABNORMAL RETURNS			
	-2	-1	0	1	2	(-2:-1)	(-1:+1)	(0:+1)	(+1:+2)
Allianz	1,032624	1,047911	-0,784747	-1,480014	0,183469	2,080535	-1,21685	-2,264761	-1,296545
Alpha bank	-0,756407	0,446732	1,301903	0,514547	-1,506902	-0,309675	2,263182	1,81645	-0,992355
Banca Intesa	-0,761909	1,872213	-0,2163	-0,930186	0,038333	1,110304	0,725727	-1,146486	-0,891853
Banco popular	0,73408	0,479219	0,507917	0,243274	-1,978581	1,213299	1,23041	0,751191	-1,735307
BBVA Bank	-0,179976	1,132911	-1,164525	-0,968127	1,177217	0,952935	-0,999741	-2,132652	0,20909
BNP	0,056175	1,828658	-1,088131	-0,131493	-0,66427	1,884833	0,609034	-1,219624	-0,795763
Caixa bank	-0,014967	0,774961	1,369269	-1,423581	-0,705872	0,759994	0,720649	-0,054312	-2,129453
Commerz Bank	1,249527	0,085108	-1,735184	-0,211721	0,610089	1,334635	-1,861797	-1,946905	0,398368
Credit Agricole	0,839487	-1,946324	0,128597	0,566703	0,4097	-1,106837	-1,251024	0,6953	0,976403
Deutsche Bank	1,168514	-1,753404	0,379208	-0,339928	0,546542	-0,58489	-1,714124	0,03928	0,206614
Erste bank	-0,998039	0,378412	1,537677	0,276903	-1,192737	-0,619627	2,192992	1,81458	-0,915834
KBC bank	0,289047	0,641079	-1,983168	0,62179	0,431489	0,930126	-0,720299	-1,361378	1,053279
Lloyds	0,140497	-0,011504	-1,349385	1,708739	-0,488306	0,128993	0,34785	0,359354	1,220433
N. B. of Greece	0,395988	-0,631016	1,666975	-1,278897	-0,152535	-0,235028	-0,242938	0,388078	-1,431432
Sabadell Bank	1,01438	0,582584	-0,540174	-1,707681	0,650898	1,596964	-1,665271	-2,247855	-1,056783
Santander	-0,546797	-0,548365	-0,868679	1,907996	0,057284	-1,095162	0,490952	1,039317	1,96528
Sberbank	-0,395692	1,049698	1,157931	-1,521653	-0,28984	0,654006	0,685976	-0,363722	-1,811493
Skandiska	-0,440739	-1,038072	-0,272648	1,905004	-0,153464	-1,478811	0,594284	1,632356	1,75154
Societe generale	-1,66962	0,391691	0,083921	-0,222292	1,41556	-1,277929	0,25332	-0,138371	1,193268
Unicredit	0,382465	0,68325	-1,983508	0,33388	0,584066	1,065715	-0,966378	-1,649628	0,917946
<b>MEAN</b>	0,0769319	0,2732871	-0,1926525	-0,106836	-0,051393	0,350219	-0,0262023	-0,299489	-0,1582298
<b>(t-stat)</b>	(2,7598)	(3,4090)	(3,6915)	(2,7922)	(2,2152)	(4,4365)	(4,8615)	(2,6932)	(1,9582)

*Table 5*  
AR and CAR for acquiring (Panel A) and target banks (Panel B)

## Panel B

BANK	EVENT WINDOW ABNORMAL RETURNS					CUMULATIVE ABNORMAL RETURNS			
	-2	-1	0	1	2	(-2:-1)	(-1:+1)	(0:+1)	(+1:+2)
Almanij	-0,802793	0,622834	-1,540425	0,622938	1,098174	-0,179959	-0,294653	-0,917487	1,721112
Banco Pastor	-0,503397	-0,457035	0,02665	1,89618	-0,982022	-0,960432	1,465795	1,92283	0,914158
Banco de Valencia	-0,000347	-0,000013	-0,000224	0,000095	-0,000214	-0,00036	-0,000142	-0,000129	-0,000119
BPI	1,180988	-1,768193	0,446763	0,436937	-0,296272	-0,587205	-0,884493	0,8837	0,140665
Capitalia	-0,323989	1,066233	1,062648	-1,608845	-0,198105	0,742244	0,520036	-0,546197	-1,80695
Credit Llionais	-0,443499	-1,67707	0,669944	0,23954	1,218821	-2,120569	-0,767586	0,909484	1,458361
HBOS	-0,382155	-0,318419	-0,943104	-0,30367	1,946366	-0,700574	-1,565193	-1,246774	1,642696
Komercni	-0,203305	1,026051	-1,452026	1,211132	-0,579447	0,822746	0,785157	-0,240894	0,631685
San Paolo	1,52534	0,510478	-1,470924	-0,494067	-0,07079	2,035818	-1,454513	-1,964991	-0,564857
TSB Group	-0,508523	-0,364707	1,963165	-0,26395	-0,826176	-0,87323	1,334508	1,699215	-1,090126
<b>MEAN</b>	-0,046168	-0,1359841	-0,1237533	0,173629	0,1310335	-0,1821521	-0,086108	0,04987	0,3046625
<b>(t-stat)</b>	(1,7331)	(3,2556)	(1,3586)	(2,2239)	(2,2348)	(2,6787)	(2,3481)	(2,3058)	(1,5733)

*Table 5 (continuation)*  
AR and CAR for acquiring (Panel A) and target banks (Panel B)

First column represents the considered institution; following 5 columns display the Abnormal Returns of each company in the 5 days of the event window, where 0 represents the day of the event. Following four columns represent the Cumulative Abnormal Returns from day -2 to -1 of the event window, from day -1 to +1, from day 0 to +1 and from +1 to +2 respectively. The outputs on the last two lines display the results of a regression in which returns represent the dependent variable and the mean value of such returns represent the constant value. Outputs for t-stat are provided.

By analysing the table in Panel A, but the same is valid also for the other table, and focusing on the line relative to cumulative abnormal returns, it becomes evident that not all values are negative as we expected, however the outcome is eventually really close overall. In fact, for nearly just one company among all the 20 considered, the CARs resulted negative in value, even though it is worth pointing out that the results were quite low overall. As we can see, those are however general results, in fact if we consider the outputs displayed in all the four columns referring to CARs, the situation changes, and it is particularly variable in that nearly all entities displayed variable values in magnitude and sign for the considered indicators, with a trend to negative values. Therefore, we can finally state that, as we expected, the overall results for acquiring entities display a negative outcome for abnormal returns and cumulative abnormal returns, but a certain degree of variability is in any case underlined. This means that, even though the values are not that significative, the general effect resulting from the computation has correctly been forecasted, and therefore the expectations regarding shareholders' behaviour have been confirmed. In addition to that, results relative to the aforementioned regression are displayed too. While the mean has no need of being explained, it is worth reminding that the T-stat is the ratio of the departure of the estimated value of a parameter from its hypothesized value to its standard error, and it is displayed in the last line of the table.

Besides the results obtained that we have just discussed, at that point the most accurate readers will have noticed that of the sample of 42 transactions, just 20 acquirers were finally analysed. As previously stated, this is mainly due to the lack of data displayed by Bloomberg Lp during the considered dates of the event window for each company. This is also reflected for the case of target companies, whose results will now be analysed.

In fact, going further into the discussion relative to Panel B of Table 5, it is now worth analysing the outputs of the empirical work carried out for the targets. Also in this case the effective number of target companies studied was lower in comparison to the sample initially considered, with that meaning that the final number of considered entities was equal to 10. However, with regards to the outputs obtained, in this case the amount of positive values is quite low in comparison to what we expected to be the value for target companies. This means that out of ten companies, not all of them displayed positive cumulative abnormal returns, giving therefore space to variability that in some cases resulted in negative outcomes for target entities. The reasons for the occurrence of such results could be different and with various nature. Either the data considered were affected and therefore not valid any longer, or the model adopted was not perfectly able to fit the data in a proper way. In addition to that, other reasons could be provided by the inability of shareholders to predict the occurrence of the event or, finally and most likely, the use of an index that is not truly able to carry out its role of benchmark. The conclusions reached are therefore not really different from what already

discussed.

To conclude this last part, we can state that the reasons explaining the results obtained for target companies could be reflected in the complementary ones reported previously for acquiring entities.

### 3.4 The market share effect on cumulative abnormal returns

After having provided some comments regarding the results obtained in the previous section, it might be now interesting to investigate another aspect, that is to verify how cumulative abnormal returns are affected by the market share feature of each institution. This basically means that we are interested in discovering whether and how the market shares, relative to the number of customers supplied by each entity, affect the generated CARs. In order to verify the link between those two variables, a cross-sectional regression has been applied to most of the acquiring banks, in that it was necessary to display how cumulative abnormal returns, the dependent variable, were explained by the market share of each company, the independent variable. However, before doing that, it was necessary to compute the effective market share value, in terms of deposits, for each considered entity. For this reason, the total amount of deposits held by each institution, compared to the total value of deposits hold in the country, was researched in the annual financial reports of each entity in the year before the transaction. Those results, together with other descriptive statistics are displayed in Table 6:

#### Panel A

Bank	Market share	Total assets	Deposits/assets
Allianz	2,1289891%	64.759.588.000,00 €	3,26%
Alpha bank	1,7396450%	52.284.000.000,00 €	5,62%
Banca intesa	2,1100000%	273.760.000.000,00 €	5,61%
Banco popular	1,3057125%	110.376.000.000,00 €	3,86%
BBVA Bank	2,3846154%	750.078.000.000,00 €	0,01%
BNP	3,1743728%	N/A	N/A
Caixa bank	2,4094911%	270.425.000.000,00 €	2,57%
Commerz Bank	0,9419349%	615.500.000.000,00 €	2,08%
Credit Agricole	3,5676154%	562.700.000.000,00 €	2,49%
Deutsche Bank	3,5466095%	1.501.000.000.000,00 €	3,56%
Erste bank	1,7470414%	86.033.000.000,00 €	2,35%
KBC bank	0,7904201%	225.586.000.000,00 €	6,09%
Lloyds	1,9289941%	353.000.000.000,00 €	2,33%
N. B. of Greece	3,2096982%	53.891.000.000,00 €	0,07%
Sabadell Bank	2,6567817%	161.547.085.000,00 €	4,84%

<b>Santander</b>	4,6019527%	1.522.695.000.000,00 €	5,41%
<b>Sberbank</b>	0,5378698%	935.935.000,00 €	2,92%
<b>Skandiska</b>	0,7301775%	710.255.000.000,00 €	0,02%
<b>Societe generale</b>	2,7319527%	4.559.000.000,00 €	2,71%
<b>Unicredit</b>	3,9305030%	823.284.000.000,00 €	6,02%

## Panel B

<b>Bank</b>	<b>Market share</b>	<b>Total assets</b>	<b>Deposits/assets</b>
<b>Almanij</b>	2,7000000%	40.168.180.640,00 €	1,06%
<b>Banco Pastor</b>	N/A	N/A	N/A
<b>Banco de Valencia</b>	N/A	N/A	N/A
<b>BPI</b>	0,7000000%	24.383.257.490,00 €	1,80%
<b>Capitalia</b>	0,3184200%	71.051.458.293,00 €	4,07%
<b>Credit Llionais</b>	N/A	N/A	N/A
<b>HBOS</b>	1,8251700%	33.888.500.000,00 €	6,20%
<b>Komercni</b>	0,4183000%	4.182.047.100,00 €	1,99%
<b>San Paolo</b>	4,6170000%	270.606.000.000,00 €	2,97%
<b>TSB Group</b>	0,1417000%	45.934.500.000,00 €	5,20%

*Table 6*

Market share, total assets and deposit-asset ratio for acquirers (Panel A) and targets (Panel B)

Three key statistics for financial institutions referred to acquirers and targets are displayed. Market share has been computed in terms of deposits hold by the bank over the total number of deposits in the operating country, in the year proceeding the transaction. Remaining indicators were researched in the respective annual financial statement.

By proceeding in such a way, we were finally able to apply the following regression:

$$CAR_{[t_1,t_2]i} = a + b * mkt\_share_i + e_i$$

Where  $CAR [t_1 , t_2] i$  indicates the cumulative abnormal returns of bank  $i$  in the time period ranging from  $t_1$  to  $t_2$ . In our case the time period was selected in order to reflect the time period pre-merger. Going further,  $a$  represents the intercept of the regression whereas  $b$  represents the coefficient, which is probably the most interesting aspect of this research. Finally,  $mkt\_share_i$  represents the market share of the entity at time  $i$ , which is one year before the event, while  $e_i$  represents the error term of the considered entity. The idea behind this study is given by the fact that in statistics, simple linear regressions are a method of estimating the conditional expected value of a dependent, or endogenous

variable  $Y$ , given the values of other independent, or exogenous, variables  $X_1, \dots, X_k : E [ Y | X_1, \dots, X_k ]$ . This basically means that for each sample observation we have a  $Y$  determination and  $k$  non stochastic determinations  $X_1, X_2, \dots, X_k$ . We then look for a linear relationship between the  $Y$  variable and the  $k$  deterministic variables. By doing so, we can plot the observations and regress them in order to see which the relationship between the cumulative abnormal returns and the observed market share is. The results obtained by applying the procedure displayed are summarized into two values, represented in Table 8 in chapter 4, the market share, which takes value -358,9300 and the constant, which instead takes value 3,3963. The results obtained for the estimated variables might therefore provide an idea about the explanatory term that the market share could induce to the CARs. By considering the outputs relative to the regression, we can observe that the independent variable has a negative and consistent explanatory power on the dependent variable. On the other hand, the intercept has a positive and consistent value, but this does not provide explanatory information to the analysis. In addition to that, the reasons that might explain such results could be researched in the stock price volatility of the considered entities. In fact, if they display a high volatility in the long- and short-term period, this will be reflected in the CARs and finally in the results provided by the regression. What's more, also the price value of the stocks might be responsible of the limit outputs obtained by the regression.

We could finally conclude that the results obtained had negative and apparently not consistent explanatory value for what regards the capability of the independent variable to explain the dependent one.

### **3.5 Market anticipations: evaluating investors' forecasting run-up capabilities**

The last aspect that is worth analysing, with respect to the effects generated by the occurrence of transaction announcements for stakeholders, is given by the ability of investors to predict the announcement of the takeover. This aspect is important in that it displays the behaviour and the reaction of those shareholders that were able to predict corporate plans. Given the relevance of the subject, some academic papers tried to further investigate the forecasting capabilities of investors and the behavioural effects generated by the transaction. With regards to this point, it is worth citing the procedure carried out and the results obtained by Cai, Song and Walkling (2011), and by Cornetta, Tanyerib and Tehranian (2011). The main aim of the latter research, from which we try to partially emulate the procedure, is basically that of examining investors' anticipation of bidder and target

merger candidacy and identifying if investor anticipations about candidacy affect the distribution of value between bidder and target firm shareholders. Starting from previous studies conducted by Jensen and Ruback (1983), Jarrell et al. (1988), and Andrade et al. (2001), which report that announcement period cumulative abnormal returns to target firm shareholders are substantial (around 20%), whereas cumulative abnormal returns to bidder firm shareholders are insignificant (around 0%), the authors apply a strategy based on the investigation of abnormal returns and cumulative abnormal returns. The preliminary results they obtained displayed that usually investors can predict bidder firms more successfully than target firms. In addition to that, as a consequence of the difference in the freshness of information revealed at the merger announcement, they state that it is not surprising that previous research has found that target firm CARs are larger in magnitude than bidder CARs. Thus, according to the authors, the empirical evidence that has been investigated supports the hypothesis that, to some extent, asymmetry in investor anticipations about merger candidacy causes disparity in bidder and target firm announcement period abnormal returns.

On the other hand, the former paper previously cited aims at documenting market anticipation of merger bids and subsequently shows that less anticipated bids earn significantly higher announcement returns. As a consequence, bidders in the same industry experience significant and positive abnormal returns around the time of initial industry bid announcements. These results suggest that announcement period returns underestimate the wealth effects of bidding. This is basically given by the fact that, after accounting for anticipation, bidding activity is on average a significant wealth-creating event. In addition to that, bidders pursuing public targets increase shareholder wealth and bidders in stock swaps do not lose. Finally, it is stated by the authors of the paper, that the results obtained contradict conventional wisdom, and it is exactly for this reason that we try, in a more intuitive way, to study the same issue by applying a graphical methodology, for both acquirers and targets, that is displayed in Figure 2 and 3 represented below. The idea at the basis of the methodology applied is that of plotting the abnormal returns in the 10 days preceding the merger announcement and in the 10 days following the new and see how they behave.

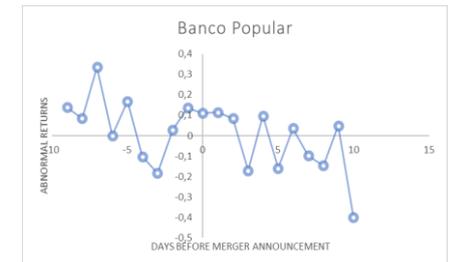
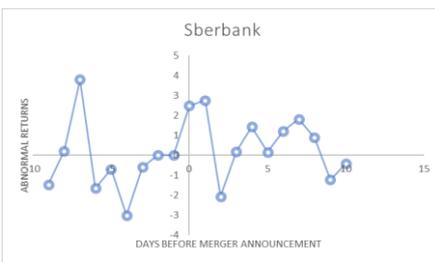
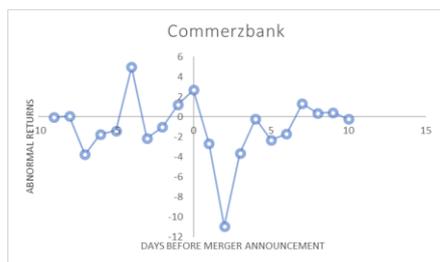
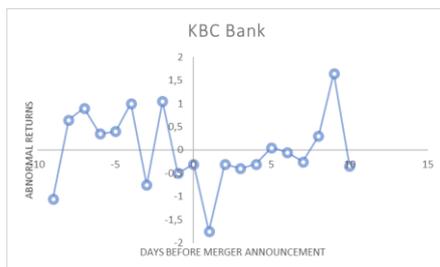
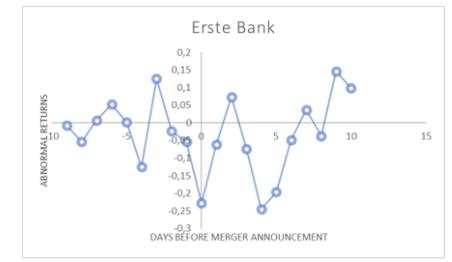
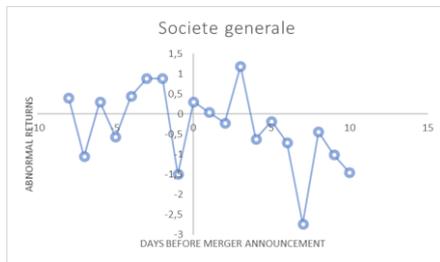
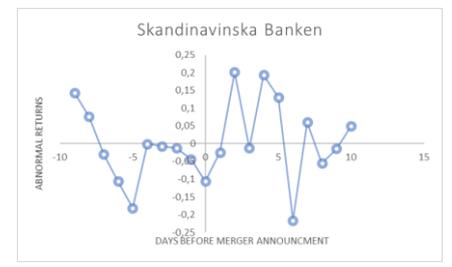
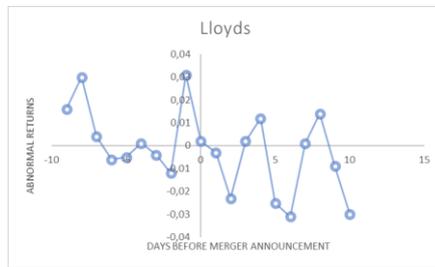
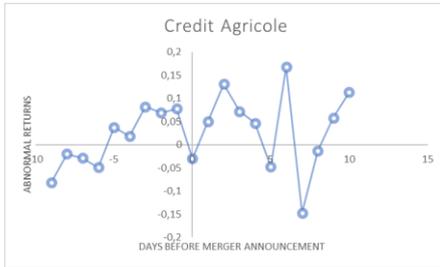
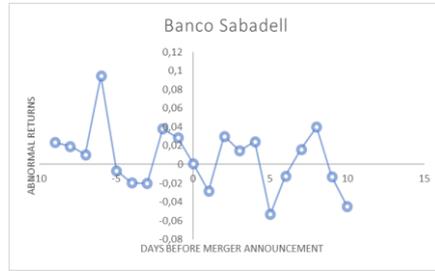
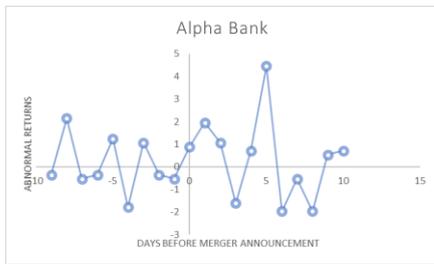
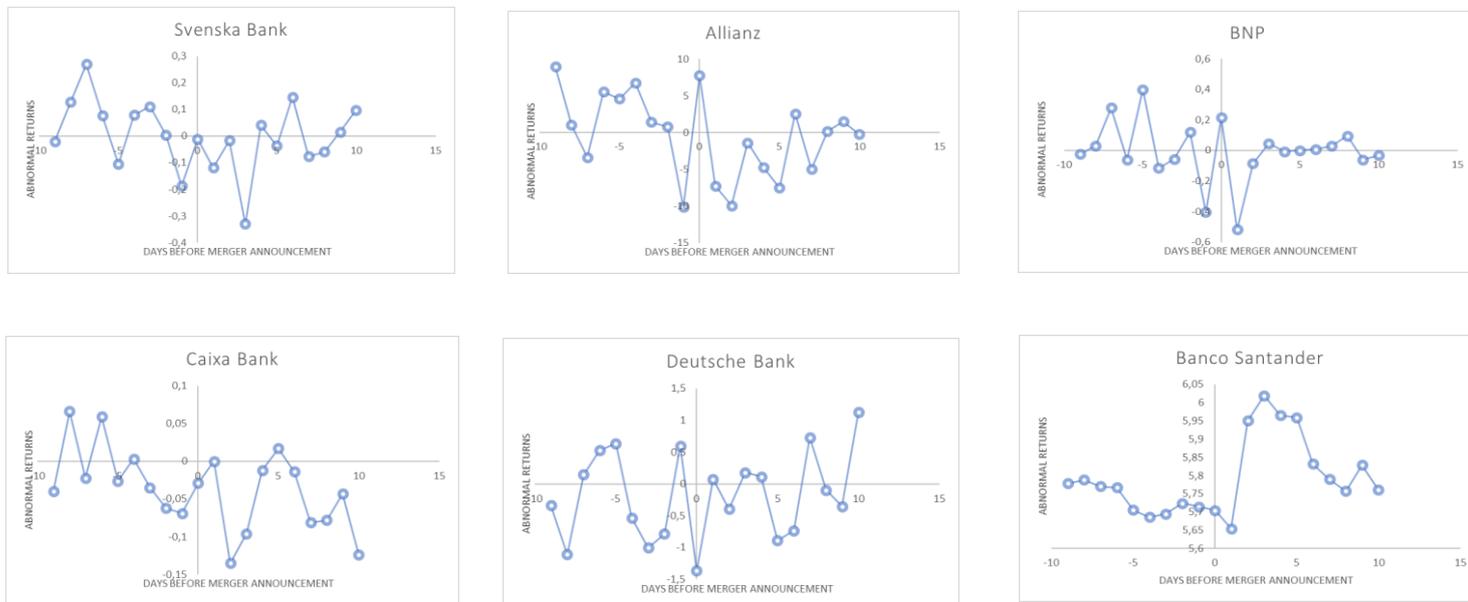


Figure 2  
Abnormal Returns plot for acquiring entities



*Figure 2 (continuation)*  
Abnormal Returns plot for  
acquiring entities

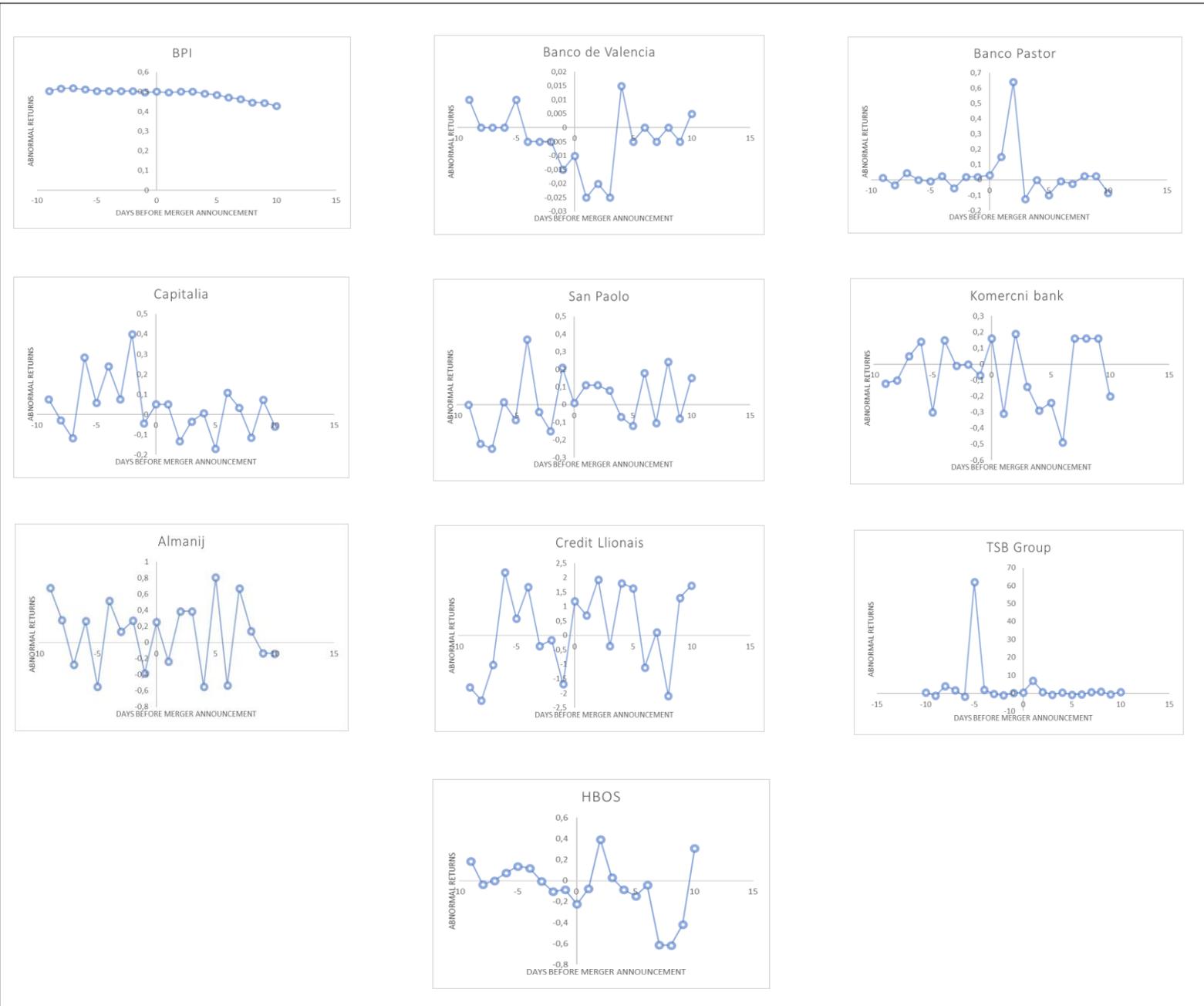
The plots describe the Abnormal returns' evolution (vertical axis) for acquiring entities in a time period ranging from 10 days before the occurrence of the transaction up to 10 days after the reference date (horizontal axis).

As we can see from Figure 2, the outcomes of the plots of the acquiring entities are quite heterogeneous, displaying an upward and positive evolution for some companies while a downward and negative one for others. To be more precise, out of 21 considered entities, just 6 displayed a downward evolution regarding abnormal returns. Just few banks presented instead a flat trend, with that meaning that the remaining institutions, which represent the greatest part of the sample, present an upward abnormal return trend. Since in this case we are considering acquiring institutions mainly, we should expect the abnormal returns to decrease significantly if the announcement has been foreseen. But this seems not to be case. We could therefore conclude this former analysis by saying that in our study there is apparently no significative evidence of predictive power of shareholders in the time period considered.

But this is not the end of the story, because besides the predictive power of investors, another aspect might affect the results obtained, that is "insider trading". This concept is basically referred to the process of buying and selling securities, or other financial instruments of a particular company by individuals who, due to their position within the company or their professional activity, have come into possession of confidential information which is not in the public domain. Such information, due to its nature, allows individuals who use it, to position themselves on a privileged level with respect

to other investors in the same market. In this sense, insider trading is a financial crime. However, since in our case we concluded that there is no significant evidence of predictive power coming from investors, we can state that there is consequently no evidence of insider trading too. This is basically given by the fact that those two concepts are two sides of the same coin, since they both explain the occurrence of this phenomenon.

On the other hand, for what regards the run-up analysis of target banks, the obtained results are displayed in the following figure:



*Figure 3*  
Abnormal Returns plot for target entities

The plots describe the Abnormal returns' evolution (vertical axis) for target entities in a time period ranging from 10 days before the occurrence of the transaction up to 10 days after the reference date (horizontal axis).

As we can see, what obtained from our analysis is surprising. Out of the six companies considered, which are the ones for which all data were available and reliable at the date of the transaction, only two displayed increasing trends, whereas the remaining four were characterized by a decreasing evolution. This is exactly the opposite of what we expected to occur, and therefore, even though the considered sample size is too small to be significant, we can conclude that from what analysed by the graphs, there seems not to be predictive power nor insider trading by the considered investors for the occurrence of the transaction.

## **4. The effects of transaction announcements on bondholders' wealth**

Having provided a detailed analysis regarding the effects that the occurrence of a transaction might have on shareholders, it is now worth addressing the economic consequences that might instead arise for bondholders. Since the nature of the two instruments held by the two categories is different, in that one belongs to the equity category while the other to the one of debt, we might expect different consequences arising from the transaction. Also, the methodology that has been applied to the data has a slightly different nature and a different scope in comparison to the one applied for shareholders. The idea behind our research is that of analysing how a transaction, like a merger between banks, could affect the behaviour of debt holders and how this could be reflected in terms of risk and return of the underlying instrument. In order to do that another type of financial instrument, strictly connected to bonds, has been used, that is credit default swaps. This type of instrument, which is also known with the acronym of CDS, is a financial agreement according to which the seller of the swap will compensate the buyer in case a default or another credit event occurs. This means that the seller of the CDS insures the counterparty against the default of some underlying reference assets. At the same time, the buyer of the CDS is forced to make a regular series of payments to the seller and, in exchange, it may expect to receive a payoff if the assets default. What's more, in the event of default, the buyer of the instrument receives compensation which is usually equal to the face value of the loan, while the seller of the CDS takes possession of the defaulted loan.

The rationale behind the methodology that we are going to apply is simple and it considers the change relative to the spread of the swaps, and in particular it displays that the more the spread increases, the more risky the underlying of the CDS becomes and the more the bond price decreases to make returns higher. Obviously, also the reverse of what just represented is true, with that meaning that as the price of a swap decreases, the risk of the underlying bond decreases, the return decreases too but the price generally increases. Of course, those are not fixed rules but rather the logical consequence of an event. Therefore, we can state that usually we will expect such a behaviour from the market.

In order to investigate the effective market reactions, an analysis similar to the one carried out in the previous section, but focused on the spread of the instruments, has been applied and will be addressed in the following sections.

## 4.1 Results

As mentioned in the previous sections, the sample of entities that has been considered for the present analysis is quite reduced. In fact, out of 84 companies, only 5 of them presented a set of data that allowed us to carry out a reliable research. Despite this, the spread has been computed for each of the considered institutions with respect to the considered financial instruments. The rationale that lies on the basis of the methodology applied, basically consists in considering the change relative to the price of the swaps. In particular, the reasoning behind this concept displays that the more the spread increases, therefore the higher the price becomes, the riskier the underlying of the CDS becomes. This is given by the fact that a CDS involves a regular series of payments made by an entity in order to receive back insurance on a given instrument by another financial institution. Obviously, the insurer will require a higher payment the higher the risk of the underlying instrument becomes. As a consequence, the higher the risk of the instrument underlying the CDS, the more the bond price decreases in order to make returns higher and attract investors. To review what just said in a clearer way, if we observe an increase in the price of a credit default swap, we will automatically expect an increase in the risk of the underlying bond, a decrease in the price of the same instrument and a consecutive increase in its return. Therefore, if we face an increase in the price of such a derivative instrument, it is quite intuitive to think that it is bad news for bondholders, at least from the point of view of the safety of their investments. As a consequence, the aspects addressed are all related to the risk-return dualism of the underlying bond, which will then be reflected in the price of the swap. Obviously, it is intuitive to conclude that also the reverse of what just represented is true, with that meaning that as the price of a swap decreases, the risk of the underlying bond decreases, the price consequently increases but finally the return decreases too. This is at least the logical interaction of events that bring us to forecast what might occur in such cases.

In order to verify what already said, it is now worth checking and discussing the results obtained in our analysis, that are displayed in Table 7. The structure and meaning of the data displayed are effectively similar to the ones presented in Table 5, with the only difference that they are limited to 5 banks, which are probably the most important ones in the European framework, that are: Banco Santander, BBVA, Banco Sabadell, Deutsche Bank and UniCredit.

BANK	EVENT WINDOW SPREADS					CUMULATIVE SPREADS			
	-2	-1	0	1	2	(-2:-1)	(-1:+1)	(0:+1)	(+1:+2)
Banco Santander	1,545364	6,180877	5,749487	-28,412172	-3,676952	7,726240	-16,481808	-22,662685	-32,089124
BBVA	6,883453	-0,638276	9,318020	-0,087981	-4,671842	6,245177	8,591762	9,230039	-4,759823
Deutsche Bank	-0,139370	-1,545965	-1,064826	0,351713	-2,461258	-1,685335	-2,259078	-0,713113	-2,109545
Banco Sabadell	1,228982	-1,174831	3,277055	-8,038949	-0,048400	0,054152	-5,936725	-4,761894	-8,087349
Unicredit	1,241428	3,310552	3,406419	2,123574	6,928102	4,551979	8,840544	5,529992	9,051675
<b>MEAN</b>	2,151971	1,226471	4,137231	-6,812763	-0,786070	3,378443	-1,449061	-2,675532	-7,598833
<b>(t-stat)</b>	(1,2654)	(1,7256)	(0,8030)	(3,1727)	(1,4398)	(0,9028)	(4,3142)	(2,1037)	(1,9346)

*Table 7*  
Spread changes for Credit Default Swaps

First column represents the considered institution; following 5 columns display the spreads of each company in the 5 days of the event window, where 0 represents the day of the event. Following four columns represent the Cumulative Spreads from day -2 to -1 of the event window, from day -1 to +1, from day 0 to +1 and from +1 to +2 respectively. The last two lines display the results of a regression in which spreads represent the dependent variable and the average of such spreads represent the value of the constant element. Outputs for mean and t-stats are also provided.

With regards to the results represented by the spreads, we can see that they have double nature, either positive or negative, and with values ranging from -32 up to +9, depending on the respective aggregation of abnormal returns used. What we can perceive from those results is that, overall, the spread decreased even though not in a significative way. In fact, if we consider the entities on a stand-alone basis, this is not always the case, as for BBVA and UniCredit the spreads resulted in having positive and consistent value. This is quite strange if we consider that both the considered companies are acquiring entities, but we should bear in mind that we are no longer referring to equity instruments but rather to debt ones. On the other hand, with regards to Banco Santander, Banco Popular and Deutsche bank, the results and conclusions we could reach are exactly the other way around. Also in the case of bondholders we could therefore conclude that there are no relevant trends that point in an unique direction, but rather cases that should be studied on a case by case basis and that are difficult to predict and to pool together.

## **4.2 The market share effect for bondholders**

The last aspect that is worth studying in order to provide a complete analysis regarding the effects of M&A transaction announcements on stakeholders is given by the market share influence on bondholders. As for the case of shareholders, we aim at identifying whether the market share of the financial institution affects the value of CDSs and therefore impacts also the underlying bonds. In order to do that a methodology completely equivalent to the one carried out for the case of shareholders has been applied. This means that a cross-sectional regression was carried out by selecting the identified spreads of the CDSs as dependent variable and the market share of the considered financial institutions as independent variables. The outputs of the methodology applied are presented in Table 8 together with the outputs obtained by the cross-sectional regression carried out for the stock case, which has been discussed in the previous sections. It's worth reminding, for comparing purposes mainly, that while for the case of stocks a relatively large sample of institutions was considered, in the case of bondholders the sample was quite small. For these reasons, we should keep in mind those features before providing a comparative analysis.

<b>Regressions' output</b>	<b>Shareholders</b>	<b>t-Stat</b>	<b>Bondholders</b>	<b>t-Stat</b>
<b>Constant</b>	3,3963	0,2986	0,2202	0,7695
<b>Market share</b>	-358,9300	-0,8083	-6,4558	-0,7940

*Table 8*

Market share effect on CARs

Outputs of cross-sectional regression relative to constant and market share are displayed, both for shareholders (second column) and for bondholders (fourth column). CARs represent the dependent variable and market share the independent variable. Respective t-stats are also displayed.

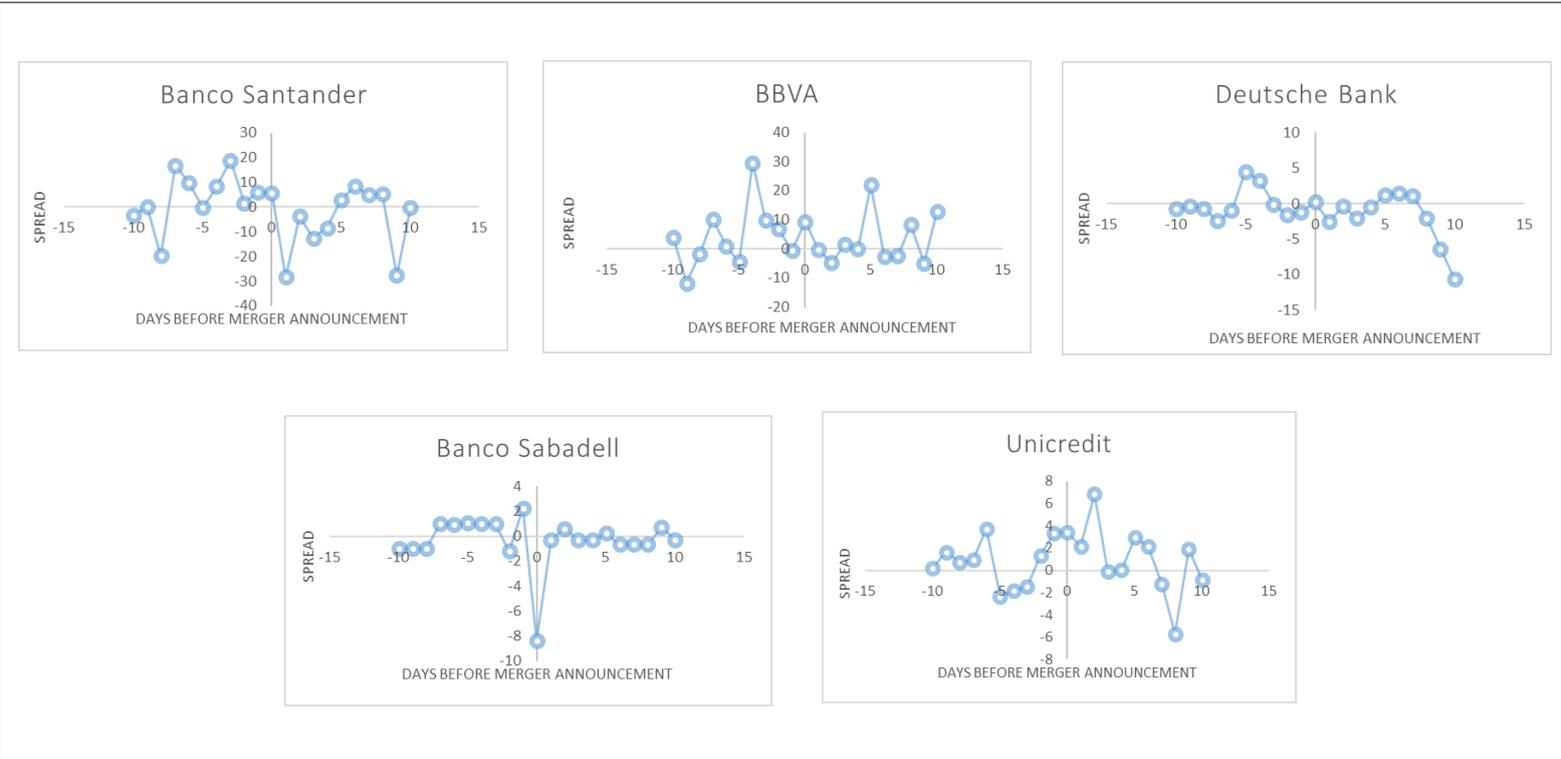
Going further, as we can see from the table, the values obtained are quite significant both for the constant and for the market share. In fact, in the former case we obtained a value equal to -6,45 while in the latter case a value equal to 0,22 was displayed. This result basically means that there is no explanatory power of the market share over the change in value of the credit default swaps connected to the underlying bonds.

From what stated we can therefore conclude that, as in the stock case, the explanatory power of the market share over the change in price of bonds and shares is not consistent, with that meaning that there is no connection among the considered features.

### **4.3 Bondholders' market anticipation capabilities**

As for the case of shareholders, an aspect that is interesting to analyse in the context of mergers and acquisitions is the capability of investors to predict the occurrence of the event and consequently act in order to avoid negative economic consequences or to exploit positive generated conditions. The procedure applied to investigate the effective occurrence of such anticipation capabilities is basically the same that has been presented in the previous chapter, and consists in a graphical analysis based on the spread of the CDSs in the days preceding and following the transaction announcement. Figure

4 displays exactly those plots for the five financial entities for which data were available.



*Figure 4*  
Spread' plot for CDSs

The plots describe the evolution of the spread (vertical axis), for available CDSs of entities, in a time period ranging from 10 days before the occurrence of the transaction up to 10 days after the reference date (horizontal axis).

What we can deduce from the graphs considered is that four out of the five entities display a slightly decreasing evolution, with one being close to being flat, whereas just one entity displays a slightly increasing trend. What is of greatest interest for our purpose is, however, the case of Banco Sabadell. As a matter of fact, the spreads of the considered entity are quite flat for a quite large period of days, while just in the day of the announcement the value of the indicator decreases sharply. This means that no anticipation effect was predicted and that investors immediately reacted to the announcement in the same day in which the new become public. This does therefore not display forecasting capabilities of investors, but rather the effective and efficient reaction that those investors had on the day of announcement. For what regards the other entities, we can instead state that there were some

changes in the spread of CDSs already before the announcement, but we cannot state whether they are due to forecasting capabilities, insider trading or other reasons. The only aspect that we can state with a certain degree of certainty is given by the fact that those changes occurring before the announcement date are not significant and therefore not necessarily conductible to investors' forecasting run-up capabilities.

As a result, we can state that as for the case of shareholders, also for the one of bondholders there is no significative evidence of forecasting and predictive capabilities of investors in terms of expectations relative to the occurrence of the event. In addition to that, it is worth highlighting that the sample considered is not adequate in order to provide definitive and reliable conclusions.

## **Limitations of the analysis**

Arrived at this point, it is worth spending some words on the limitations of both the legislative concerns displayed in the first chapters and the empirical analysis that has been conducted and analysed in chapter 3 and 4. Regarding the former element, that is however strictly connected to the latter one, it is worth saying that the Banking Union, as it has been presented, is a relatively new system that has not been finished yet and that is continuously evolving in order to be effective and in step with the times. With regards to this point, the main issue is given by the fact that the sample used for the empirical analysis includes also pre-union banking transactions, which will therefore have to be framed in a context of harmonisation of national legislation not yet so advanced. It is therefore clear that a limitation of the empirical study is given by the recent introduction of the Union, whose effects might be studied in future analysis relative to mergers and acquisitions of financial institutions taking place in Europe.

For what concerns the empirical work in a stricter sense, the most relevant point, that has already been cited, is the one concerning the availability and reliability of the downloaded data. It follows that the results and conclusions reached and discussed might be affected and therefore not be completely representative of the truth. In addition to that, the limitation regarding the methodology applied should also be considered. In fact, even though abnormal returns and cumulative abnormal returns are commonly used for academic investigations, it is worth recalling that they are based on predictions. As should be evident, this latter term intrinsically reflects the uncertainty of the methodology, since outcomes are never certain but rather forecasted. Therefore, a certain degree of deviation from reliable outputs of those operations should be considered.

Finally, a last aspect that could be interesting to further investigate is the one relative to the features that might explain the occurrence of AR and CARS additionally to the one considered in this paper, that is the market share. This aspect might in fact allow to further distinguish and identify the variables that are responsible of the generate effects. This could be helpful particularly to enhance forecasting capabilities for future perspective transactions.

## Conclusion

The main purpose of the present paper was that of providing a complete and truthful representation of the procedure and the economic effects generated by mergers and acquisitions involving financial institutions operating in the European Union. To that purpose, a first analysis regarding the procedure that applicants must carry out to start the transaction was provided, giving particular emphasis to the European institutions that are responsible of regulating, supervising and eventually approving the draft of the perspective transaction. In more detail, the role, the organization and the applicable actions of the involved authorities were presented in order to introduce their role focused on consumer protection. In fact, among the different matters that those institutions are responsible of, one of the most important ones is given by the antitrust issue. This means that European institutions are basically responsible of supervising all perspective transactions and to block those which might result in harming customers' rights. The idea behind this procedure is therefore that of avoiding that few or even one financial institution takes advantage of the situation in the industry and sets conditions that are unbearable for consumers. Consumers that are often also depositors, therefore part of the bank's creditors, but that are at the same time protected by instruments such as deposit insurance.

Despite this, consumers are not the only type of stakeholders that might be affected by operations of concentration among banks. In fact, shareholders and bondholders are another class of individuals whose wealth might be affected by the occurrence of a transaction, if approved by the competent authorities. For this reason, following the methodology applied in previous academic papers, an empirical analysis focused on the reaction of both groups of investors on the spread of the new of the transaction has been researched. This was done by applying a methodology consisting in the computation of cumulative abnormal returns for both stocks' prices and credit default swaps' prices.

In addition to that, the forecasting capabilities of both types of investors and the dependence of the market share of the institution on the returns has also been investigated. As a result, we obtained that what we discovered in our analysis was generally in line with the findings of previous researches, according to which share prices of acquiring entities decrease after transaction announcements, whereas share prices of target banks increase after the announcement. On the other hand, the results obtained for bondholders are quite more controversial in that they involve an analysis on credit default swaps which is centred on the risk-return dualism and on the spread of the underlying instrument.

In conclusion, we discovered that the market share effect on the obtained returns is dubious, with that meaning that there seems to be no explanatory power of the market share of the entities on the generated returns. Finally, this results to be true also for the forecasting capabilities of stakeholders.

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