The Quest for Synergistic Effects in Horizontal Mergers Using Combined Transaction Cost Theory and Resource-based View

The Case of Activision Blizzard

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Executive Summary

The following thesis encompasses the research and analysis the authors have conducted to explain how transaction cost theory and resource-based theory of the firm can be employed to understand the conditions under which horizontal integration may create competitive advantage. The merger of Activision and Blizzard Entertainment concluded in 2008 is chosen as the case, which the authors refer to in order to investigate the practical applications of synergy-creating horizontal mergers. The aim of the thesis is addressing the two theories and their applications towards horizontal mergers and proposing a combined framework which extends the theories towards understanding of the prerequisites of competitive advantage in terms of synergy.

The aim of the thesis is approached by formulating the following problem statement:

In regards to the theories exploring horizontal mergers, how can transaction cost theory and resource-based view of the firm be employed to explain the conditions under which the merged companies achieve competitive advantage and the consequences from synergy-creating M&As?

Additionally the authors break down the problem statement into the following three research questions, which guide the analysis:

1. How can transaction cost theory and resource-based view be combined in order to understand the conditions under which horizontal mergers will achieve competitive advantage?
2. Taking into consideration the merger between Activision and Blizzard Entertainment in the interactive entertainment industry, how did the merger of the companies lead to operational efficiency and competitive advantage?
3. What are the consequences from the synergistic effects of the merger on the overall structure and performance of the industry?

The methodological approach chosen is the systems view, developed by Arbnor and Bjerke (2009). The authors choose to study the relationships that are generated between the elements of transaction cost theory and resource based view and to develop a model that comprises the elements of the theories in addressing the case of horizontal mergers. This manner of addressing the thesis falls in the finality relationships of the system view, where the events of the theories are explained through their purpose and the driving force that influences the relationships, allowing the system created to be greater than the sum of its parts.

The thesis is an academic research involving the deployment of qualitative research methods of secondary data, related to literature review and documentation analysis.

A chapter devoted to theoretical review includes summarized overview of the transaction cost theory, resource-based theory of the firm, discounted cash flow model and literature on the phenomenon of mergers and acquisitions.

Following is the analysis chapter which involves the authors' input on the manner in which the transaction cost theory and resource-based theory of the firm can be combined when understanding the circumstances under which horizontal integration can create synergy. The chapter includes the combined theoretical framework, proposed by the authors, as well as a detailed analysis of the case of the merger between Activision and Blizzard Entertainment and its correspondence with the research questions and the problems statement.

Transaction cost theory can be related to horizontal mergers when combined with resource-based view to explain horizontal mergers which occur in order for the companies to obtain complementary strategically valuable resources. The combined framework presents a structured synthesis of the arguments for entering a horizontal integration option in order to attain synergistic effects (competitive advantage). It shows under what conditions and prerequisites can this be achieved.

Addressing the case of the merger, the authors conduct discounted cash fow model to evaluate the standalone values of the two firms in 2007 and their combined value in 2010. The Activision Blizzard valuation of 2010 revealed that the newly formed company has reached a standalone value of $10.851 billion, which clearly demonstrates that the merger of the companies has led to operational efficiency.

The authors go one step further to analyze what is the influence of the synergy from the merger on the interactive entertainment industry and their main rival Electronic Arts. It is shown that following the horizontal merger, the overall performance of the industry is positive whereas the operating performance of the competitor will be negative.

The thesis is concluded with a recommendations and reflections chapter outlining further research opportunities and the authors' reflective research process.

The contribution of this thesis is towards a deeper understanding of the components of transaction cost theory and resource-based theories and their extension towards explaining horizontal integration. The authors offer a combined perspective of the conditions under which a horizontal integration may create synergy and consequently influence the market and its rivals. It is the belief of the authors that the theoretical discussion and combined theory present an opportunity to extend both theories towards horizontal integration options and provide a starting point for future academic discussion.

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1 Introduction

The current chapter represents the outline of the thesis with its background where the reasons for choosing the mergers and acquisitions process within the interactive entertainment industry are stated. Following the introduction of the theories and the industry employed for the M&A process, the authors state their research question which represents the methodological point of departure the thesis. The chapter concludes with the thesis approach and the scope and limitation subchapters which have the role of structuring the research and delimit the interpretation of the thesis.

1.1 Background

The number of corporate mergers and acquisitions around the world has increased dramatically the last two decades, both in number of transactions and in total value. The reasons behind mergers and acquisitions (M&As) are several, among them to reduce costs, capture new technology, enter new markets or to create synergies with existing business functions. Companies proudly announce M&As as great possibilities that will take the businesses to a new level. Because of their frequency, invested capital and potential value that can arise from these transactions, scholars from various fields have addressed the issue of M&As thorough researching their causes and consequences. The majority of studies conducted on this issue reveal that the number if mergers and acquisitions is proportionally directed with the failures arising from the transactions. Therefore, the studies' results show an actual success rate of 50%, whereas other are more dramatic declare that "*83% of mergers produce no benefit whatsoever to shareholders*" (Millman, 1999, p. 106) or" *60-70% of acquisitions failing to produce positive returns*" (Sirower, 1997).

Taking in consideration these statements the authors decided to investigate the M&As evolution and success in the interactive entertainment industry. Interactive entertainment industry has changed dramatically ever since its emergence in the beginning of the '80s. Today the industry is at the peak of technology and it seems to continue in its expansion. As of 2010, industry accumulated $55 billion revenues and is projected to reach over $80 billion by 2015 on a 5.7% annual compound revenue growth rate (PwC, 2010).

Due to the dynamics of the industry, companies rapidly change and grow. Since technology rapidly evolve, many companies develop yearly upgrades or new technological wonders, the only way to be able to remain on top of this industry is to acquire developing companies and to integrate their operations under the company's activities since developing technologies

internally can be costly and be outdated when released. Video games giants like Activision Blizzard, EA, Take-Two Interactive and Nintendo are acquiring smaller developers and expanding through M&A each year. However, the academic community has done very little in regards to application and study of theories within this industry.

Since the M&As literature presents arguments of contradicting synergies that arise from these transactions, the authors have chosen to address the dynamics of M&As of the interactive entertainment industry and to focus on the analysis the two main theories, transaction cost theory and resourced based view of the firm, treating the M&As process. The authors consider that the roles of competition, cooperation and integration in the video game industry; the impact of M&As in the sector on the overall market as well as on the rival companies have not been fully addressed. There is not enough academic research on the combination of transaction cost theory and resource based view in mergers and acquisitions in general, thus, this is addressed through the gaming industry perspective. Although, the industry is extremely dynamic and knowledge intensive and holds a number of game-changing M&As, the academic community has not addressed the effects of synergy created from these M&A on the market and on rival companies.

The authors have chosen to address the Activision Blizzard merger in 2007, a successful software publishing company for video games, to show the impact of their merger and its synergistic effects on the market and their biggest rival Electronic Arts.

1.2 Problem Formulation

In regards to the theories exploring horizontal mergers, how can transaction cost theory and resource-based view of the firm be employed to explain the conditions under which the merged companies achieve competitive advantage and the consequences from synergy-creating M&As?

1. How can transaction cost theory and resource-based view be combined in order to understand the conditions under which horizontal mergers will achieve competitive advantage?
2. Taking into consideration the merger between Activision and Blizzard Entertainment in the interactive entertainment industry, how did the merger of the companies lead to operational efficiency and competitive advantage?
3. What are the consequences from the synergistic effects of the merger on the overall structure and performance of the industry?

1.3 Thesis Approach

The Thesis Approach subchapter treats the systematic plan of approaching the thesis. Here, the authors also introduce the case components of the thesis as well as a short overview of the companies the authors have chosen to address.

1.3.1 Research Design

Research designs are a prerequisite for conducting a quantitative study of any field. In the qualitative studies, however, research designs have less ground. Flick (2007) argues that research designs in qualitative studies not only exist, but they also involve "*the development of set of qualitative hypotheses to be tested*" (Flick, 2007, p. 2). Unlike the quantitative studies, the research design in qualitative research is and should be a process of reflection all throughout the case. It generally involves all features of planning and execution of the qualitative study.

Figure 1 presents the qualitative research design, reflecting the stages of this research. During each component of the research, knowledge is created. The research starts with assumptions about the aforementioned problem, a formulation of the initial problem statement and conceptualizing about the limitations of the problem at hand. Flick (2007) refers to this component as the component of sampling, where the researcher decides what material, which cases and what information, they will be using in order to address the problem.

The next stage is determining the most appropriate methodological approach for the nature of the research. This includes the determination of an operating paradigm, methodological approach and the choice of research methods which reflect the intention of creating knowledge, the authors have, at its fullest. This stage involves the components of intended comparison and intended generalization, recognized by Flick (2007). The authors make decisions on what comparisons related to the problem or the case will be drawn. This decision ultimately influences the data collection as well as limits the focus of the research. The purpose of this component is not to address the research questions but to create a deeper, more systematic understanding of the context and reality of the analysed material and the structures in it. The feature of intended generalization refer to the generalizability of the conclusions, reached by the authors within the studied setting and beyond it. A qualitative research aims at generalization not on numerical level but on a theoretical level, by developing theories which are either applicable to a specific field or to a variety of fields

(Flick, 2007). Furthermore, "*a well-defined level of generalization limits the study to only relevant dimensions of the case*" (Flick, 2007, p. 8).

The next stage involves a literature review of the concepts, models and theories, used to answer the research questions. The purpose is to present the current literature on the topic in order to identify and address the knowledge gaps, relevant for the problem under study. The choice of literature and data, required to address the problem and research questions, is done through revised sampling and additional limitation of the focus of the study. This is done so that the complex issues of the research can be broken down into components which can be addressed in limited time and with limited resources in order to reach optimal results.

The final stage of the knowledge creation is the conducted analysis. The authors deploy analysis of the theoretical foundations of the presented theories in order to create a combined framework which answers the problem statement. Additionally, the framework is put into practice through a case in order to test its consistency and address the research questions. The analysis employs qualitative research analysis of secondary data. The conclusions and reflections offer not only a direct answer to the problem statement but also directions for further research and reflections on the process of delivery of the results from the study.

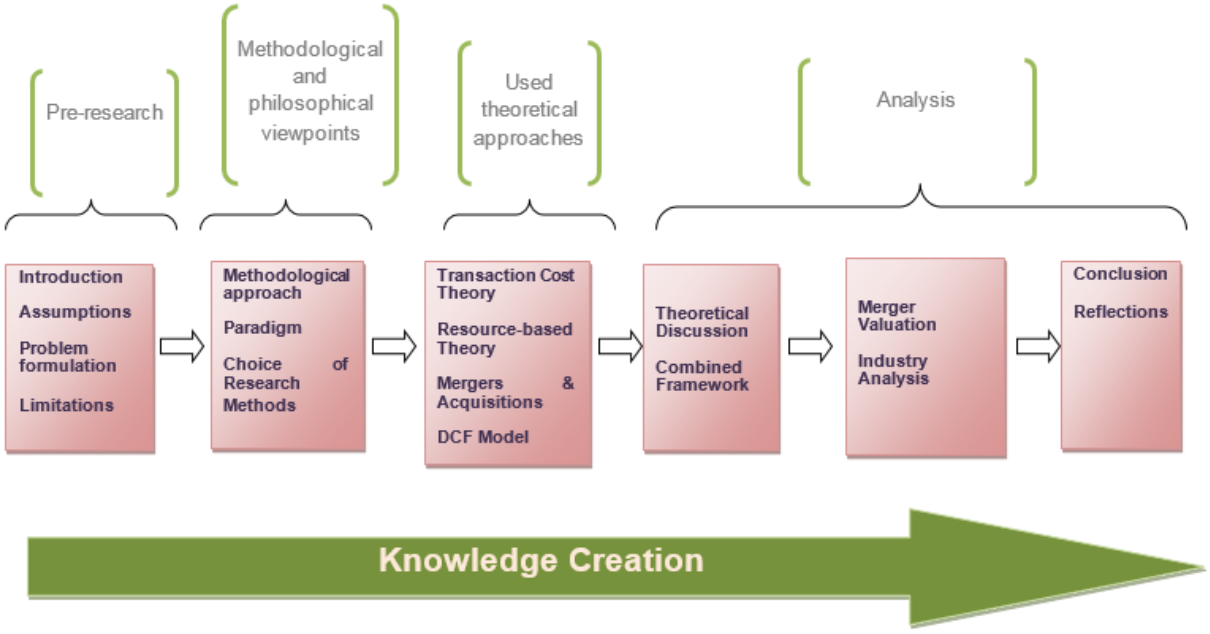

Figure 1 Research Design

Source: own creation

1.3.2 Case Approach

The following section presents an introduction of the case components. The purpose is to have the reader familiarized with the components of the case and present the context in which the authors approach the case.

The Interactive Entertainment Industry

Firms do not operate in a vacuum and identification of the industry a company is situated in as well as all overlapping industry is of crucial importance to the successful performance of the firm. However, identification of the particular industry within a reality of globalization and tight inter-industry networks is not without its difficulties. Traditional industries like automobile, steel, agriculture or retail are easily identifiable even across borders. But more and more innovative industries have their boundaries blurred. The interactive entertainment industry is a name given by its participants. The name of the industry according to the United States Census Bureau is Software Publishers Industry (NAICS code 511210, SIC 7372). The code 51 indicates the Information industry, sub-industry 5112 refers to Software publishers. The description of the industry from the North American Industry Classification System is "*establishments primarily engaged in computer publishing or publishing and reproduction. These establishments may design, develop, and publish, or publish only*" (US Census Bureau, 2012). The index entries corresponding to this industry are: "*applications software, computer software, games, operating systems software, packaged computer software publishers, programming language and compiler software publishers, utility software"* (US Census Bureau, 2012). As seen, this industry identification is quite broad and includes, operating software, utility software, programming languages and other products and services which are not the focus of this thesis. Research companies and also producers and publishers of games have moved away from this classification and introduced other definitions of this industry.

The Entertainment Software Association (ESA, 2013) is one of the private institutions which monitors the industry of video games and has introduces the industry identification as entertainment software industry, although this name is not official.

Additionally, different names of the industry as well as different definitions have been introduced by research companies and organizations connected to the market of games. For example, DFC Intelligence, a market research consulting company has published a number of market research papers on the interactive entertainment and gaming industry. The video games industry has been a focus of research by PriceWaterhouseCoopers, another consulting company, when it comes to the consumer spending for "*new console games (including*

handheld games), personal computer games, online games, and wireless games as well as video game advertising" (PwC, 2011) . The company "*excludes spending on the hardware used for playing the games"* (PwC, 2011). The authors consider the definition of PwC the closest to reality since it excludes the hardware producing companies (such as Sony and Microsoft), which if added to the industry, will change the structure significantly.

The difficulty in defining the industry may also stem from the three-fold structure of the industry – hardware, software and infrastructure and technology (see figure below).

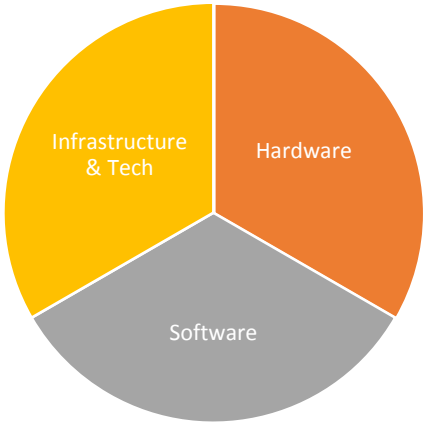

Figure 2 Structure of the Interactive Entertainment Industry

Source: own creation

The hardware segment includes companies who not only produce the content of the games but also offer the gaming platforms, such as Microsoft, Sony, and Nintendo. Companies like Activision, Blizzard Entertainment, EA and Ubisoft are strictly within the software segment, while there are companies, who develop content as well as offer distribution like Valve Corp. The interactive entertainment industry is an industry with diverse value chains, which characterizes the stages and participants in the development, marketing and consuming the content. The industry consists of a traditional retail value chain, including developers, publishers, distributors, retailers and consumers. Additionally, the vast development of online commerce has introduced a lean online value chain where participants are only the developers and consumers. The third value chain is that of the casual mobile gaming, where developers, distributors and consumers are the only participants (see figure below).

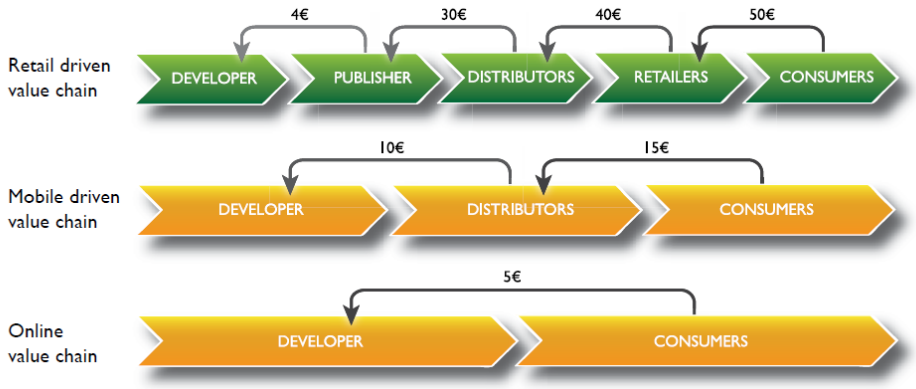

Figure 3 Diverse Value Chains of the Interactive Entertainment Industry; Source: adapted from European Federation of Game Developers, 2011, p. 5

The following is a description of the key participants in the industry value chain:

- Developers are the creators of the content. They create the concept and implementation of the gameplay procedures. The revenues of the developers come either directly from the consumer, in the case of the online value chain, or in the traditional retail driven value chain, they are entitled to royalties according to the revenues generated by sales of the video game. Developing teams may be in-house of a bigger company, for example as it is with Electronic Arts which develops as well as publishes titles, but they can also be small companies which are hired by publishers to develop the game. The developer companies can either be entirely independent, partially owned or entirely owned by the publishing company. Changes in the structure of the industry can be seen through mergers and acquisitions which occurs where a publisher acquires a developer. This is a classic up-stream vertical integration and is common in the industry (Cucuel, 2011). The trend in the last five years (from 2007 onwards) is the progressive growth of indie game developers, which are small companies developing games for a niche market. These now accumulate over 60% of the developed titles in the industry (Ankeny, 2012).
- Publishers: Publishers are responsible for producing and marketing the game. These participants are the ones with the most financial risk but also the ones benefiting from the greatest bargaining power from the value chain. Publishers both order the development of a game and finance it, or they choose which of developed projects they would publish, which gives them the right to interfere in the processes of development as well as limit the bargaining power of the developers. Key participants like Nintendo have adopted and operate across streams of the value chain – producing the hardware (in the case of Nintendo, the console Wii), developing

games for the console as well as publishing the titles. Other publishers either develop the game themselves, acquire a developer with already developed title (the case of Electronic Arts) or outsource the development of the title to a third party (the case with the massive multiplayer online game Guild Wars, which is developed by Arena Games but published by the giant NC Soft). Publishers are often the largest enterprises in the industry, operating mostly worldwide (Cucuel, 2011).

- Distributors: Distributors make the title available the retailers. Usually, they are also responsible for stocking the games. The existence of the so-called "innovative risks" involved in this part of the traditional value chains makes it so that distributors often influence the availability of titles which have the most commercial potential (Cucuel, 2011). Unsurprisingly, with the increasing popularity of the online value chain, the influence of distributors has been declining. In addition, online game platforms such as Steam, Xbox Store and the Playstation network arrange for an immediate access to the content in question without added cost. Additionally, online distributing is not dependent on stocking and delivery costs (Cucuel, 2011).
- Retailers – The main purpose of retailers is the stock the games according to the customers' preferences and the display of promotional material and marketing campaigns. Retailers are losing more and more from the adoption of online gaming platforms and direct developer-customer relationship. The nature of the gamers have also changed the landscape moving from toddlers and teenagers to an average of 29-30 years old in 2012. Retailers' main strategy is marketing campaigns and promotional campaigns for new titles and in correspondence with the release of new consoles or handheld devices (Cucuel, 2011).
- Consumers – The consumers of the interactive entertainment industry are the key to the success of the sector. The Entertainment Software Association has conducted extensive analysis and survey to identify characteristics of the gamer. The average game player age is now 30 years old (ESA, 2012). A little more than half of the video game players – 53% are male. The female video game players in the US are 47% and women aged 18 and over represent 30% of all gamers in the US; this is the fastest growing segment in the market. The age of the consumer of gaming content indicates that the consumers are vastly more likely to possess disposable income which they spend on hardware, content as well as microtransactions within the game itself (ESA, 2012).

- Video Game Associations and Rating Entities – These are self-regulated establishments which protect the interests of the interactive entertainment industry worldwide. The main players, here, are the Computer Entertainment Supplier's Association (CESA), the Interactive Software Federation of Europe (ISFE) and the Entertainment Software Association (ESA). Additionally, the Entertainment Software Rating Board (ESRB), established in 1994 by the ESA is the association behind the creation of rating systems for video games and other related content and the monitoring of the implementation of these rating systems worldwide (ESA, 2011). One other rating association is the Pan European Game Information (PEGI), which supplies age labelling according to the content of the title (PEGI, 2013). Even though, these organizations strive to fulfil the requirements for appropriateness of the video games and content, the cultural differences across border have created a lot of controversial issues with the ratings (Anderson, et. al., 2004).

The profile of the gaming consumers presents a shift in the industry in terms of growth and segmentation. In recent years video games are not related to the male audience as much and with the profile of the teenager, playing games for long periods of time. The new generation of hardware and various ways and means of playing as well as the growing social aspect of gaming, have expanded the traditional market to include new demographic of players such as women, families and elderly people (ESA, 2013).

The diverse options for platforms of gaming such as smartphones, tablets, smart TV and social networks, have resized the customer format creating a greater interactive experience and adding the social aspect for them (Gardiner, 2012). Thusly, the "casual gamers" grow in terms of consumer of titles, making this industry further segmented with diverse target segments (Wada, 2011). The dynamics of user demographics is presenting a beneficial market opportunity for companies to diversify across platforms and tackle penetration of new customer segments (Patel, Leung and Chesler, 2010).

Activision

Activision is one of the leading international companies publishing interactive entertainment products. The company's products cover a wide category of games, from: action/adventure, action sports, racing, role-playing, stimulation, first-person action, to music-based games and strategy. Activision's products are created for the following platforms: Sony PlayStation, the Nintendo Wii and the Microsoft Xbox360 console systems, the Nintendo Game and Dual

Screen and the Sony PlayStation Portable hand-held devices, and the personal computer (Activision Annual Report, 2008).

Activision was founded in October 1, 1979 by David Crane, Larry Kaplan and Alan Miller, former Anatari programmers, responsible for developing games such as "Gang of fur" which generated 60% of Antari's games sales. The three programmers' team was completed with Jim Levy former music industry executive. Activision developed and distributed their video games for Antari in the following years, their games becoming one of the bestselling Antari games. Activision was the first independent developer and distributor of console games in the world (Fahs, 2010).

In June 13, 1986 Activision merged with Infocom, a leading developer of that time of text adventure games. This merger removed Jim Levy as CEO of the company, making Bruce Davis the new CEO. Davis decided to change Activision's name with Mediagenic, this move was intended to make Activision name globally more represented in its activities. The company continued to release games but it has dramatically decreased its revenues and value with many of its valuable human resources such as developers and founder David Crane, leaving the company. In 1991 Bobby Kotick, former graphic developer for Apple, has bought 25% of Mediagenic shares and appointed himself the new CEO of the company and decided to rebrand the company under its former name Activision. By 1995 the Activision brad was once again a symbol of quality and synonym with producers of great PC games. By the end of '90 Activision had a strong internal team. However, Activision's partnerships with independent studios raised the company to become a company with great annual franchises and currently the biggest publisher in the world (Fahs, 2010).

By 2003, Activision's goal was to win the battle against EA, the industry leader. Thus, in 2003 Activision created a new studio, Infinity Ward employing former EA developers, and announcing the release of Call of Duty. The company continued its investments in independent studios, purchasing RedOctane, the developer of Guitar Heros. Bobby Kotik's strategy and thirst to conquer the industry reached at its peak in 2007 the proposal for the merger between Vivendi Universal and Activision was made (Fahs, 2010).

Vivendi Games – Blizzard Entertainment

Blizzard Entertainment is renowned global developer and publisher being famous as the creator of World of Warcraft, Diablo, StarCraft and Warcraft. World of Warcraft being the number one game of Massively multiplayer online role-playing game (which will be referred as MMORPG from now on) in the world (Vivendi Annual Report 2007).

Blizzard was founded in February 8, 1991 by Allen Adham, Frank Pearce, and Mike Morhaime all the three of them being UCLA newly graduates. The company's original name Silicon & Synapse was and during the early days, its main activates were to create ports for other studios (Clayman, 2010).

In 1992 the company started releasing games on the Super Nintendo Entertainment system, with The Lost Vikings and Rock n' Roll Racing being the most notable games. In 1994 the company was acquired by distributor Davidson & Associates. The year 1994 brought some changes in the company's name, from the original Silicon & Synapse the company changed to Chaos Studios, and eventually settling for Blizzard Entertainment. In terms on ownership, the company has been through numerous transitions, being acquired CUC International in 1996, then being sold to the French publisher Havas in 1998, and in the same year being purchased by Vivendi, becoming part of the Vivendi Games group (Clayman, 2010).

Even though the company has been through these numerous transition, its passion and commitment to deliver high quality games pursued, the company being able to have a visionary perspective over the future of PC and console games. The company's reputation over the years grew, being able to release games ahead of its deadlines because of its dedicated developers and the company's premise of creating great products before being concerned about sales figures and deadlines. In 1996 Blizzard acquired Condor Games, and renaming it Blizzard North. The company launched Diablo an action RPG, which assured the expansion the Blizzard Empire (Clayman, 2010).

Blizzard also released StarCraft, which was declared the most successful game in 1998, with over 1.5 million copies sold. However, the most noticeable game produced by Blizzard is World of Warcraft (WoW) which was first introduced in 1994, in 2001 Blizzard announcing entering the MMORPG arena with the game. In 2004 the games was released making it the number one MMO genre game in the world and the most subscribed MMORPG with more than 10 million monthly subscriptions.

In January 2007 Blizzard Entertainment releases World of Warcraft: The Burning Crusade. The games sold almost 2.4 million copies within 24 hours and, generating sales of 1.7 million and having more than 1 million players logged on to play the new version online. The games makes records all over the world, having 8 million-player worldwide with more than: 2 million players in North America, 1.5 million players in Europe and 3.5 million players in China (Clayman, 2010).

1.4 Scope and Limitations

This section highlights the limitations encountered throughout the stages of conducting this research. The authors acknowledge the impact of these limitations on the overall knowledge creation process as well as on the theoretical and empirical results of this thesis.

In regards to primary and secondary data, the authors employ only secondary data from renowned scientific journals and publicly available official financial documents. Given the theoretical focus of the thesis, the authors consider that at this stage of research secondary data is sufficient to showcase the logic of the combined framework. Further research including primary data on other cases and/or other industries may be conducted in a different methodological manner.

In regards to the interpretation of data, the authors acknowledge that theoretical and empirical interpretation is based on their personal values and views, thus limiting the authors in creating a perfect knowledge. The theoretical and empirical results of the thesis should be considered subjective, since they are accumulated under the assumption of accuracy of the secondary data. The authors assume that the information distributed to the public about the business activity of each of the case components is not manipulated in any way and represents the true intentions and actions of the companies.

The combined framework is limited to the assumptions and concepts, determined by the authors to be most relevant, to explain the conditions, under which horizontal integration will create synergistic effects. Naturally, the theories are not combined at their fullest.

The authors present and deploy the discounted cash flow (which will be referred as DCF from now on) model merely as a tool to evaluate the performance of the merged companies before and after the merger. Thus, the DCF model is excluded from the combined framework of transaction cost theory (abbreviated as TCT in the thesis) and resource based view (abbreviated as RBV in the thesis).

DCF is used to calculate the stand alone value of the companies that are merging, however, the synergies that arises from the combined value based on changes in beta, cost of equity and cost of debt. However, the authors demonstrate the synergy effect in evaluating the combined company's performance after two years.

The authors only address the software sector of the interactive entertainment industry, leaving the hardware and infrastructure & technology segments aside. The software sector is chosen due to the position of the case companies in this market.

The overview of the effects of the synergy created by Activision and Blizzard is limited to the industry and one competitor EA, since it is the former market leader and main direct competitor of both companies. Further research can be addressed specifically to explore the industry's participants more thoroughly.

2 Methodology

The following chapter presents the concept of paradigm and the methodological concepts that stand behind the concept of crating knowledge and how does these relate to social science and to the creator of knowledge research. The importance of this chapter streams form the fact that science is structured is schools of thoughts and knowledge and how each individual perceives reality is different from researcher to researcher and their manner of creating knowledge within their research. It is important to be aware of the underlying concepts and preconditions and how one's research is related to them to better understand how a research is performed and what point of view the reader should take when going through a research and its results.

2.1.1 The Concept of Paradigm

Science objective is to make sense of what is surrounding us by creating knowledge about the reality we live in. Thus, science is structured in school of thoughts that prevail to different traditions, creating more than one science filled with knowledge and the concept of reality (Clark and Fast, 2008).

Clark and Fast (2008) argue that our knowledge and the way we understand reality streams form the manner we form our concepts in interpreting reality. These concepts become preconditions of the forthcoming/created research. This is why it is important to address the underlying conceptions and preconditions before conducting a research.

The research design represents the blueprint of the forthcoming research. It comprises the sequence of the logical activities which illustrate the connections between the already introduced research questions, the manner these questions will be addressed, how the data is collected and analyzed, and in the end the elaborated conclusions (Kuada, 2012).

The chosen methodological foundation of the research has a great influence over the manner the thesis is addressed. They form assumption whose basis create a better understanding for the reader and the researcher when reflecting his/her work (Kuada 2012). Philosophy of science casts light in understanding the underlying assumptions of the research in connection to the reviewed papers and books (Kuada 2012).

The concept of paradigm was first introduced in the academic world by Kuhn (1970), who approached this concept through the following question: *"What is science, and how is scientific cognition produced?"* (Clark and Fast, 2008, p 47). He claims the components of a paradigm as such (Arbnor and Bjerke, 2009):

- Symbolic generalizations, which are the already accepted and non-questionable expressions the research group accepts and uses.
- Metaphysical convictions of the structure of reality, which are the typical models, whose functions are similar to the symbolic generalizations, however, they also contribute to the further accepted explanation or solution when determining what will be considered among researcher as unsolved problems.
- Standards of the scientific activity, such as quantitative research results, or employed theories or scientific topics.
- Ideal examples, which scientists encounter in their work as solution to the formulated problem from academically accepted journals.

Kuhn (1970) perceives that scientific revolutions are responsible for changes in the development of science, where, old paradigms belonging to the normal science are being replaced by new ones. The process of scientific revolution takes place when a specific "frame" is "filled out" by observations that conflict or do not fall within the initial frame. Thus, researchers investigating a certain "frame" and start questioning the initial assumptions, creating "anomalies" which will lead to scientific revolution. Figure 4 illustrates the process of scientific revolutions according to Kuhn's (1970) interpretation. The paradigm encompasses definite standers of the scientific activity where in practice, a group of researchers with mutually accepted scientific standards and models work together on a certain research (Clark and Fast, 2008).

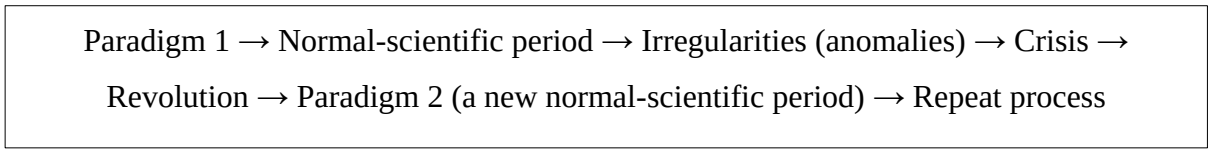

Figure 4 Scientific Revolutions by Kuhn

Source: Clark and Fast (2008), p. 48

In essence, a paradigm comprises the basic assumptions of reality which are conducted within a time frame guided by the commonly accepted logic of perceiving science. Thus, when conducting a research the scientist deliberately chooses to perceive reality in a certain way, looking at the world through specific "glasses", and through the medium of its scientific activities, it confirms or disagrees with the perspectives/schools/approaches of the socially accepted scientific community (Clark and Fast, 2008).

Arbnor and Bjerke (2009) place their paradigm in relation to methodology. They express the relation between ultimate presumptions and methodological view through the use of paradigm. They state that one cannot start its research without first addressing to its ultimate presumptions and linking them to the methodological view. Ultimate presumptions have a philosophical character; they rarely change radically, but through gradual modifications, thus, through the concept of paradigm, the relation between the ultimate presumption and methodological views is created. The paradigm represents a "conceptual language" that bridges the two views. Arbnor and Bjerke (2009) further state how do methodological views are connected with the study area. This is done through the use of operative paradigm, which has the role of connecting these two areas. Thus, the process of creating knowledge with all of its activities such as formulation a problem, collecting data and so on are to some extent organized by the chosen methodological view. Analyzing the already stated elements and their connections, one can observe that the methodological view has a double function (Figure 5) in linking the ultimate presumptions to the study area through the use of theory of science and methodology.

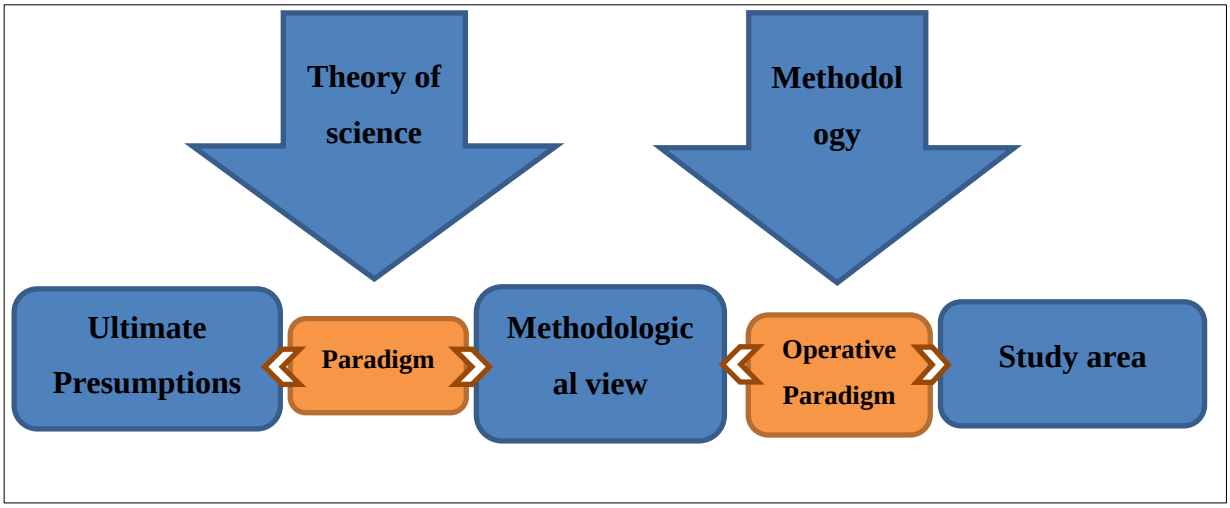

Figure 5 Ultimate Presumptions and Methological Approaches

Source: adopted by Arbnor and Bjerke (2009), p 17

Theory of science employs the concept of paradigm to express the important philosophical assumptions that are essential in the research. Arbnor and Bjerke (2009) relate the concept of paradigm to Törnebohm's classification. They agree with Törnebohm (1974) scientific evolutionary position of the paradigm. In comparison to Khun's revolutionary perspective, Törnebohm's field of social science states that new paradigms tends to live alongside with the old ones, whereas Khun's natural science field believes that old paradigms are replaced by

the new ones in the process of scientific revolution. Thus, according to Törnebohm, a paradigm consists of:

- Conception of reality deals with the how reality is constructed according to the philosophical ideas. Here, the general pre-assumptions and conceptions, as well as hypotheses of a researcher influence its work (Clark and Fast, 2008).
- Conception of science represents the influence of knowledge accumulated through education to the researcher's beliefs and concepts about the studied object and subjects. This establishes the manner a researcher assesses his knowledge accumulation in relation to other schools of thoughts (Arbnor and Bjerke, 2009).
- Scientific ideal consists of the assumptions of how science should be developed in the researcher's work. This is related to the researcher as a person, where the presented ideas and standards define the research of the scientist (Clark and Fast, 2008).
- Ethical and aesthetical aspects represent the view of the researcher over what is morally suitable or unsuitable. The ethical element has a double dimension, (1) internal ethics takes into consideration intra specific honesty and (2) external ethics concerns the social responsibility in regards to the local community and society. Aesthetical aspect deals with what the researcher consider beautiful or ugly, from the appearance of scientific work (Clark and Fast, 2008).

The paradigm and its elements are perceived as unchanged by any major forces, because continually questioning the concept of reality or any of its four elements will make the knowledge creation and the practical research impossible to pursue. However, the operative paradigm has a changing character depending on the *"shifting character of the study area"* (Arbnor and Bjerke, 2009, p 16) and the nature of paradigm employed. These differences arise from different concepts of reality and their views. Therefore, the operative paradigm contains methodical procedures and methodics, where the connection between methodological approach and a specific field of investigation is determined. By the methodological procedures and engaged by the methodic (Clark and Fast, 2008).

Methodological procedure represents the manner a researcher assimilates, develops and alters an already settled technique that derives from a specific methodological viewpoint. Methodics are perceived as the manner the employed methods are being related to and integrated during an investigation. *"To adopt a technique to a method view is thus a methodological procedure, while the adjustment of this adaptation is the methodic"* (Clark and Fast, 2008, p 55). This implies that when using theories, former studies and techniques,

one has to approach it through the development of the operative paradigm. Therefore, the role of methodology is to advance the personal development of the researcher rather than learning distinct knowledge and skills (Clark and Fast, 2008).

Objective vs. subjective

Social science distinguishes two types of theorizing and thinking, and places them into the objective and subjective dimensions. The objectivistic approach belongs to the positivistic school of trait, where social events and phenomena is being described, explained and predicted through the use of causality and regularity relations among various factors. Knowledge is created through accumulation of information where new knowledge is acquired in the same preconceived scientific method as the previous one, by adding new information to the already existing knowledge. Specific method related to the objectivistic approach is the quantitative research, where studying the behaviors of man is determined by situational factors and the environment (Clark and Fast, 2008). The analysis is mainly performed by looking at relationships and regularities among elements, and afterwards expressing these elements in a quantitative manner. The aim of this method is to generalize and to explain hoe reality is being governed.

The subjectivistic orientation perceives the world as being constructed by humans, on describing and understanding everyday reality. In order to understand this reality, one has to take part and be involved in the studied activities. Therefore, it is important to understand the manner reality is, one has to focus on understanding how does man and a group of people are acting. Social phenomena and psychological connection are being approached. The element of uniqueness is strongly rooted with the individual, dismissing the generalization perspective (Clark and Fast, 2008).

Arbnor and Bjerke (2009) place their views and the objectivistic and subjectivistic approach through the use of methodology. They discuss methodology through the use of three views: analytical, systems and actors view. In order to illustrate the relations and how these there views are related to the objective and subjective view, they place the analytical and systems approach in the objective traditions, and the actors approach in relation to the subjective relations. Figure 6 presents the concept of reality according to Arbnor and Bjerke (2009). The analytical view's objective is to explain reality which is filled with facts.

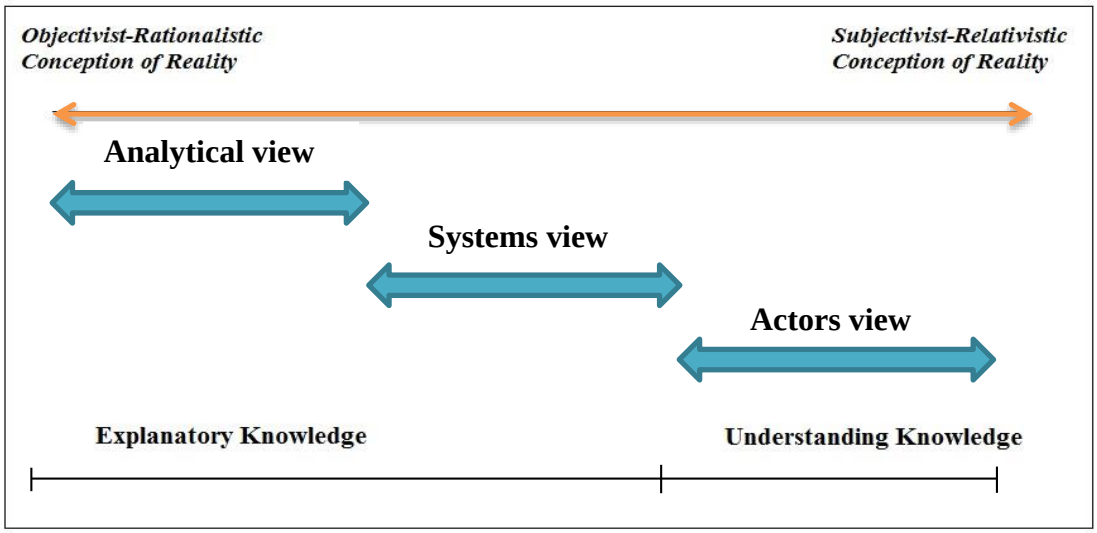

Figure 6 Methodological Approaches

Source: adopted by Arbnor and Bjerke (2009), p 51

It is important to note that these three views shape the basis of research according to their background logic. Therefore, research conducted in each of the three perspectives will lead to different content and meaning.

2.2 Methodological Approaches

The following section presents the three methodological views according to Arbnor and Bjerke (2009) with their philosophical assumptions, methods, results and connections.

2.2.1 The Analytical View

The analytical view is considered the oldest of the three methodological views and it is mostly used in business consulting and research. Figure 7 illustrates the analytical view, where reality is filled with facts and has a summative character, where the sum of its parts makes up the whole. Therefore, the knowledge creator can reproduce the reality picture by being acquainted with the different parts of the whole, and adding them together to make up the complete picture. The knowledge created by the researcher is considered *independent from the observer,* meaning that knowledge progresses through formal logic represented by certain judgments, independent form the subjective experiences of the creator of knowledge.

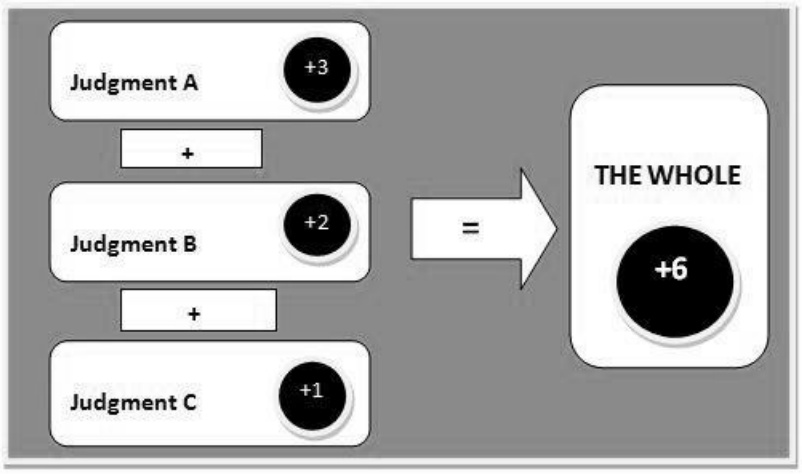

Figure 7 the Analytical View

Source: Arbnor and Bjerke, 2009, p 52

The analytical view investigation relies on causality relations, where the research's aim is to explain its effects by identifying the previous or current cause. This means that the quantitative data supports a more ample explanation whose results are *of cause-effect relation, logical methods and representative cases* (Arbnor and Bjerke, 2009, p 57). This allows the results to be generalized. The conceptions of reality of the view create the condition for the creator of knowledge to constantly be in contact with its research front.

Arbnor and Bjerke's (2009) ultimate presumptions according to this view rely on the fact that the creator of knowledge perceives reality as filled with facts, which encloses objective elements, and all in all have the objective to summarize reality in order to express it more precise. Adding more and more facts to reality leads to creating a more complete picture of it. This view relies on statistically secured results, whose scientific ambition is to create *"explanations from a general point of departure"* (Arbnor and Bjerke, 2009, p 37). This implies creating representative models and patterns through the use of regularities and similarities in their research. The concept of *causality* is predominant in the analytical view, which believes that one circumstance leads to another, making reality and its events caused, therefore, the analytical view is always seeking for the forces responsible and their causes that produce the event.

According to the analytical view, the creator of knowledge strives to depict reality, which is filled with facts, in an objective way through explanations. *The main sources of information are public statistics issued by impartial agencies or institutions and quantitative data*. The research developed by the creator of knowledge is to explain and describe the study area through hypothesis whose goal are to confirm or dismiss the formulated hypothesis. The

employed methodics of the analytical view are well-defined steps to perform and follow the research in order to obtain valid results. These results are conducted so that the results of the investigation or study are to be generalized and applied to more cases.

The knowledge created by the analytical view has the aim to result in absolute theory by becoming general.

2.2.2 The Systems View

The systems view was first introduced in the business practice in 1950 as a reaction to the analytical view and its summative picture of reality. The main assumption behind the systems view holds that reality consists of parts where the whole differ from the sum of its parts (Figure 8) (Arbnor and Bjerke, 2009, p 53). The relations of the parts create the synergy effects. For this reason, the view's assumption is founded on the fact that the whole in reality will each time vary from the sum of its parts. Therefore, the systems view operates with analogies usually grounded on "*similarities in structure and form*" (Arbnor and Bjerke, 2009, p 57).

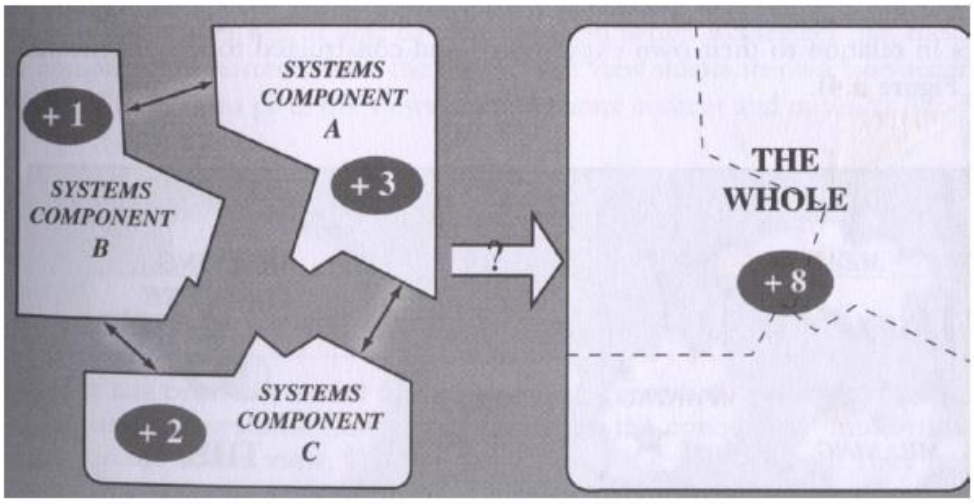

Figure 8 the Systems View

Source: Arbnor and Bjerke, 2009, p.53

The systems view seeks to explain or understand reality through the use of finality relations whose results aim to identify *a force with structural pattern*. The synergistic effects in reality are structured into models or illustrative interpretation leading the work of the creator of knowledge towards typical cases and definite universal classification mechanisms for unlike cases.

The systems view relies on finality relations, where the phenomena and events are explained by the aim that stands behind the driving force, therefore, allowing the whole to be greater than the sum of its parts.

The components of reality of the systems view are considered to be reciprocally dependent on each other which makes it impossible to sum them us as in the analytical view. The synergistic effects provide information in accordance to how the components are brought together as well as their content. This is why it is important to take into consideration all of the factors that create the whole, otherwise, the research risks being seriously affected.

It is possible to be an actor in the systems view, where individuals are part of the structure created in the systems view and where powerful individuals have the ability to alter or change the structure or its relations. However, the actor presence is possible in the systems view only being part of the whole structure and its processes, because the factive meaning governs and assumes that people's behavior and opinions are part of the overall larger perspective created by the systems view.

The systems view denies looking at a single-dimensional casual relation, but it looks at reality as a whole with its forces that influence the system. The theoretical knowledge generated by the systems view is related to a single or a number of categories of systems or to a certain systems phenomena, thus, the knowledge become systems-dependent. Previous knowledge, experience and results for former studies are meant to be mental inspiration for analogies or metaphors in investigations conducted within similar systems orientation or content.

This view, as its name, perceives reality as filled with facts that belong to systems structures, from the objective point of view; and of subjective opinions that are part of the structures. Reality is made from parts that are combined and influence each other, "*reality is not summative*" (Arbnor and Bjerke, 2009, p 39). The scientific ideal behind the systems view is to study and analyze systems and their patterns and improving the overall systems picture. The ethical dimension sees the different components of the system connected to each other.

Reality in systems view can only be explained or understood in its context (Arbnor and Bjerke, 2009, p 39). The context seen by the creator of knowledge is made of regular outlines, connections and relations. However, irregular aspects can also be brought into the picture. All of the aspects are considered as part of the systems model or metaphor that aims to describe and explain reality.

The knowledge created in the systems view is founded on three principles: totality, complexity and relativity. The totality principle relies on the interdependency of the parts

creating the overall picture of reality. It states that it is essential to create external and internal limitations when creating the overall picture of reality. The external limitations refer to delimiting the picture of reality due to practical reasons, since it is impossible to reproduce it. The internal limitations are made because they inform the knowledge creator of the amount of details the needs to be put to create the picture of the system and that is it always compulsory to select a specific magnifying level.

The complexity principle states that it is impossible to reproduce the world and its systems due to their complexity, that models and interpretations will be able to only create a limited picture of reality.

The last principle, the one of relativity means that the creator of knowledge it responsible for the created picture of reality, limiting therefore the picture, and making it dependent on the point of view the creator of knowledge has chosen to approach.

The collection of reliable secondary data is very important in the systems view, since it is important to track the system's history with its critical events. The systems research contain empirical results than are more or less unique to the study either being based on systems theory of other studies, or create a representative metaphor that brings understanding in a deeper way that the use of explanations.

2.2.3 The Actors View

The actors view has its roots in subjective traditions with the main focus on the actor/actors and their distinct interpretations. The actors view relies on the assumption that reality is socially constructed, where previous research made by other creator of knowledge can be used as for developing new skills in the knowledge creation, but they cannot constitute starting points of the new research that it going to be performed.

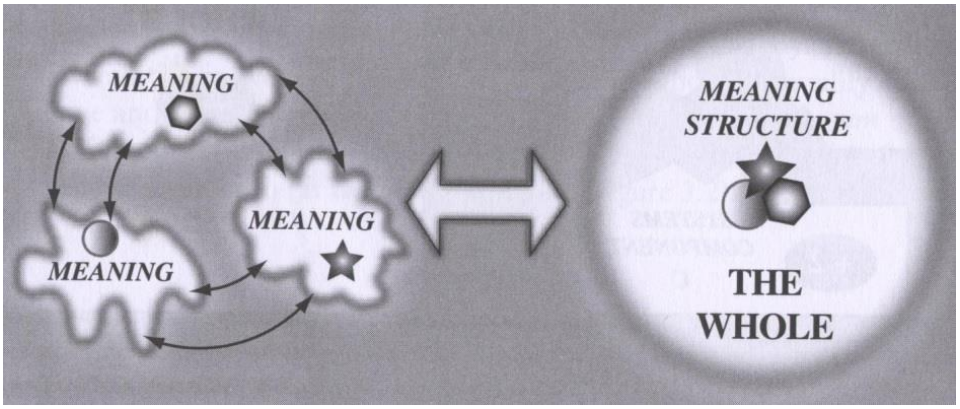

Figure 9 the Actors View

Source: Arbnor and Bjerke, 2009, p 54

The understanding of reality in the actors view is created through pictures of reality understood and developed by individual actors (Figure 9). Individual meanings interact and impact one another and thus, affecting the whole, which affects the meanings. This action is performed on and on between the meanings and the whole continuously changing the reality.

The actors view research and the use of fundamental theories that provide a general starting point of social construction of reality and its various constitutive interpretive procedures result in creating a descriptive language (for example situational interpretive models), an ideal-typified language (used in typified cases) and emancipatory interactive action of the study area. These results are perceived as certain "general" contributions, where the constitute concept stand behind the actors view. The constitute concept *"stands for constructing social reality and/or making it visible"* (Arbnor and Bjerke, 2009, p 58). It assumes identifying general factors that can create an understandable construction of reality, where the generality can be questioned, changed, and transformed.

The actors view tries to understand the relations created through the constitutive interpretations and the manner these relations and the factors vary and influence each other in an uninterrupted evolving process.

The actors view believes in the ideal reality, and not in the factive one. The purpose of the actors view research is to isolate specific relations of the reality and to create a greater understanding of these relations.

The actors view believes that reality is a social construction, filled with chaos and elements of uniqueness; however, there are relative stable structures in this reality which are mentally fixed with the actors who are responsible for maintaining the stability of these structures. The concept of science of this view assumes that pre-scientific concepts are to be submitted to reflection when creating knowledge. The scientific ideal of the actors view supports creating knowledge through active interaction. The view seeks to create innovative knowledge interest and promotes driving change in its research. Therefore, the activities, such as language style or the manner the work is developed, of each performed research are being created simultaneously. The actors view is aware of the fact that performing a research simultaneously affects the study area and how others perceive it, since a research of a study area can and will influence the mentally constructed structures.

The actor's knowledge creation is oriented towards a non-linear process, which requires a deeper understanding of the researched phenomenon. One of the dominant characteristic of the actors view set of concepts is the concept of *language development*, which has the purpose to bring understanding and action over the research. The conceptual development of

the study is to link "*the actors' own mental language with the developing descriptive language of the creator of knowledge*" (Arbnor and Bjerke, 2009, p 43). However, the language development and the manner the creator of knowledge understands and perceives the information limits him/her to remain in the previously defined mental language and structure.

The actors view uses the dialogue as a choice of method when creating knowledge. It is important to be able to connect with reality in its own terms. The creator of knowledge on the actors view seeks to advance a greater understanding and insightful action within its research. It is about finding the in the irregularities in the regularities, so that the element of uniqueness would persist. Therefore, the use of metaphors as concepts of shaping is the element of greater importance in the descriptive language. Symbols are the next form of creating knowledge in the work of a researcher. They are used in cases when metaphors are not sufficient to express the descriptive language. *"Symbols are instruments of knowledge which can be used to disclose sides of reality, which get away from all other languages"* (Arbnor and Bjerke, 2009, p 44).

The creator of knowledge tries to understand the study area, because it believes in the elements of uniqueness in everything and everybody. Therefore, general explanations applied to multiples situations are ruled out, making way for the understanding and the clarification between the interaction of the study field and its unique similarities of the general reality.

The matter of objectivity is ruled out in the actors view. The researcher is openly participating in the creation of knowledge which automatically makes the developed knowledge subjective. Reality in actors view should be understood within the thesis, antithesis and synthesis relationship. This relationship stream from the manner the dialectic methodology arises in the knowledge creation process through the interaction between thesis that consists of the daily language and antithesis that create the vivid ultimate typified language. The outcome between the interaction of thesis and antithesis result in creating knowledge and in this way generating synthesis.

2.2.4 Chosen Methodological View

Once the three views have been described, with their ultimate presumptions, traditions and methods, the authors have chosen to use the systems view since it is considered the most relevant and fitting approach to treat the chosen theories and their application. The systems view is also considered the best platform in answering the formulated research questions. The main purpose of the research is to identify the best fit between transaction cost theory and

resource based view characteristics to treat horizontal mergers in order to achieve competitive advantage. Therefore the analysis of Activision Blizzard merger of 2007 and the manner the merger has influenced the interactive entertainment industry and its main competitors, Electronic Arts Inc., with the relationships that emerged from the merger call for the need of engaging in the systems view approach.

The authors choose to study the relationships that are generated between the elements of transaction cost theory and resource based view and to develop a model that comprises the elements of the theories in addressing the case of horizontal mergers. This manner of addressing the thesis falls in the finality relationships of the system view, where the events of the theories are explained through their purpose and the driving force that influences the relationships, allowing the system created to be greater than the sum of its parts.

The thesis seeks to combine the elements of the theories employed to unveil the most proficient combination of the elements and therefore generating the synergy effect. As the methodological chapter states, the concept of synergy can be associated only with the systems view. Where the synergistic effect is structured into models or illustrative interpretation, which is what the authors seek to create when employed the theories of transaction cost theory and resource based view and applying them to a case of horizontal merger.

Moreover, the developed model of the combined theories has the aim of being applicable to other cases or industries, due to the generalizable character of the model. Because of this characteristic of the model, associating the research with the actors view and perceiving reality as a social construction is not considered fitted for the thesis as the results of the analysis are presented as reflections which are responsible for shaping the models and theories and serve as an motivation towards change.

The primary part of the research consists of explaining the relations between various factors, such as the components of transaction cost theory and the elements of resource based view, and understanding the development of the theories through horizontal merges. The concept of explaining belongs to the analytical approach, concept that cannot understand reality, but only to explain it as factive and accurate as possible. The aim of the thesis is however to explain and understand the reality and its relationships of the interactive entertainment industry with the main players, and to shed light of how does changes in subsystems such as horizontal merges influence the whole system.

From the actors point of view, the thesis conducted through this methodological view should involve the decision making process of the merger between Activision and Blizzard, including the motives, attitudes and experiences of the conducted merger, which would

clearly be enriching, However, the authors' objective is not to pursue and analyze results associated with certain individuals (actors) of the two companies, but to explain and understand how does the components of the theories employed provide a comprehensive knowledge for creating synergistic effects which influence the relationships in the industry and change the performance, size and activity of the overall system and its components (Activision Blizzard main competitor Electronic Arts).

2.3 Research Methods

This section follows the academic literature on methods, generally used for collection and processing of data for social and business research. The main purpose of the chapter is to introduce the reader to the research methods available to the researcher and to present the method, applied for the following study. Within the description and discussion below the terms methods and techniques have been used as synonyms. However, here, the term methodology encompasses the epistemology and ontology of the research and is related to another aspect of the analysis.

Quantitative, qualitative and mixed research methods are the three types of techniques for social and business research, described in literature. All three have been presented further in this chapter.

2.3.1 Quantitative Research Methods

Quantitative methods have been a dominant strategy in the business and social research and continue to put forth influence within the academic community. Qualitative research entails methods of collection of data numerically and a deductive relationship between theory and research. Additionally, the nature of such method of research is positivist with a clear objective view of the social reality (Bryman, 2008).

The following are the steps of the process of quantitative research.

Figure 10 Steps in Quantitative Research

Source: adopted from Bryman, 2008, p. 150

The deductive nature of the methods is evident by the stages in the figure above. The starting point is elaboration of a theory which means that the relationship between theory and research is a deductive one. Naturally, a set of hypotheses are deduced from the theory and then proceeded to be tested by research. Although, this is the standard method of procedure, a lot of business research using quantitative methods does not elaborate hypotheses but instead uses a broader set of conditions in order to collect and analyze data. Hypothesis formation, however, is very much a practice in experimental research (Bryman, 2008).

Next, a research design is chosen. Research design is crucial in quantitative research since it influences to a great deal the degree of validity of the findings as well as ensures a causal

relationship between the concepts in the findings of the research. The devise of measures of concepts is sometimes referred to as "*operationalization*", which relates to the physics' term for procedures in measuring a concept (Bryman, 2008, p. 151). The selection of research sites and respondents or subjects is carried out on the set of presumptions taken by the researcher. These are in accordance to the set hypotheses and theoretical foundations. Then, collection of the data is required. In business and social research this would mean administrating the techniques chosen to collect the data – such as structured interviews, questionnaires or if the research requires observation – observing the subjects and assigning categories to their behavior. After the administrating the research instruments, the data collected should be quantified. Some information may already be quantified, such as demographics information, financial information and so on, whereas some information may require "*coding*", that is converting it into numbers in order for the quantitative analysis to be performed (Bryman, 2008, p. 152). This leads to analysis of the data. In this stage the researcher chooses various techniques to compress the data, test the relationships between variables and elaborate the fashion in which the results should be presented. This step will eventually lead to findings which will emerge from the analysis. Here the researcher will receive answer to questions such as if the results/findings support the hypotheses or not, what repercussions there are from the findings for the theory elaborated in the beginning. The following step requires writing up the findings, or publishing a paper, report or an article on the topic. Whether the readers find the research conclusions robust, relevant and important or not is essential for the research. The step in publishing the results is also crucial for concluding the research since it entails the results becoming a part of the objective knowledge of the social reality, thus looping the last step to the first, as shown on the figure above. Positivism is definitely the nature of this type of research methods because its characteristics can be found throughout the process of quantitative research. For instance, deductivism and inductivism are related to the procedure. The focus on transformation of concepts into quantifiable measures is a characteristic of the positivist view. (Bryman, 2008)

Concepts and Measures

"*Concepts are the building blocks of theory and represents the points around which business research is conducted*" (Bryman, 2008, p.153). Concepts are the abstract "*organization of ideas and observations*" (Bulmer, 1984, p.43) Concept is for example intelligence. Whereas its measure is the IQ. Generally in the social world the close connection between concepts and their measures has caused them to be used as synonyms, for instance, using meters for

the concept of length or distance. Concepts need measures if they are to be employed in a quantitative research. Using measures concepts can take the form of variables, dependent and independent. Variables are invaluable for quantitative research since they allow for abstract concepts to be quantified and relationships, correlations and behaviour to be investigated using numerical techniques. (Bryman, 2008) Measurements are instrumental for research in three different ways:

- Measurements allow for outlining very fine differences between subjects (generally people) when it comes to a characteristic in question. This is important since small distinctions between a certain characteristic is much harder to identify than larger differences.
- Measurements provide a "yardstick", they offer the consistent instrument for making distinctions and identifying the variance in differences in characteristics. It should be noted that measurements are consistent in two aspects – over time and across researchers. This means that measurements cannot be altered in their nature by neither time nor the person using them. However, it is very important to be mentioned that measurements do change with the natural change and progress in social reality. Changes in paradigms in the social world will inevitably influence the way of measurements of concepts in research. This is connected to the issue of reliability in a way that whether or not a measurement can generate consistent results within the social paradigm it exists, shows how reliable the measurement is (Bryman, 2008)
- Measurements offer "the basis for more precise estimates of the degree of relationship between concepts" (Bryman, 2008, p. 154). This is, for instance, the role of the measurement of correlation in the regression analysis.

Additionally, indicators provide a way of identifying the concept within the research data. This can be achieved by a question or a series of questions; through observation schedule, when it comes to the behavior of the observed; through the usage of surveys to obtain statistics about the studied group or through content analysis to identify patterns or changes. (Bryman, 2008)

Reliability and Validity

Reliability is a crucial concept in quantitative research methods and reflects the consistency of the measure of the concept under study. There are three factors when identifying the degree of reliability of the measure:

1) Stability – answering the question whether or not the measure remains stable over time and can assure that the findings from the measure are not changing over time;
2) Internal reliability – here it is important that the indicators set to identify differences in respondent's characteristics match across the group of studied respondents;
3) Inter-observer consistency – this issue relates to the consistency in the views and decisions of different researchers involved in the same research. It is highly important that there is a consistency in the decisions on techniques of content analysis for instance and also in the subjective judgments involved in activities in research (Bryman, 2008)

Coherence of the indicators is of importance to the overall reliability of the measures as well. If there is a lack of coherence in the indicators that would mean that some indicators are indicative of something else but the imposed meaning of the indicator. There have been several different techniques to test the reliability of the indicators in a quantitative research. Such are the split-half method and the more popular Cronbach's alpha, which since developed within a computer software has been widely used for analysis of quantitative data. (Bryman, 2008)

Validity relates to "*the issue of whether or not an indicator (or a set of indicators) that is devised to gauge a concept really measures that concept*" (Bryman, 2008, p. 159). The degree of validity shows how much a measurement is actually displaying the characteristics of the concept. There are several different types of validity and they are related to different ways of estimating the validity of a measure.

1) Face validity – this is a straightforward idea of whether or not a measurement reflects the characteristics of the concept. It may be obtained by query to others with experience or expertise in the field. Regardless, it is an intuitive process since it requires a certain degree of suggestion from the researcher;
2) Concurrent validity – this is related to the usage of criterion or a set of criteria which is related to the studied concept. Thus the measurement is tested against a criterion close to the characteristics of the concept in order to ensure that the measurement is valid to the concept.
3) Predicative validity – this aspect of validity is very similar to the concurrent validity but it is related to using a future criterion measure, rather than a current one.
4) Construct validity – the construct validity is related to the elaborated hypothesis from the theoretical ideas which spun the research. The valid measures in this case would be measures which give an answer to the tested hypothesis in the research;

5) Convergent validity – this is a method of testing the validity of measures against measures of the same concept but developed out of other methods. These for example may be a measure of a concept developed from a questionnaire tested against one developed from a structured interview or observations. Thus, ensuring the measure is consistent regardless of the technique used (Bryman, 2008)

Although reliability and validity are two distinctive aspects of the measures used in quantitative research, it should be mentioned that they are closely related in the way that validity would presume reliability. Thus, if a measure of a concept is not reliable, then it cannot be valid. Analogically, if the measure is not stable over time, it cannot be valid. Furthermore, not all the techniques provided to test validity and reliability are used in all the cases and mostly measures are simply proclaimed. (Bryman, 2008)

Critique of the Quantitative Research

No method of social study is without any criticism. Qualitative researchers specifically have been criticizing the epistemological and ontological foundation of the quantitative method. Several critiques are listed below:

- "*Quantitative researchers fail to distinguish people and social institutions from 'the world of nature"* (Bryman, 2008, p. 168). This critique refers to employing a naturalistic view on a social setting as if the setting complies with the natural order. This idea is a positivist one where the principle is that the scientific method is to be applied in all phenomenon in all cases and in all fields of investigation. Thus, the critics of the quantitative research methods claim the method "turns a blind eye" to any differences between the natural and the social world. Furthermore, any interpretations of the social world from its participants is disregarded.
- "*The measurement process possesses an artificial and spurious sense of precision and accuracy*" (Bryman, 2008, p. 168). Here, critics claim an assumed connection between measurements and concepts rather than a real one. The methods, described above, used to test measurements' validity and reliability also do not hold since they use assumptions too.
- The usage of instruments and procedures actually does not reflect the true connections between research and the social setting. This criticism relates to the emphasis of the quantitative methods on the control over the instruments administered. However, in reality, critics claim that instruments are administered with a false sense of certainty since it can never be ensured that the subjects have the capacity to answer the

questions provided or the behavior of subjects is in reality with accordance to their everyday life.

- The fourth criticism is related to the static view of the social world generated by the quantitative research methods. Many argue that the way of analysis of relationships between variables leaves the respondent's life and experiences disregarded. Additionally, the interpretations of the people involved with the study about the variables and concepts in question are disregarded creating not a dynamic but a static view of the social world. (Bryman, 2008)

2.3.2 Qualitative Research Methods

Definition

The Qualitative research method is definitely the more controversial of the research techniques used by scholars and researchers. Its main emphasis falls on "*words, rather than quantification in the collection and analysis of data*" (Bryman, 2008, p. 386). The more this type of research strategy is being used in approaching social and business problems, the more growing the need is for a concrete definition of the characteristics and features of the technique. The simplest of explanations for what distinguishes the qualitative from the quantitative research method is its concern with words and not numbers. However, two essential points are to be raised here. Firstly, qualitative research method should never be defined solely on the features by which it differs from the quantitative research method. And secondly, the prominence of word-interpretation within the qualitative method does not imply a lack of numbers in the method (Flick, 2007).

When qualitative research method is being defined, three key features need to be noted:

1) Theory in the qualitative research method is derived from research, meaning the relationship between theory and research has an inductive nature;
2) This type of research method falls into the interpretivist epistemological view, which infers that understanding of the studied world is achieved by an analysis of the participants' interpretation of the world;
3) From an ontological point of view the qualitative method is a constructionist one. There is a focus on the interactions between participants in the social world and the main underlying assumption is that the characteristics and properties of the world are derived from those interactions. (Bryman, 2008)

The usage of qualitative research has only increased in the last 40 years, however, academics have not been able to reach an agreement on a distinct and unified definition and description. One reason may be mistakenly defining the qualitative research strategy as a strategy where quantitative data is not collected or analyzed. Another reason identified by scholars is that qualitative research includes techniques which are very different from each other.

Within the history of qualitative research, scholars identify a number of different stages, each with prominent characteristics about the method. The traditional period was within the years leading to World War II. It was characterized by exhaustive studies of "slices of life" and related greatly to the views of positivism. The modernist phase followed until the early 1970s. In this period, qualitative research was still positivist, however, a more in-depth reflection of the nature of the qualitative method have been observed in the works of qualitative researchers. The next phase, the blurred genres, is described as a stage where a number of different epistemological and ontological approaches and theoretical frameworks were used as foundations of qualitative research. In this period, for the first time, characteristics of interpretivist views and approaches are observed. The next stage in the history of qualitative methods of research starts in the mid-1980s. This period is called crisis of representations. It can be characterized as a period of self-awareness, when qualitative researchers became more aware of the different ways of representing reality and works of research were very much marked by the social location in which they were conducted. Following are the postmodern period of experimental ethnographic writing (in the mid-1990s), the post-experimental enquiry (until the 2000s) and the methodologically contested present (until 2005). These were periods of heavy influence by the postmodernist views and researchers experimenting within the field. In the early 2000s more and more journals for qualitative research emerged to give a platform for debate on the topics of how the research should be carried out; in which directions and by what means. (Bryman, 2008)

This brief presentation of the history of qualitative research should serve as an evidence of the difficulty of defining qualitative research.

Process of Research

The qualitative research method is developed by following six general steps. These are illustrated on the figure below:

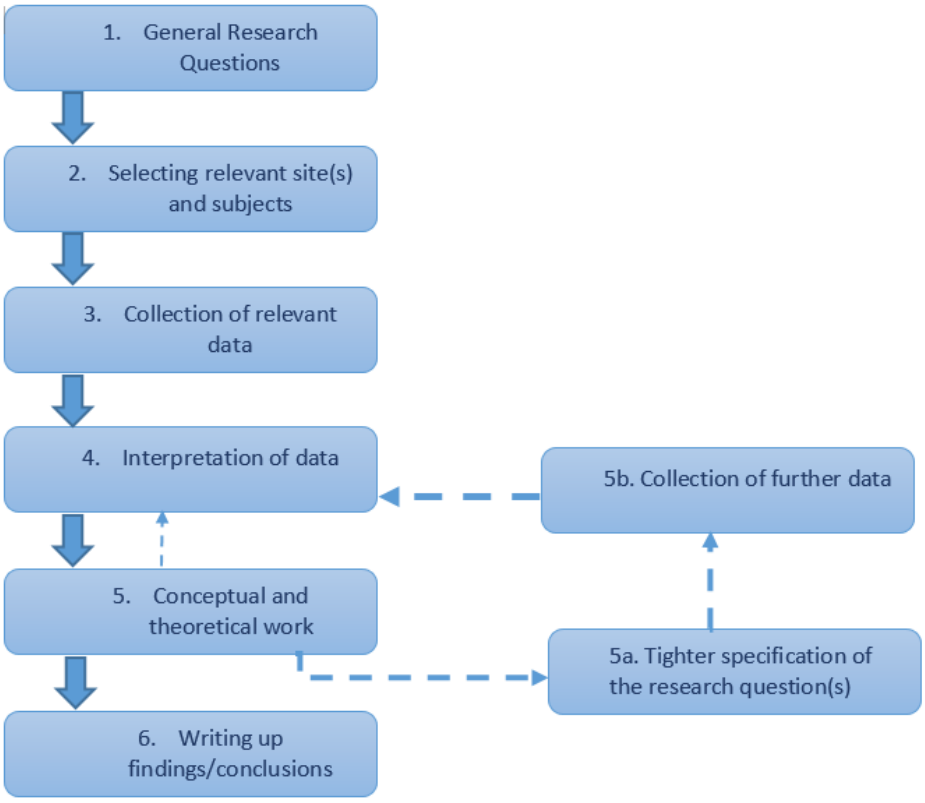

Figure 11 Steps in Qualitative Research

Source: adopted by Bryman, 2008, p. 389-390

The qualitative research method is mostly related to treating theory as a derivative of research results. Bryman (2008) describes several researchers who present the relationship between theory and research in this method as inductive, meaning that the researcher should not try to impose any preconceived assumptions and ideas about the data, but should more look for the intrinsic patterns and models which stem from the collected data. Allowing the research to be carried out with no predisposed assumptions and ideas about the result is difficult and scholars like Marshall (1981) have characterized this process of the qualitative research methods as "*a fear that nothing is going to come out of the research*" (1981:396). Nonetheless, an increasing number researchers in the academic world has adopted what is called grounded theory – as a fundamental tool of achieving a theoretical framework from a research. Glaser and Strauss (1967) define grounded theory as "*the discovery of theory from data systematically obtained from social research*" (Glaser and Strauss, 1967, p.2). In addition to exploring new theoretical ideas from data, qualitative research method has been used as a tool to test the consistency of theories which have been conceptualized prior to data collection. Additionally, within the qualitative research methods the testing of theories can be carried out alongside or within the process of research (Bryman, 2008). Although testing the

consistency of theories is a common goal of a qualitative research, the preferred is still the generation or resulting of theories from qualitative research.

Reliability and Validity

Debating over the concepts of reliability and validity, applied to the qualitative research methods is common in the academic world. This stems from the natural discussion on what is relevant as a research and how the meaning of the terms may be altered. As Bryman (2008) points out, there is a certain degree of consensus on the approach of "*adapting reliability and validity for qualitative research*" (Bryman, 2008, p.395) He supports the view of other scholars such as Mason (1996) about viewing reliability, validity and generalizability as terms referring to the quality of a research and the potential of the research to be applied to a wider field of thought. Manson (1996) is determined that the terms should not be understood very differently from their meaning within the quantitative methods. In Mason's view "*validity refers to whether you are observing, identifying, or measuring what you say you are*" (Mason, 1996, p.24)

Other researchers change the meaning of those terms in order to apply them in the qualitative research methods. Bryman (2008) examines the way LeCompte and Goetz (1986) approach the concepts of reliability and validity in qualitative research. Unlike Mason (1996) they recognize two specific types of reliability and validity:

- External reliability – which refers to the "degree to which a study can be replicated". Largely, this is rather challenging to achieve in general terms since the social interactions and circumstances within the social setting cannot be "frozen" in time nor cloned in another setting. However, a step in the right direction would be for the researcher to "*adopt a similar social role to that adopted by the original researcher*". Thus, the qualitative researcher would "*see*" and "*hear*" what the original researcher did. (Bryman, 2008, p.395)
- Internal reliability – this refers to the notion of "*inter-observer consistency*" and mostly mean that the higher the agreement among the researchers involved in the qualitative study is, the higher the reliability of the results from that study. (Bryman, 2008, p.395)
- Internal validity – this relates to the positive connection between observations and theoretical ideas which stem from them. According to scholars qualitative researches are strong in this aspect because of the extended period of the researcher's participation in the social setting he/she studies. (Bryman, 2008)

- External validity – LeCompte and Goetz (1986) recognize this as problematic for qualitative research since it asks the question to what extent the conducted research can be applied or generalized across social settings. The scholars suggest that the affinity towards case studies and small sampling which qualitative research has poses problems to achieving high external validity. (Bryman, 2008)

Naturally, there are academics who argue that the nature of qualitative research calls for a different set of criteria. Scholars such as Guba and Lincoln (1994) propose two sets of criteria, specifically designed to measure the quality of a qualitative research – trustworthiness and authenticity. Trustworthiness, according to them, consists of credibility (which reflects internal validity in the opposing scholars' views), transferability (referring to external validity), dependability (or reliability) and confirmability (which reflects objectivity in quantitative research) (Bryman, 2008, p.395). This application of new terms for assessing quality of the research comes from the argument that the realistic view of terms like reliability, validity and generalizability is not applicable in a paradigm in which there are more than one absolute truths about the social setting. (Bryman, 2008)

The concept of credibility takes central stage in the accounts on how trustworthy a qualitative research is. Credibility is related to how well the research reflects the 'cannons of good practice" and the reception of feedback from the studied members of the world that the findings reflect the correct understanding of that social setting. Respondent validation (member validation) and triangulation are both techniques used to achieve that feedback. (Bryman, 2008, p. 396)

Respondent validation or member validation is used commonly in qualitative researches and with good reason. It reflects the desire of the researcher to receive confirmation that the findings of the research correspond properly to the experience and perspective of the studied members. Another aspect of the respondent validation is the aspect of returned authority, when members who have been researched receive a chance to give feedback on the outcome of the research. This, of course, may lead to problems and has been widely debated as a successful strategy to achieve validity of the qualitative research. (Bryman, 2008)

Triangulation means involving a number of different methods, sources of data and observers in order to study a phenomenon. This strategy is believed to deliver greater confidence in the results, since a multiple of points of reference has been used. (Bryman, 2008)

Transferability in qualitative research, as described by Guba and Lincoln (1986) does not involve itself with the ability of the research to be applied in another set of social conditions or in another time. They focus more on the importance of producing rich accounts of details

about the culture of the researched area and going in depth rather than breadth as the quantitative research would. (Bryman, 2008)

Dependability is related to adopting an "auditing approach" to research, that is, including impeccable documentation of each step of the process of research. Additionally, others close to the researcher should be given the task to be auditors throughout the process. However, the time-consuming nature of this approach and the large datasets generated by qualitative research are often reasons for dependability to not be pursued.

Another criteria of trustworthiness connected to auditing is confirmability. It is related to ensuring that the researcher "*acts in good faith; in other words it should be apparent that he or she has not overly allowed personal values or theoretical inclinations manifestly to sway the conduct of the research and findings deriving from it*" (Bryman, 2008, p. 396)

The second set of criteria proposed by Guba and Lincoln (1986) is authenticity. This set consists of fairness, ontological authenticity, educative authenticity, catalytic authenticity and tactical authenticity. Despite being thought-provoking these criteria are widely disputed and have not influenced the qualitative research theory significantly.

The fundamental focus of social science on people and their social surrounding differs from the focus of the natural sciences in one crucial aspect – the objects of study in the natural science cannot give meaning to events and phenomena in their setting. However objects in social science – people – can. Thus, the methodology of conducting a qualitative research should include a commitment to understanding the views, perceptions and experiences of people in social world. Researchers should occupy themselves to interpret the social world, they are studying, from the perspective of the people, who are being studied. (Bryman, 2008) Social knowledge in this case is obtained by face-to-face interaction and adopting the "role of the other" in order to understand their experience with the environment under study. (Bryman, 2008)

The emphasis on context in qualitative research is evident. Detailed descriptions are provided in qualitative research to explain conditions in the setting, subjects' behavior, organizational behavior and political as well as economic interest in order for the user to a detailed context of the social world examined. Certainly, a phenomenon called "*descriptive excess*" may happen where the understanding and analysis of the data is hindered by the overwhelming amount of detail about the conditions or environment. (Bryman, 2008, p.404)

Qualitative research methods are very much involved with processes. The nature of this type of research is to incorporate change and flux. Techniques such as semi-structured or structures interviews are a way of obtaining information by making the participants reflect on

the process, "walk you through" the processes which lead up to the event/phenomenon under study. (Bryman, 2008)

All these characteristics of the qualitative research methods entail flexibility of the method. Among most qualitative researcher are those who seek as little contamination of the social setting as possible. Imposition of predisposed assumptions or views about the world will hinder the ability to adopt the view of the studied members and render the study less sufficient in its goals.

Critique of the Qualitative Research Method

Qualitative research has widely been criticized for being "*too subjective*". (Bryman, 2008, p. 406) This obviously originated from the impressionistic and inductive nature of the research. However, specifically the fact that qualitative research allows for a more wide area of initial interest and gradual process of narrowing down the research and specifying the research questions, provides the reader of the findings with arguments on why a specific area is being chosen over another.

Another critique has already been identified earlier in this chapter – the difficulty of truly replicating a qualitative research. Arguments such as the lack of structured procedures to follow, which impede the replication of a qualitative research are common among scholars, favoring quantitative methods. Another argument for this criticism is the over-reliance on the researcher's interest and values on what subject area is relevant and important to the study as well as the profound influence of the researcher's subjective tendencies and characteristics. (Bryman, 2008)

A mainstream criticism towards the qualitative research methods is the claim that the findings and results of the study are restricted. Methods of data collection such as unstructured interviews and basing the analysis on a small group of participants within a social setting may lead to conclusions not being able to be generalized to other social settings. And this is true when generalizing about population from a small group of case studies. On the other hand, qualitative research methods are to generalize about theory rather than about populations. The vigor and consistency of the theoretical reasoning is the focus not the statistical criteria, points out Bryman (2008).

2.3.3 Mixed Research Methods

Increasingly from the 1980s, a combination of the quantitative and qualitative research strategy has been developed. Naturally, combining two seemingly opposite methods is not

without controversy (Bryman, 2008). The following is a presentation of the arguments for and against integrating the two previously described techniques. Additionally, the various ways of combining are outlined.

Definition

The term is used to describe a research method which incorporates quantitative methods of research and qualitative methods within the same study project. Initially, mixed method projects were described as multi-strategy research. The term "mixed methods" is preferred for it represents clearly the process of mixing the quantitative with the qualitative methods, not just using both together. (Bryman, 2008) Two indispensable arguments against the usage of mixed research methods should be mentioned which relate to the definition of a mixed research method. Firstly, as it was outlined in the previous sections of this chapter, each of the opposite strategies of research carry embedded epistemological and ontological commitments. That is if one chooses to conduct a semi-structured interview, this will bring about not only a way/method of data collection but also an epistemological position towards constructivism. Thus, a mixture of research methods is not feasible because methods which carry a diametrical epistemological characteristics (Bryman, 2008). The second argument involves the claim that both quantitative research and qualitative research are two separate paradigms and mixture of both simultaneously is not possible. Supporters of this view argue that "*when researchers combine participant observation with a questionnaire, they are not really combining quantitative and qualitative research, since paradigms are incommensurable – that is, they are incompatible: the integration is only at a superficial level and within a single paradigm*" (Bryman, 2008, p.629). However, this argument also rests on the premise that research methods encompass paradigms, which is by no means clear. The arguments against combining techniques related to quantitative and qualitative research seem to stem from only an epistemological view. In contrast, the arguments for the mixed methods approach are from a technical view. The supporters of mixed research methods do not argue against the epistemological and ontological commitments of the different methods, but they claim that these commitments are not fixed and unavoidable. They perceive each research technique as independent and available to serve the opposite research design. Thus, mixture of techniques from the quantitative and qualitative research becomes feasible.

Approaches to Mixed Research Methods

1) *Triangulation* – this concept has already been mentioned in the previous section of this chapter. Application of triangulation for a mixed methods research relates to cross-checking the results from a study, conducted with one method from one strategy of research with another research method from a different strategy. Triangulation is one of the three classifications to mixing research methods, developed by Hammersley (1996).
2) *Facilitation* – Hammersley (1996) identifies this application of mixed research method as a way of aiding the research by employing a research method from another strategy of research in order to facilitate the initial method.
3) *Complementarity* – In this approach, two different research methods with different epistemological views are employed with the aim of enriching the research by providing information on different aspects of the studied element. (Hammersley, 1996)

Another classification of the approaches to mixed methods research is the one offered by Morgan (1998b). This involved two major types of mixed methods research – the priority decision and sequence decision. The priority decision relates to the answer of the question "*How far a qualitative or a quantitative method is the principal data-gathering tool or they have equal weight?*" (Bryman, 2008, p. 632). Whereas the sequence decision provides information on which method proceeds which method in the research. Thus, the researcher is offered a range of nine types of combinations with priority and sequence decisions.

A mixed methods research may be approached differently to serve a specific purpose. Qualitative research may be added to quantitative research with a goal to provide hypotheses. The opened nature of the qualitative research methods may facilitate the development of hypotheses which subsequently to be tested using quantitative methods. Another way of facilitating quantitative research is by using qualitative research to aid the measurements. Qualitative research providing extensive knowledge of the social context and interpretations of the social setting is a good way of ensuring the design of a quantitative research method encompasses that context and ensures the highest quality of relevant data collected. (Bryman, 2008)

In other cases, quantitative research methods may be added to qualitative research to facilitate it. Quantitative method may be employed in order to select interviewees for a qualitative in-depth interviews, thus ensuring objective selection.

Additionally, mixed methods research is appropriate when the researcher needs to "fill in the gaps" in their investigation. That is when the researcher cannot rely on one strategy to complete his/her findings. Such are cases when information cannot be accessed through one technique of research but requires the deployment of additional one. (Bryman, 2008)

Supporters of the mixed research methods argue that this strategy of research solves the problem of generalizability of qualitative research. Here, this school of thought claims that the combined usage of quantitative and qualitative methods can help uncover generality of the phenomena under investigation.

Concluding Remarks

The controversial mixed methods approach is gaining more and more acceptance for two specific reasons. Firstly, the shift in views on the epistemological and ontological "*baggage*" of research techniques, mentioned previously (Bryman, 2008, p. 643). Secondly, a more acceptant attitude towards quantitative techniques from feminist researchers have aided the development of a mixed methods research.

Whichever technique or mixture of techniques is chosen it should undoubtedly be conducted competently and with relevance to the researched field and its characteristics. Additionally, providing rationale for the employment of any of the research methods will yield a better understanding of the researcher's objectives and results. Combination of approaches may be appropriate and desirable but also should be in accordance with the abilities and resources available to the researcher in order to ensure results matching the initial goals of the research.

3 Theoretical Review

The theoretical review chapter represents the foundation of the theories employed in the thesis. The authors give a thorough analysis of transaction cost theory and resource based view. These theories are the main theories the authors apply in exploring horizontal mergers and synergy creation. Following the presentation and the foundation of the main theories, the authors introduce the merger and acquisition process with a general overview of the theoretical and empirical research on mergers and acquisitions and a more detailed outline of the horizontal mergers. The last section represents the discounted cash flow model, which is used as a tool in evaluating companies and calculating the synergy effects.

3.1 Transaction Cost Theory

Transaction cost theory has its place to the "New Institutional Paradigm" which has been succeeded by traditional neoclassical economics. Neoclassical economics has paid a great amount of attention towards the concept of the firm as a production function, whereas, TCT explicitly views the firm as a governance structure (Rindfleisch and Heide, 1997). TCT has come to be the main theoretical framework that addresses the organizational boundary decisions (Geyskens, Steenkamp, and Kumar, 2006).

3.1.1 Definition and Theoretical Essence

Ronald Coase (1937) was the first to introduce the concept of transaction costs in the paper "The nature of the Firm". He perceived firm and market as *"alternative methods of coordinating production"* (Coase, 1937, p 388), where he detected that when a firm is determining which model to use to enter a market, this decision should be derived and not taken as given (Williamson, 2010). Coase addressed the question "why do firms organize internally those exchanges that might otherwise be conducted in markets?" TCT presents how combining rationality with the opportunistic behaviour can create costly negotiations and monitoring expanses that will incline in engaging in exchanges within the market (Roberts and Greenwood, 1997).

Coase (1937) argued *that 'a firm will tend to expand until the cost of organizing an extra transaction within the firm will become equal to the cost of carrying out the same transaction by means of an exchange on the open market'* (Coase, 1937, p. 395). His theory predicts that a firm will prefer to internally execute the activities that can be accomplished at a lower cost. This means that the firm will create an internal (hierarchical) management control as well as

systems that support this activity. On the other hand, a firm will rely on the market where independent players such as distributors, agent and intermediaries provide a better cost advantage for the firm's activities (Hollensen, 2011). Coase's (1937) transaction theory however encountered difficulty in directly assessing the costs resulting from transactions, making his theory "*much cited and little used*" (Coase, 1972, p 67).

Williams (1975) in his seminal book *Markets and Hierarchies* succeeded to resolve the operationalization gap of transaction cost theory by combining the relative effectiveness of governance modes with noticeable dimensions of transactions, which are asset specificity, uncertainty and transaction frequency (Geyskens, Steenkamp, and Kumar, 2006). Williamson's book *Markets and Hierarchies* (Williamson, 1975) where the author is addressing the transaction cost economics (TCT) has become one of the primary viewpoints when addressing the study of management and organizations. Williamson's work and the success of these books published in 1975 and 1985 become a milestone of the TCT, his work being cited between 250 and 500 times yearly ever since 1990. Williamson (1991b) "*has argued that TCT should form the basis of a "core theory" of strategy* (David and Han, 2004, p 39).

Transaction costs emerge when operating in a market under perfect competition it is assumed that the operations are friction-free, making the transaction costs zero, and therefore, there would be no need to impose impediments to perform free market exchange. Nevertheless, this ideal scenario does not apply to the real world, where friction between buyers and sellers create transaction costs (Hollensen, 2011). Williamson (1985) defined this friction as a '*self-interest seeking with guile*' which can be described by opportunistic behavior. The main methods of the opportunistic behaviour comprise of distortion, misleading actions, disguise and misunderstandings. It is the responsibility of the engaged parties to adopt safeguards or governance structures to protect themselves from the opportunistic behaviour. Safeguards are perceived as control mechanisms whose main aim is to deliver the control and trust of transactors within the minimum cost. The legal contract is the most employed safeguard, where the obligations and sanctions for opportunistic behaviour are specified, thus, creating perception of **fairness** or equity between transactors (Hollensen, 2011).

According to Williamson (1975), TCT focuses at its main principal on "*transactions and the costs that attend completing transactions by one institutional mode rather than another"* (Williamson, 1975, p 2). Thus, when a good or service is being transferred, the means of carrying out the transaction is the main outcome of interest (Williamson, 1985, p 1). TCT

fundamental statement relies on costs and the manner transactions are being performed according to the involved costs.

Forms of governance

Transaction cost analysis argues that firms will tend to internalize[1] through vertical integration if the costs produced by the friction between buyer and seller create higher costs than through an internal hierarchical system (Hollensen, 2011). The below equation presents the cost elements that are associated with the transactional relationship among buyer and seller:

Transaction cost = ex ante costs + ex post costs = (search costs + contracting costs) + (monitoring costs + enforcement costs)

Figure 12 Cost Elements of a Transactional Relationship
Source: adopted from Hollensen, 2011, p 78

Ex ante costs include: search costs and contracting costs. The search consist of information gathering about the market, and contracting costs are the costs related of negotiating and writing a contract between the parties involved (Hollensen, 2011).

Ex post costs consist of: monitoring costs and enforcement costs. Monitoring costs are related with monitoring weather both parties respect the set of obligations of the agreement, while enforcement costs include the sanctions and the costs associated with them when one of the trading partners does not follow the agreement (Hollensen, 2011).

The transaction cost theory relies on the assumption that firms will choose to minimize the ex-ante and the ex post costs as much as possible when engaging in transactions. Williamson (1975) grounded his analysis by associating transaction costs with various forms of governance.

Coase (1937) initially used markets and hierarchies models to explain the manner firms prefer to engage in transactions. Williamson (1991) introduces a third mode in the transaction cost economics, which is the hybrid mode (Williamson, 2010). As a result, Williamson (1991 b) distinguishes between three forms of governance that are associated with transaction cost, these are: market, hybrid and hierarchy. These forms have their own form of contract law, having their own and specific coordination and control systems.

Market governance is associated to the classical contract law, where the parties' identities that are engaged in the transaction are trivial and there is no subordination relationship among the involved parties. The main characteristic of market governance is the "hard bargaining" concerning the parties (David and Han, 2004).

[1] Integrate an external partner into one's own organization (Hollensen, p 78)

The *hybrid governance* considers of valuable importance the identity of the involved parties, where costs are attributed when replacing one party. The parties involved in the transaction retain their autonomy, however, they are jointly dependent in a nontrivial way (David and Han, 2004).

Hierarchy governance or internal organization has a more elastic form then the classical contract law. Disputes between the involved parties are decided internally. Williamson names this form of governance as the "contract law of forberance" (David and Han, 2004, p 41).

The employed governance mode, such as market, hierarchy or hybrid, is related with the involved transaction costs, therefore, the preferred mode will be the one that has the lowest transaction costs (David and Han, 2004). The main attributes that are associated with transaction costs are: asset specificity, uncertainty and frequency.

Asset specificity, Uncertainty and Frequency

TCT is seeking to find the most efficient way transaction are implemented, this can be done within a firm through vertical integration, or through autonomous contractors outside the firm through market governance. The initial assumption of TCT believed that market governance provides more efficiency than vertical integration. However, the dimensions of asset specificity, uncertainty and frequency give a broader and clearer explanation to then each of the governance modes should be employed (Geyskens, Steenkamp, and Kumar, 2006).

Asset specificity refers to the redeployment of assets within a transaction to "*alternative uses and by alternative users without sacrifice of productive value*" (Williamson, 1991b, p 282). Transaction-specific assets are considered assets that are uniquely created to a particular transaction and are difficult to be redeployed in an external relationship of the involved parties of the transaction (Geyskens, Steenkamp, and Kumar, 2006). Williamson (1983) recognizes four types of asset specificity:

- Site specificity (or location specificity) – where investments are crated on the basis of the partner's location so that inventory and transportation expenses are economized
- Physical assets specificity – which are the specialized equipment systems acquired or developed for the specific transaction to produce a component
- Human asset specificity – are the engaged skills and knowledge that arise in a learning-doing manner throughout the transaction
- Dedicated assets – represent the distinct investment in a plant that adds to the firm's overall production capability.

Because of their nature, safeguarding creates an importance factor from opportunistic behaviour of market competitors. The asset specificity and redeployment relation is directly proportional, thus, when asset specificity increases, redeployment will decrease, making joint dependency an important aspect in the transaction in avoiding risks between the involved parties. Therefore, according to Williamson (1991b) low asset specificity will lead to choice of market governance, intermediate asset specificity towards hybrid governance, and high asset specificity to hierarchical form of governance (David and Han, 2004). This way the governance relationships and hierarchical control processes of vertical integration create a more efficient safeguarding competence for the firm (Geyskens, Steenkamp, and Kumar, 2006).

Uncertainty arises when significant unforeseen events within a transaction are considered too volatile to be defined as ex ante in a contract (this relates to environmental uncertainty) or performance can be difficult to confirm in the ex post activity (this relates to behavioral uncertainty) (Geyskens, Steenkamp, and Kumar, 2006). Uncertainty and its effect of the employed mode of governance is conditional on asset specificity.

Environmental uncertainty urges firms to engage in hierarchical governance to ensure that agreements are being followed, without any major difficulties to adjust them. Nonetheless, high environmental uncertainty can also encourage firms to be flexible, and this way could employ in market governance (Geyskens, Steenkamp, and Kumar, 2006). Klein argued that "*it appears that uncertainty is too broad a concept and that different facets of it lead to both a desire for flexibility and a motivation to reduce transaction costs*" (Klein, 1989, p 256). These lead authors to divide uncertainty, Walker and Weber (1984) extended Williamson's (1975) TCT framework and classified environmental uncertainty in: volume uncertainty and technological uncertainty. *Volume uncertainty* arises when a relationship cannot precisely predict the volume requirements. In the case of high volume uncertainty, suppliers experience unpredicted production costs or a surplus in their capacity. Buyers experience "stock-outs" or surplus in their inventory. The variations arising from this affect are better managed in hierarchical governance, than market governance (Geyskens, Steenkamp, and Kumar, 2006). *Technological uncertainty* streams for the inability to correctly predict technical requirements in a transaction. This type of uncertainty arises when unforeseeable changes occur in the case of components or product standards or specifications, or in cases of overall technological development. Technological uncertainty urges firms to develop market governance relationships, which allow them to change partners that have up to date

technological capabilities. This way the lock-in effect of an out-dated technological relationship can be avoided (Heide and John, 1990).

Behavioural uncertainty encourages firms to engage in vertical integration to assure a higher degree of control, making evaluation capabilities and performance easier to express (Geyskens, Steenkamp, and Kumar, 2006).

Thus, in the case of low asset specificity, uncertainty makes the transaction costs to prefer the market governance (Williamson, 1985). When asset specificity has a nontrivial degree, and the level of uncertainty rises, Williamson (1991b), encourages firms to undertake hybrid governance, as the uncertainty level increases, hierarchies provide a safeguard over hybrid or market governance modes. In the case of high uncertainty and asset specificity, Williamson (1985) argues that hierarchy governance is more cost-effective than the other two modes of governance (David and Han, 2004).

Frequency is also conditioned by asset specific transactions. Thus, frequent asset specific transactions which demand continuous monitoring are associated with hierarchy mode, while occasional transactions are encouraged to employ the other two governance modes (Williamson 1985).

3.1.2 Transaction Cost Theory Application and Theoretical Consistency

TCT has been given a great amount of attention ever since its emergence, many authors investigating the theory and verifying its appliance. Researches have been reviewing numerous articles and cases on the effect of TCT over the governance mode and how the theory applies to the real world. Most of the literature reviews the governance modes and the elements of asset specificity and uncertainty. TCT has been tested numerous times and was summarized in numerous meta-studies. Many of the studies have been testing the links between the elements of the theory (especially asset specificity and uncertainty) and the governance modes employed.

Governance Modes

The majority of studies analysed the classical relationship of hierarchy vs. market governance (make or buy). Most of the studies supported Williamson's initial argument. Walker and Weber (1987) demonstrated that a high level on uncertainty lead automobile firms to produce than purchase a component. Rindfleisch and Heide (1997) identified that the type of governance mode employed depends on the matter of safeguarding. Valuable circumstances of safeguarding are opportunism and asset specificity. The authors findings support Williamson's (1985) statement where a small number of negotiating lead to opportunistic

abuse. Anderson (1988) suggests the opportunistic statement by augmenting that "*direct sales force displays less opportunistic behaviour than do manufacturers' representatives*" (Rindfleisch and Heide, 1997, p 43).

In the case of market vs. hierarchy studies on TCT, concerning hierarchical governance, vertical integration is not the only mean exercising ownership, hierarchical governance can be achieved through contractual provisions that "*produce the effects of hierarchies*" (Stinchcombe, 1985, p 165). Thus, hierarchical governance as clearly founded by legitimate authority, can be achieved through employment relationship or contractual agreement, both of which creating the decision-making authority to the firm in a specific area (Geyskens, Steenkamp, and Kumar, 2006, p 521).

In the case of hybrid governance over market governance opinions are divided. David and Han (2004) argue the little support was found in regards to this relation. The authors support Klein, Frazer and Roth (1990) arguments that asset specificity does not necessarily leads to creating alliances rather than market distribution (David and Han, 2004).

However, other studies contradict this statement by providing arguments that sustain the opposite. Hybrid (relational governance, alliance partnerships) can be a possible alternative to hierarchical governance when the market mode fails to function. Hybrid governance is perceived as more informal because of its component, making it not easily legally enforceable. Mutual dependence, trust, joint actions, and procedural fairness are at the basis of this governance (Bradach and Eccles, 1989). These relationships are open-ended ones, with no finite or predictable ending points (Heide, 1994). Economic and sociological mechanisms stand as bridges in the exchange hazards in relational governance. Trust as an economic mechanism is carefully calculated within a relationship; while values and affective feelings that stream from a long going trustworthy interaction stand as sociological mechanism (Geyskens, Steenkamp, and Kumar, 2006). Therefore, the more firms interact with each other and engage in exchange relationships, more information about the cooperative behavior arises, allowing parties to asses which firm to trust or not (Poppo and Zenger, 2002).

In regards to the hybrid governance, the extent of the opportunistic behaviour decreases when partners have a history of cooperation. The opportunistic behaviour diminishes the level of performance within relationships especially among buyers and suppliers. Asset specificity plays an important role in safeguarding problem. Firms seek to apt for vertical integration to reduce the transaction costs. These findings support Williamson's statement (Rindfleisch and Heide, 1997). In additional to vertical integration, Williamson (1991b) suggests that firms

can safeguard their specific assets through hybrid governance modes, such as unilateral and bilateral hybrid governance mechanisms. Unilateral mechanisms are responsible for safeguarding ex ante agreements through the use of long term agreements, exit barriers, exclusivity and the use of financial incentives in a relationship. Bilateral hybrid governance mechanisms provide safeguarding specific assets through developing closer relations between partners such as relational norms and joint actions in developing products or services. These mechanisms create decision controls decreasing the risks of opportunism (Rindfleisch and Heide, 1997, p 43).

Analyzing the three dimensions of uncertainty Geyskens, Steenkamp, and Kumar (2006) found that hybrid governance is a less preferred option in the governance mode of choice due to the conditional belongingness to a specific network and its dynamic exchanges. The negative effects of uncertainty in associated with hybrid governance for firms that may engage themselves in unproductive relationships or risk not creating partnerships with other viable firms. Therefore, market governance is perceived as a better option, allowing firms to avoid the lock-in effects of unproductive partnerships and thus forming multiple alliances that can provide a multiple options for different requirements.

In the case of hierarchies vs. hybrids, opinions are mutually shared among researchers, supporting that increasing asset specificity leads to hybrid modes such as joint actions between buyers and suppliers (Heide and John, 1990). Asset specificity lead firms to choose hierarchy mode to hybrid one, however, technological uncertainty lead to creating alliances between firms than engage in hierarchies. "*These results suggest that TCT explanations are better at predicting integration within hybrid forms rather than the replacement of hybrid forms with hierarchies*" (David and Han, 2004, p 46).

Williamson (1991b) stated that uncertainty doesn't addresses hybrid governance as effective as market governance, because relational adaptations cannot be made separately since they require mutual consent, unlike market adaptations, which can be made unilaterally. Therefore, as asset specificity will increase, hybrid governance becomes favoured to market governance. In the case of uncertainty and hybrid governance, this characteristic with its elements: volume, technological and behavioural uncertainty will favour market governance over hybrid governance when the level of uncertainty increases (Geyskens, Steenkamp, and Kumar, 2006).

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The governance modes employed when associated with environmental uncertainty support the choice of hierarchical governance when the level of uncertainty exhibits a higher degree.

In terms of performance and the TCT implications the authors Geyskens, Steenkamp, and Kumar (2006) have found arguments supporting the choice of hierarchical and hybrid governance leading to performance in response to transaction hazards.

Asset specificity and uncertainty

Asset specificity is the most commonly tested variable, research confirming its value and application in transactions activity therefore supporting Williamson's theory. "*Williamson's (1975) book led to the proposition that asset specificity is the critical determinant of the choice between markets and hierarchies*" (Geyskens, Steenkamp, and Kumar, 2006, p 521). Williamson arguing that "*asset specificity is the big locomotive to which transaction cost economics owes much of its predictive content*" (Williamson, 1998, p 36). Anderson and Schmittelin (1984) research came to the outcome that asset specificity led firms to use in-house sales force as a measure of safeguarding that outside representatives (David and Han, 2004).

Analyzing the uncertainty characteristic, the authors Davind and Han (2004) have discovered the lack of association of uncertainty with asset specificity level among the researched papers, many of the authors overseeing this factor or assuming that the correlation between the two of them was present. This making the result to vary in supporting the theory, resulting in either no evidence of uncertainty bringing higher integration among sellers and buyers in domestic transactions (Andersen and Buvik, 2001), or an small number of articles actually giving a great importance to this relation, even though this is highly significant in Williamson's framework (David and Han, 2004).

When it comes to uncertainty levels, measurements of uncertainty under market conditions, technology and behaviour are being mostly employed (p 47). Robertson and Gatignon's research (1998) showed that firms are commonly employing in hybrid governance (alliances) when the rate of technological is exposed to constant change (Davin and Han, 2004).

TCT critique

The number of studies performed to the meta-theoretical application of the theory are vast, the theory having numerous classifications of the elements of asset specificity and uncertainty with the governance mode adopted. Authors have reviewed hundreds of articles, created as many correlations and identified links and outlines that explain the application of the theory. "*A theory of such prominence and disciplinary-spanning power would have clear-cut support"* (David and Han, 2004, p 51). *However, our results keep us from unreservedly agreeing that the theory is an 'empirical success story' (Williamson, 1996: 55)*" (David and Han, 2004, p 52). Nonetheless, scarce studies have been able to provide a proper correlation between the generic strategies and their performance. Thus, while the theory has become increasingly influential over time, there has been no convergence of empirical findings that would indicate increasing agreement on baseline relationships.

Apart from the performance assessment, the theory lacks strong support for its predictions. The independent variables of asset specificity and uncertainty vary, with asset specificity being the most successful in predicting the type of governance employed and the degree of integration between autonomous buyers and sellers. Uncertainty, the variable that should be treated in correlation with asset specificity as Williamson formulated it. Analyzing the uncertainty characteristic, the authors Davind and Han (2004) have discovered the lack of association of uncertainty with asset specificity level among the researched papers, many of the authors overseeing this factor or assuming that the correlation between the two of them was present. This making the result to vary in supporting the theory, resulting in either no evidence of uncertainty bringing higher integration among sellers and buyers in domestic transactions (Andersen and Buvik, 2001), or an small number of articles actually giving a great importance to this relation, even though this is highly significant in Williamson's framework (David and Han, 2004).

The variable with the least support of the TCT is transaction frequency and the relationships generated from it. Even though the majority of the research analyses TCT, transaction frequency is the element encountered in the limitations of the research and the conclusions, where authors demand for more research of this important element. Nonetheless, the academic and the business world keep on disregarding this element.

Little attention and support is also attributed to the relative performance of the types of governance modes chosen. Tests of hierarchical performance over market mode when asset specificity and uncertainty have a high level are not conducted, or the opposite relation, when market choice generates greater performance in the case of low level of the two attributes.

Even though research manages to prove that asset specificity leads firms to choose hierarchical modes over market one, there is little evidence of the efficiency of this choice. This limits the theoretical picture of TCT as a whole (David and Han, 2004).

As much research was conducted in identifying the relations between TCT's core constructs (asset specificity and uncertainty) and the interpretations of the key relationships, a great amount of discrepancy and disagreement arose regarding their operationalization. The theoretical characteristics allows a high degree of flexibility, thus these characteristics have been summoned to a wide amount of measurements. The accumulations of the measurements have created confusion of the theory's empirical standing, leading researchers to test the theory and invent their own measurements, which lead to the theory's misinterpretation. Therefore, the malleability of TCT has allowed the theory to grow and spread fast, but, it has also given rise to in various fairly loose applications. Because of these extensions, a better care when addressing the operationalization and the measurement of the theory should be taken (David and Han, 2004).

3.1.3 Transaction Cost Theory and Systems View

According to Arbnor and Bjerke (2009) the systems view is based on two fundamental ideas, the nature of relationships and their behaviour. The first fundamental idea perceives relationships with their components as a web which creates a system. The second idea believes that all systems possess common patterns, behaviours and properties that can be used in understanding and/or explaining the complex systems phenomena and its behaviour, and come nearer to the unity of science.

The universally known and applied TCT was created by Williamson based on Coase's ex ante and ex post costs. Williamson has understood the fundamental idea behind Coase's perception of why transaction costs occur, and has further developed the initial idea into a model whose main characteristics comprise of asset specificity, uncertainty and transaction frequency. Thus, Williamson has tried to understand the basic idea which determines transactions among firms, the manner transactions occur and which of the elements are essential when choosing a specific mode of governance.

Looking at TCT through the systems view perspective, the components of TCT can be seen as a web of relationships, where the theory's components: uncertainty, asset specificity and transaction freqency, and the relationships of these components are analyzed to provide a greater understanding of how the components can influence firms engaging into transactions in deciding the most suitable governance mode.

Taking into consideration the systems view guiding principles of totality, complexity and relativity, it is important to relate TCT with these principles in order to explain how the theory creates knowledge from the system's view perspective. Thus, according to totality principle, the real world consists of countless elements which create and unending amount of interdependencies between them. It is therefore important to limit ones horizon and focus only on the parameters that are central to TCT. Next, the structure of TCT is placed in regards only to the important parameters of the theory, this principle relating to complexity of system view. The last principle of relativity states that the truth behind the created theory relies on the focus created by the creator of knowledge, thus, limiting the application of the theory. The relativity principle implies that due to the limited focus of the creator, the theory cannot be applied to every business. The principle of relativity also explains the emergence of the vast theories and interpretations originated form TCT, and their interpretations and applications can also have different points of focus than the original theory.

Williamson's TCT has been studied as an open system, where the author's assumptions have emerged from the context of the business environment and its components. The open system of TCT tries to understand how the three components of the theory behave in a given environment.

TCT has the structural perspective of the systems view, where the three components of TCT and their relations are studied to observe the behavioural differences that emerge in time. Thus, the static structure of the systems view can be observed in the static structure of the TCT elements.

Taking in consideration the three elements of TCT and their applicability, one can observe that Williamson has developed only three elements of TCT so that they could be translated into real case application. The three elements urge firms to engage in either hierarchical, either market or hybrid mode of governance, depending on the importance of asset specificity, uncertainty and transaction friction. The relationships of the components and the governance mode chosen are therefore highly important. Based on the relationship of the components, and the studies performed into identifying the most suitable governance mode, Williamson has concluded that asset specificity is considered the most important component of the system. The degree of asset specificity urges firms to engage in hierarchical modes of governance due to a higher control over of the transaction. Hierarchical mode is also consisted the governance mode that manages to control the best opportunistic behaviour and uncertainty.

In regards to market governance, Williamson argues that market governance is preferred over hierarchical governance when uncertainty level is low or when transaction friction between the companies is not on a frequent level. Market governance is also the recommended governance mode under technological uncertainty, due to the constant changes in technological requirements and of scientific advancements. The last form of governance, the hierarchical governance is preferred in the case of riskiness and uncertainty of the market governance.

Throughout the time, the research on TCT has broaden, the theory being put into appliance in the purse of identifying which of the elements of the theory: uncertainty, asset specificity and transaction frequency influences the most transactions. However, even though research has increased during time, the model has not been changed, with the three characteristics remaining stable as the basis of the system. The changes that took place were in the subsystem layer, where authors added further elements in explaining the original three characteristics of the theory. This overall deepened the knowledge of the relationships between the components, providing more explanations and recommendations on the TCT characteristics and governance modes. The relationships have therefore broaden the knowledge of TCT and explained in how transactions evolve and why specific methods are preferred in certain situations.

The components of uncertainty, asset specificity and transaction frequency influence an organization's decision of how to invest in a certain situation. TCT and its component create a framework that can guide companies in choosing the type of governance mode so that the company can avoid risk before and after the transaction activity.

3.2 Resource-based Theories of the Firm

Deriving from the neo-classical assumptions of competitive advantage developed by Ricardo (1817) and the prevailing ideas of strategic management (Porter, 1985) the resource-based theory of the firm deals with another look at how internal and external aspects of the firm may cause or influence its performance. In the late 80s and all throughout the 90s, the concepts of competitive advantage, performance of the companies and the different strategies of diversification, market entry and integration dominated the economics as well as other fields of research.

3.2.1 Definition and Theoretical Essence

Looking at the internal aspect of analysis of the firm, two major traits have received attention – the strengths and weaknesses of the company. In parallel, the external opportunities and threats have been analyzed with focus on their influence on performance and creating and sustaining competitive advantage. Together, this internal-external framework exploits the idea that competitive advantage is achieved if a company takes advantage of its strengths, by responding to opportunities in the industry, while taking action against potential threats and minimizing its internal weaknesses. (Braney, 1991) Two flanks of research have been developed from this framework – the first one including Porter's (1985) Five Forces framework and industry analysis and the resource-based view of the firm, focused on the strengths and weaknesses of the firm. This framework can be seen in the graph below.

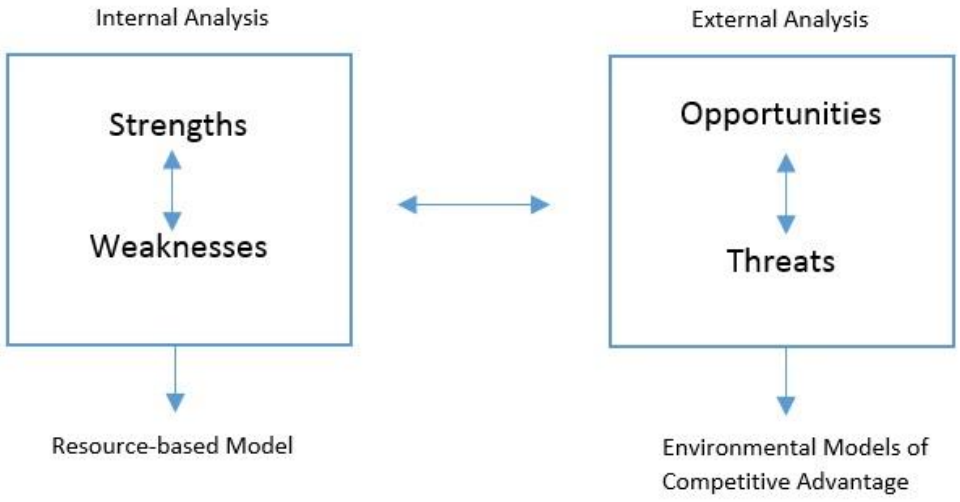

Figure 13 Collective Framework of SWOT Analysis;
Source: adopted from Barney, 1991, p. 100

In order to distinguish the differences between the two streams of economic thought, the underlying assumptions of both streams should be understood. The environmental models of competitive advantage assume that firms within one industry have in their disposal identical resources and strategies to deploy those resources. Secondly, they assume that the strategies used to deploy resources are mobile and thus, should heterogeneity of resources emerges, its duration will be short, as the competitors will adjust their strategy to employ the new structure of resources available to the industry (Barney, 1991, Porter, 1985).

The resource-based view of the firm, however, turns the attention towards the firm's internal characteristics, the bundle of resources it possesses and their influence on its performance and thus cannot employ the same fundamental assumptions. This is because the assumptions described above reject the resource heterogeneity and immobility as a basis of competitive

advantage (Penrose, 1959). In contrast, the resource-based view of the firm adopts two underlining assumptions when conceptualizing about competitive advantage. First, the theory assumes that different firms in the same industry (or groups of firms) may have access to or control different types (bundles) of strategic resources, this is also known as resource heterogeneity. Second, the resource heterogeneity may be lasting since the resources available for access and control are not perfectly mobile. Taking into account these two basic assumptions the resource-based view of the firm examines how competitive advantage and sustainable competitive advantage is created (Barney, 1991) Resource-based theory offers an understandable framework for investigating inter-firm performance variations. It is thought as a natural complement to the market-based theories of competitive advantage proposed by traditional industrial economics. (Lockett, Thompson and Morgenstern, 2009) Unlike the transaction cost theory, however, the resource-based view is not as concerned as to why firms exist but emphasizes on what is the nature of firms. (Barney 1991; Lockett, Thompson and Morgenstern, 2009)

As with any theory, defining key concepts is essential in order to create understanding about the ideas and links among them. For the purpose of presenting the theory of resource-based view the terms firm resources, competitive advantage and sustained competitive advantage are explained below.

Firm Resources

Wernerfelt (1984) claims that firms may be defined either in regards to their product/service or in regards to their resources. In traditional strategic language the firm's resources are "*the strengths that the firm can use to conceive of and implement their strategies"* (Barney, 1991, p.101). In the context of this thesis the firm resources include assets, knowledge, information, organizational processes, company attributes and capabilities, which allow the company to create and implement strategic behaviors to increase efficiency and improve effectiveness of its activities.

A variety of academics and researchers have identified types of resources, essential to companies and have generalized a categorization of resources, which is also adopted in this thesis. The first category of resources are physical resources, which include the physical technology used, equipment and architectural setting, location as well as raw materials available to the firm's control. (Porter, 1985) Additionally, another class of resources are the human capital resources. These include intelligence, knowledge, training, experience, judgment, relationships and network as well as any insight that the individuals can provide to

the organization. (Barney, 1991) The third class of resources are the organizational capital resources. These are "*the firm's formal reporting structure, its formal and informal planning, controlling and coordinating systems, as well as informal relations among groups within the firm and between firms in a setting…"* (Barney, 1991, p. 101)

It is important to be mentioned that axiomatically firms employ a mix or bundle of resources in order to fulfill their business activities. Therefore, for the purposes of presenting this theory and all throughout this thesis the term resource is used as a collective of the mix of resources used by the firm for its activities.

Here, the difference between resources and strategic resources should be made. Not all of the resources at the firm's disposal are strategically relevant ones. According to Barney (1986b, 1991) some of the resources which a firm possesses may not be relevant in implementing effective and efficient strategies; others may be preventing the creation of efficiency in the firm and others may not have any influence on the strategic behavior of the firm (Barney, 1991). The resource-based view of the firm focuses on the resources which enable the firm to conceive and implement strategies which lead to efficiency and effectiveness in the firm's activities. A central purpose of the resource-based view is to explore the conditions, under which the strategically relevant resources are identified and how they can be a source of sustained competitive advantage.

Competitive Advantage and Sustained Competitive Advantage

The definition resource-based view theorists adopt for competitive advantage refers to a specific value-creating strategy which is only being implemented by one firm in an industry. Sustained competitive advantage refers to a competitive advantage or a value-creating strategy which currently is not being implemented by any other company and it is impossible to be replicated by other companies within the industry (Barney, 1991). It is important to be noted that the definition includes all companies, being current or potential competitors of the firm (Wernerfelt, 1984). Another important notion is that sustained competitive advantage refers to value-creating strategy which the company employs not for a certain period of time but rather one that is not duplicated by current or potential companies. This is an equilibrium definition rather than a temporal one. The essence is that it is not the period of time that defines a sustained competitive advantage but rather the inability for other players in the industry to replicate this same value-creating strategy. The concept of inability to duplicate, however, does not exclude environmental factors which may influence the structure and environment of the industry and lead to the firm losing the uniquely value-creating strategic

resources which it controlled. Again, the competitive advantage is only sustained if it cannot be nullified through competition from other companies in the industry (Barney, 1991).

As it was presented earlier, the underlining conditions for firms' strategic resources to be deployed to create value and competitive advantage are resource heterogeneity and immobility. However, not all resources have the potential to create competitive advantage. Barney (1991) identifies for prerequisite characteristics of the resources which have potential to create competitive advantages. A firm resource must be:

- valuable;
- rare among the firm's current and potential competitors;
- imperfectly imitable;
- not strategically duplicable (Barney, 1991).

These attributes show the levels of heterogeneity and immobility of the resources and ultimately presume how well these resources may create competitive advantages.

Valuable resources means that the resource may enable the firm to implement it in a strategy which leads to efficiency and effectiveness of the activities. Ultimately, the value of the resource stems from the ability of the company through the resource to exploit the opportunities and neutralize the threads in the environment (Barney, 1991).

Since firms benefit from competitive advantages which are not implemented by its current or potential competitors, even if the resource is valuable, if it is possessed by a large number of firms in the industry, it cannot enable the creation of competitive advantages. Thus one strategic resource or a bundle of resources should be rare. Of course, there will be the question of how rare should a resource be. Hirshleifer (1980) theorizes that a resource can be considered rare if the number of firms which possess the resource is less than the number of firms required for perfectly competitive conditions within that industry.

Valuable and rare resources can only be sources of sustained competitive advantage if they continue being unobtainable by others in the industry. Barney (1991) identifies these resources as imperfectly imitable. There are certain conditions in which the resources obtained and employed in one firm remain unobtainable for the rest in the industry. One condition is that the obtainment of the specific resource is dependent on unique historic events or conditions. Market imperfection created from such resources is exogenous or outside the strategic decisions of the company. Another reason for imperfect imitability is that the "*link between the resources possessed by a firm and firm's sustained advantage is causally ambiguous"* (Barney, 1991, p. 107). Causal ambiguity is related to conditions when

the link between the firm resource and the value-creating strategy it employs is not understood or understood limitedly. Causal ambiguity may be one of the reasons for the rest of the players in an industry to not be able to imitate the resource or duplicate its effects in their setting. (Barney, 1991)

Another reason for the resources to be imperfectly mobile is that they may be socially complex. Social complexity as recognized by Barney (1991) impedes the ability of other firms to duplicate the resource (or mix of resources) and thus reach competitive advantage. Social complexity and causal ambiguity go hand in hand in business when it comes to value-creating mixes of resources and strategies. Such socially complex resources are the company's culture, or extended network that benefits the company, socially complex resource is also the term used for firm's reputation among suppliers and customers, as described by Porter (1985). Physical technology is often not included in the socially complex strategic resources. When it comes to innovative technology, however, the value-creating exploitation of the technology may require socially complex intangible resources.

Lastly, it is key to mention the substitutability of the resource as a characteristic of a value-creating strategic resource. "*Two valuable firm resources (or two bundles of firm resources) are strategically equivalent when they each can be exploited separately to implement the same strategies*" Barney, 1991, p.111) If a current or a potential competitor possesses a strategically equivalent resource or bundle of resources, then competitive advantage cannot be reached or it would only be reached for a limited period of time. Thus, the higher the level of substitutability, the lower the chance for gaining competitive advantage. It should be noted that the substitutability of the resources in this context refers to the ability of firms to exploit them for the same value-creating strategies. The resources may not be imitated or duplicated exactly but they still can be deployed to serve the same purpose. Thus, although the characteristics of the resources are different they are substitutes.

Resources and Strategic Decision

Ultimately, the decision if and how to employ resources and capabilities in order to create value and thus competitive advantage falls in the hands of decision-makers in the firm – managers. Therefore, resource market imperfections may be endogenous, i.e. be a result of a conscious decision to develop or acquire the resources by managers. (Lockett, Thompson and Morgenstern, 200) Here is where the resource-based theory departs from the traditional assumptions of the industrial economics. In the latter theory, industry characteristics such as market imperfections are strictly exogenous from the actors. The resource-based theorists

such as Wernerfelt (1984) acknowledge that in the short-run the resources in availability to a firm are likely to be exogenous to the decision-maker. However, the managers are those who identify and decide to take advantage of opportunities to develop or acquire resources or deploy different bundles of resources in order to create value. Lockett, Thompson and Morgenstern (2009) compare the role of the manager in resource-based theory to this of a card player. In the beginning of the game, the card player is provided with a set of cards, in accordance with the rules of the game (which are exogenous for the player). It is up to the card player's skill to augment the power of the cards he/she possesses with additional ones acquired during the game in order to be successful. Eventually, although the player had originally started with a specific set of cards, in the end of the game the hand may differ significantly. This logic provides valuable insights on how managers in resource-based theory are presented to exploit market imperfections in order to maximize the performance of the companies. The resource-based theory not only places managers as key players and influencers but also strives to explain the internal and external conditions in which managers make decisions. Thusly, this theory combines the traditional logics of industrial economics when it comes to showing how decision-makers react to the changes in the external environment – in the industry or in their rivals but also takes one step further by looking at the internal processes of decision-making, and rejecting the traditional attitude of regarding the firm as a "*black box"* (Lockett, Thompson and Morgenstern, 2009, p.12). In the resource-based view of the firm, managers and decision-makers have not only a "*responsive*" but also "*adaptive and proactive*" roles (Lockett, Thompson and Morgenstern, 2009, p.12). Furthermore, the resource-based view of the firm devotes a stream of research and theory towards understanding the behavior of managers when deploying bundles of resources in a strategy to create value. Penrose (1959) as well as Peteraf and Helfat (2003) and others dedicate their research to understanding and ultimately mapping the behavior of managers when it comes to three key aspects: resource functionality, resource recombination and resource creation. Lockett, Thompson and Morgenstern (2009) claim that "*an important role for managers is to determine the most profitable usage for the resources at their disposal*" (Lockett, Thompson and Morgenstern, 2009, p. 13). Resource functionality in the simplest terms refers to the firm's opportunity set, proposed by Penrose (1959). She argues that the firm's opportunity set is both defined by what the managers can "*see and take advantage of*" as well as by what resources they possess (Penrose, 1959, p.31) Moreover, that decision is bound to be influenced heavily on the subjective perceptions of the decision-makers. Since the managers have proactive role in the firm, they may, by employing mixes of resources,

ultimately change the structures of the industry. Thus, the resource-based view of the firm argues that managers who are responsible for how the resources are used, determine the industry in which the company operates.

Obviously, a key milestone before all managers is to understand the functionality of the resources of which they are in control as well as those that their competitors control. A good understanding of both will ensure that managers can identify not only their current competitors but also any potential ones. Yet, managers may encounter difficulties in understanding the functionality of the controlled resources for a number of reasons. This may be bounded rationality which is an underlying assumption in the transaction cost economics; it may be because of lack of time or attention to the concept or as Lockett, Thompson and Morgenstern (2009) point out cognitive bias or framing limitations. Expanding the firm's opportunity set with the most profitable combination of resources or by finding novel uses of the same resources or by acquiring new ones is the main purpose of the resource recombination and creation (Penrose, 1959).

The main assumption in the argument for resource recombination is that resources are rarely valuable by themselves. In practice, no single resource may be attributed to the creation of sustained competitive advantage. Therefore, combination of resources is much more likely to be a source of value-creation. Value can be created by combining resources if the resources which are combined are complementary, related or co-specialized (Lockett, Thompson and Morgenstern, 2009). In the aspect of resource recombination it is essential to mention the role of firm capabilities. A capability is "*defined as the firm's ability to undertake a productive activity, which is created through the simultaneous deployment of resources and factors of production*" (Lockett, Thompson and Morgenstern, 2009, p. 14)

Looking at the nature of resource recombination, researchers have identified three major activities – stabilizing, enriching and pioneering. Stabilizing is related to recombination of resources with minor improvements in the capabilities of the firm through improvements of the existing resources. Enriching involves implementing complementary resources or activities such as learning to advance the current capabilities of the firm. Pioneering requires completely new resources to be deployed. This activity calls for creativity and organizational learning to create unique new capabilities. (Lockett, Thompson and Morgenstern, 2009)

When it comes to resource creation the main argument that Penrose (1959) uses is that over time companies accrue resource excess capacity. She continues by adding that this will create opportunity for development of new resources. Thus, firm resources are path dependent, i.e. dependent on the firm's past decisions and activities.

3.2.2 Resource-based Theory of Competitive Advantage

The framework described below can be used to analyze the potential of a company's resources to be a source of competitive and sustained competitive advantage. It represents the logical flow of the theoretical conditions in which strategic resources can produce sustained competitive advantage. It also illustrated the relationship between the theoretical terms described above.

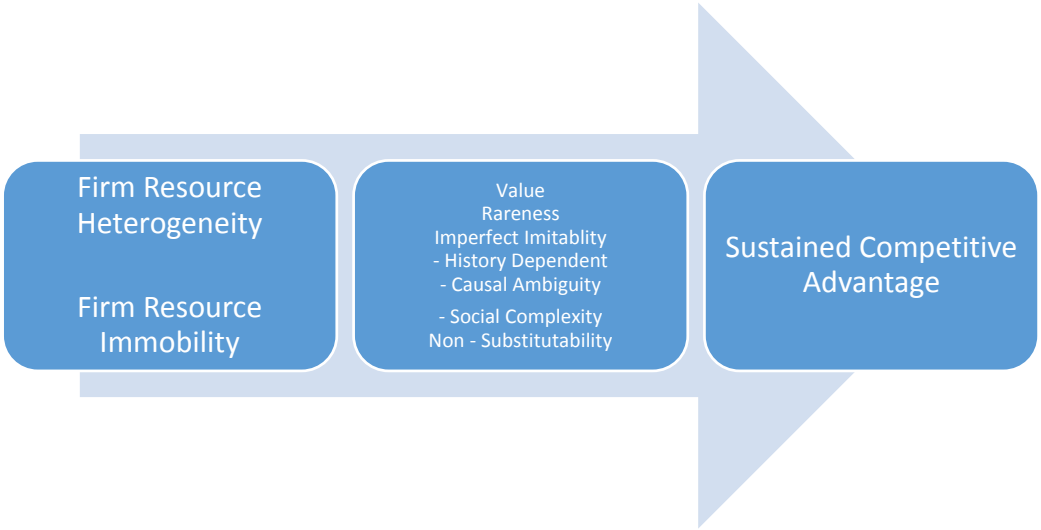

Figure 14 Resource-based Theory of Competitive Advantage

Source: adapted from Barney, 1991, p. 112

The resource-based theory seeks further to generate hypotheses about the characteristics of the resources available to companies which are prospective to create value and competitive advantage. Such hypotheses start from the assumption of resource heterogeneity and go further to explore which mix of resources responds to the characteristics of value, rareness, imperfect imitability and non-substitutability. The empirical research follows the hypotheses to explore how different resource bundles effect the performance of firms. (Lockett, Thompson and Morgenstern, 2009)

3.2.3 Resource-based Theory and Other Theories

The concepts and arguments of any theory should be positioned in relation to the other theories in the same field. Positioning of the theory and its arguments is crucial in order to define as well as limit the theory's contributions, outline the structure of the arguments and identify the issues it can and cannot address. However, positioning is not always easy, especially because one theory can be positioned in alternative ways or the arguments may shift the focus on different key points and thus reach relevant but different insights about the addressed issues and concepts. (Barney, 2001)

According to Barney (2001), the resource-based theory can be positioned in relation to three main theories – the Structure-Conduct-Performance (SCP) paradigm, the Neo-classical Microeconomics and the Evolutionary Economics. By positioning it in regards to different theories, Barney (2001) suggests that one can generate three resource-based theories of competitive advantage, each with the same main underlining assumptions and focus on understanding of why some companies outperform others, but ultimately different perspectives on implications of these assumptions.

When related to the Structure-Conduct-Performance paradigm the theorists examine the impact of industry and firm attributes to the performance of the firm. Barney's article from *1991 "Firm Resources and Sustained Competitive Advantage"* presents the resource-based view as derivative of the framework used by SCP theorists by describing it as a theory of one aspect – strengths and weaknesses of the firm and the Porter's Five Forces as another aspect – opportunities and threats in the industry. Ten years later Barney (2001) goes back to connect the resource-based view towards two other streams of economic thought and show how different focus may lead to different key theoretical points.

The resource-based view of the firm shares some of the ultimate assumptions of the neo-classical theory – "*that economic actors (be they firms or people) are boundedly rational utility maximizers, that markets can vary in their competitiveness, that information can vary in how it is diffused across a market…*" (Barney, 2001, p. 644) One crucial difference between the two theories, however, is that the latter adopts the assumption that the demand of resources (or in their terminology "factors") is elastic. This means that if the demand for one resource increases, the price of said resource will also increase and the total volume of that resource on the market will also increase. (Barney, 2001) Theorists supporting the resource-based view, however, argue that because of the characteristics of some resources or capabilities, such as social complexity, path dependence or causal ambiguity, that the supply for these resources/capabilities will be inelastic. Additionally, Barney (1991) and Peteraf (1993) go beyond and argue that supply inelasticity may actually lead to sustained competitive advantage since, companies which hold these resources or capabilities will generate abnormal profits even in the long run, since there is no increase in supply. Ricardo (1817) is one of the most prominent neo-classical economists to explore the inelasticity of supply of resources. Ricardo makes proves the argument that inelasticity in supply will lead to profitable firms when for instance a factor of production such as fertile land is fixed in supply. Thusly, resource-based view may be seen as an extension of Ricardo's arguments about inelasticity, however, resource-based theorists argue that not just few but many more

factors of production may be inelastic in supply and become a source of sustained competitive advantage. With such focus, resource-based view can also adopt equilibrium analysis as a focal point of exploration of firms' profitability. In simplest terms, the resource-based theory provides an explanation for the existence of profits in equilibrium which is based on firm heterogeneity. (Lockett, Thompson and Morgenstern, 2009)

On the other hand, evolutionary economics does not apply equilibrium analysis in examining the conditions under which competitive advantage can be reached. Most prominently, the work of Nelson and Winter "Evolutionary Theorizing in Economics" from 1993 and 2002 explains how companies employ different routines to conduct business and these routines vary across companies and industries. Moreover, they compare competition with the selection model where in one industry some routines, deployed by some companies are revealed to be more efficient than others. The most efficient and effective routines implemented by the company becomes a source of competitive advantage, while the least effective ones are either changed or simply deserted. (Nelson and Winter, 2002) These researchers put main focus on these three key concepts – variation, selection and retention, as they explore competitive advantages in firms. Analogies between these key concepts in evolutionary economics and the concepts in resource-based view are evident. Nevertheless, theorizing about resource-based view in regards to evolutionary economics will inevitably emphasize on how routines (or capabilities) in firms change over time and how competitive advantage changes with them. (Barney, 2001)

As the development of theories progresses, more and more resource-based theories may emerge from combining theoretical arguments from other neighboring (and not) theories. What is important to be noted about any resource-based theory is not where its implications lie but the sharing of common underlying assumptions about the characteristics of resources and capabilities and the ways they are employed to create value and ultimately sustained competitive advantage.

Critique of the Resource-based Theory

Although extremely popular and surprisingly simple to explain and teach, the resource-based theory is not without its criticisms. Critiques, however, offer the opportunity to push the limits of the theory and provide useful start point for further research and theorizing.

There are quite a few aspects of the resource-based theory which have been criticized, summarized by Kraaijenbrink et.al (2010) and they are listed below:

- "*The resource-based view has no managerial implications*" - this critique refers to the resource-based view as possessing no "*operational validity*" (Kraaijenbrink et.al,

2010, p. 351). This is argued because the theory does not provide insights on how companies can obtain or develop valuable, rare, imperfectly immobile and non-substitutable resources. However, the fundamental purpose of the resource-based theory is not that, but to provide insight on why some companies perform better than others. The arguments around this purpose may still be of value to managers but the theory has never intended to provide managerial prescriptions.

- The resource-based theory is too limited in its applications – this criticism stems from the argument that since resource uniqueness is an underlying assumption of the resource-based view, the theory cannot be generalized, since "*one cannot generalize about uniqueness*" (Kraaijenbrink et.al, 2010, p. 353) This is true in theoretical sense, however, Kraaijenbrink et.al (2010) points out that insights can be obtained by generalizing about the degree of uniqueness of the resources. Although, the resource-based theorists argue against this criticism, Barney (2002) indicates a very real limit of the applicability of the resource-based view – it is only relevant as long as the industry remains relatively fixed. This means that in unpredictable environments, the key concepts of resources and capabilities are not enough to explain or predict sustained competitive advantage.
- Sustained competitive advantage cannot be achieved – naturally the resource-based view assumes that sustained competitive advantage is achievable. The criticism in this case stems from the argument that because of the responsive nature of firms in the market and game theory, every created competitive advantage will inevitably be competed away by actors in the industry. Furthermore, critics argue that only dynamics in the resources and capabilities of the firm may create value and thus only continuously changing temporary advantage may be achieved. (Kraaijenbrink et.al, 2010) The issue with this criticism is the term "sustained" which is not used in the meaning of long-term but rather in regards to the market's own natural timing. In highly dynamic industries this time may be less than ones in which innovations happen slower.
- Only valuable, rare, imperfectly imitable, non-substitutable resources are not sufficient to achieve sustained competitive advantage – this criticism is not so easily disregarded and points to a considerable weakness of the theory. Critics claim that even if the firm possesses strategic resources which the aforementioned characteristics the managerial capabilities to recognize the value-creating mix of resources as well as

the opportunity and ability to implement them in a strategy is required to obtain sustained competitive advantage. Thus, just assuming that managers are capable and able to do that is a too risky assumption to make. Criticism falls on the fact that resource-based view does not address sufficiently the "*individual judgments and mental models of entrepreneurs and manages*" (Kraaijenbrink et.al, 2010, p. 356) Critics go farther to argue that the source of sustained competitive advantage lies in the individual characteristics of the teams that encompass the firm rather than in the resources or market failures. (Kraaijenbrink et.al, 2010)

- The indefinite notion of value impedes the usefulness of the theory – the problem here lies in the fact that the term value is used to both define the phenomenon and explain the phenomenon of competitive advantage and this creates issues for the generalizability of the theory. In order for the resource-based view to be a theory the *explanans* and the *explanandum* should have different definitions.

As Kraaijenbrink et.al (2010) points out, critiques are a meaningful part of the life of a theory and should never be feared or disregarded, rather they should be embraced for the arguments, ideas and perspectives they bring to the table. Criticisms should also not be taken as an attack on the theory, but rather an identification of future research paths and theoretical opportunities.

3.2.4 Resource-based Theory and Systems View

The above summary of the resource-based theory of the firm present the nature and logics of the theory. One cannot help but notice that the theory in literature is often referred to as "resource-based view of the firm". The word "view" already suggests that the theory "looks at" the firm from a perspective, its focal point is the resources of the firm. Some theorists go even to say that the resource-based view is a paradigm of its own. However, this is not the case here.

Systems theory is based on two fundamental assumptions – "*all phenomena can be regarded a web of relationships among its components, that is, as a system. Second, all systems have common patterns, behavior and properties which can be explained and/or understood to develop greater insight into the behavior of complex phenomena and move closer toward the unity of science*" (Arbnor & Bjerke, 2009, p.103). Related to the resource-based view, the theory regards the firm not as a "black box" but as a complex structure of resources, decisions, processes and outputs which are interconnected and dependent of each other. Resource-based theory does acknowledge the relationship between the components of the

system – the firm, as fundamental for understanding the behavior of the system. The basis of the resource-based theory of the finding and explanation and understanding why some companies perform better than others, that is, why how some systems' behavior is different than that of the others. Resource-based theory argues that competitive advantage can be predicted or foreseen by making a decision to implement a value-creating strategy as a result of combining strategically relevant resources. Its fundamental purpose is to explain the relationship between resources in firms and their performance and understand why some firms perform better than others within an industry.

Holistic theories assume that the sum of the components of a system will not create a full understanding of the system as a whole. On the contrary, in order for one to understand the properties of the components of a system, one needs to understand how the system as a whole behaves (Arbnor and Bjerke, 2009). Resource-based view of the firm can be held as holistic theory since it acknowledges the existence and importance of the linkages between resources in the way that they are aligned to create competitive advantage. It also supports the concept that the firm cannot be only studied as a profit-maximizing machine but the behavior of the firm determines the behavior and importance of its parts. The way the firm combines its resources and processes to achieve competitive advantage, gives the resource-based theorists the premise to understand which resources are strategically valuable and how they can be combined to create value.

The way this thesis is structured implies that the components (the firms under analysis) as well as the theories are analyzed in the context of their environment – Activision and Blizzard merger in the context of their industry. The theory of resource-based view is explored in the context of surrounding theories and the interaction of the resource-based view with the transaction cost theory is explored further in this thesis. Thus the systems under study are open. The system environment is of great importance when applied to the resource-based view. The factors in the environment (the industry) can greatly influence as well as determine the limits of the system. As previously explored, resource-based view derives from the same framework as Porter's Five Forces. The fundamental concepts of the resource-based view are deeply rooted within the analysis of the surrounding of a firm and the way the firm acts within this environment. The environment's influence on the firm may not be a prominent feature under study but it is woven into the theory of resource-based view.

Resource-based view of the firm relates to the principle of totality in systems view because it perceives the internal aspect of the firm as well as the external aspect, the industry, as dependent of each other and the components of each aspect are dependent as well. Causal

relationships between elements are prominent. The main arguments of the resource-based view are based on causal relationship between the combination of strategically significant resources and the achievement of competitive advantage.

The theory presents a limited picture of the reality since it chooses to focus on the internal aspect of the collective framework and cannot and does not try to capture the reality in its whole. The external delimitations are related to the external analysis which is secondary in the resource-based view. Additionally, internally there is the delimitation of the theory that it does not provide a model or framework on how (the method) resources should be combined in order to achieve sustained competitive advantage. This was indicated as one of the more major criticism of the resource-based view.

Evidence for the principle of relativity within the resource-based theory is that Barney (1991, 2001) chooses to which other theory the resource-based view will be positioned in relation. Thus, he consciously puts the frame of reference of the theory towards the SCP paradigm in his first paper and limits the focus of the framework he develops in 1991. Later in 2001, he revisits the theory in regards to its positioning in relations to other theories. Additionally, Penrose (1959) relates her research and theory of the resource-based view towards the growth of the firm, which shows a different perspective of the theory and proves the essence of the relativity principle, previously described in this thesis and proposed by Arbnor & Bjerke (2009).

In conclusion, the resource-based view of the firm through the systems view paradigm, presents a limited picture of the firm within its environment. It seeks to understand the firm as an open system and to explain the relationships between the resources and processes within the firm which define its behavior. It is a holistic theory with external as well as internal delimitation, which seeks to understand the behavior relationship between systems.

3.3 Mergers & Acquisitions

The following section provides an overview of the theoretical and empirical research on mergers and acquisitions (M&As). This is not a new topic in the business, finance and strategic management fields and has its focal place within academic research as well as practical research since its mergence in the beginning of the 20th century. This theoretical overview aims to shed light on the ways in which mergers and acquisitions have been studied until now and provide the reader with definitions and main theoretical assumptions about the concepts and processes involved with M&As. Additionally, since the focus of this thesis is examining ex post effects of M&As, it is only logical to provide the theoretical foundation for

analysis. One should be mindful that M&As is not a theory of itself; rather it is a business phenomenon, being analyzed by a number of theorists in a number of fields of research. An overview of these fields is provided below.

3.3.1 Cooperation strategies – Integration

Integration is one of the means of overcoming transaction costs as presented previously in this chapter. However, the studies of cooperation strategies of companies are diverse in their focus and from the perspectives of the fields they fall into. This makes it considerably hard to produce one unified theoretical view of the phenomenon and impedes the academic community to synthesize contributions for each discipline into one. M&As have been receiving considerable attention from in the field of finance, largely because of their monetary and strategic consequences. The focus of the prevailing empirical studies in finances were on the relationship between acquisition activity and performance of both the acquiring and the acquired companies. This is a focal point for not only the finance literature since it deals with the consequences of the M&A and seeks to understand the practical side of – did the acquisition added value or eroded the value of the companies (Haleblian, et.al, 2009). This is a question which each of the theoretical doctrines has tackled within their paradigm of research. The beginning of research on M&As of course is within the macroeconomics and competition theory, where neo-classical assumptions about market power reign supreme and have been the basis of competition laws administered by governments around the world. The neo-classical view on mergers and acquisitions follows the assumptions that economic, technological or regulatory changes in the industry in question are the causes of merger activity. The notion to go into integration, in the view of the neo-classical theorists is merely a response to those "shocks" in the environment (Baker and Kiymaz, 2011). The neo-classical assumptions of market power and profit maximization on the other hand were another premise for merger activity in the late 50s and 60s. However, a major criticism towards this premise is that if the acquiring partners are after profit maximization, then all M&As should be profitable. However, as numerous empirical data from across disciplines has shown – this is not the case.

Haleblian, et.al (2009) have compiled theoretical as well as empirical research on M&A activity from the 80s to 2008 to explore the prominent themes, topics and results across finance literature, economics, industrial organization and strategic management. They show that findings from early research suggest the prevailing opinion that M&As do not enhance the value of the acquiring company neither in short nor in long term performance. A

breakdown of the effects of an acquisition on the combined firm and the firms separately, conducted by researchers throughout the 90s and early 2000s, show that the majority of performance and value gains was held by the acquired company, whereas the acquiring company exhibited insignificant returns or negative returns.

For the purposes of this thesis the authors will limit their attention to the horizontal mergers, which essentially are the combination of two companies with similar, complementary or competitive products. Horizontal mergers occur within the same industry (Hollensen, 2011). Horizontal mergers have very different motives than vertical mergers and are under attention from both practical and theoretical perspective.

3.3.2 Motives for Horizontal Mergers

Mergers are a phenomenon which occurs in waves. Each wave of M&As has had a prevailing motive to arise. In the dawn of merger activity the first wave was caused by a desire for monopolistic behavior. High concentration in the industries spawned the discussions and initiation of the antitrust and competition laws in the US in the end of the nineteenth century. The second M&A wave was triggered by vertical integration motives and desire to control the supply chain of a product entirely. In the 1960s the third wave of M&A activity was conglomerates activity with a strong diversification motive. The 1980s were characterized by the so-called disciplinary mergers which were engendered by motives of corporate control. The agency theory and theory of corporate governance dominated the theoretical perspective of this period. Mergers and acquisitions in the 1990s were caused by firms' desire to increase size. They have been prominently regarded as a way of strategic market extension. They have been featured in numerous studies and research from the perspective of global marketing, as Hollensen (2011) points out, they are means of internationalization, entry to new markets, and a way of internalizing the value chain of companies. The most current wave of M&A activity is related to "*giant*" mergers within industries which are known for their concentration such as the telecommunications and the pharmaceuticals (Motis, 2007, p. 5)

The question of why companies acquire has been one of the primary research questions since the birth of this phenomenon. One thing that researchers agree on is that *"mergers are driven by a complex pattern of motives and that no single approach can render a full account*" (Trautwein, 1990, p.283)

Naturally, domestic and cross-border mergers have different motives of initiation. Cross-border M&As can occur as a mode of entry in a foreign market or acquisition of resources unavailable in the country in question (Shimizu, Hitt, Vaidyanath & Pisano, 2004).

Value Creation

Value creation as a motive for M&A activity involves theory which supports mergers as a mode of:

- Market power

Naturally, related to the consequences of horizontal merger activity is the higher concentration of the industry. The reduction of the number of competitors, connected to horizontal M&As, implies higher market power. *"Market power is defined as the ability of a firm or group of firms to raise prices above the level that would prevail under competitive conditions*" (Motis, 2007, p. 13). Two types of effects have been identified by scholars regarding the potential enhancement of market power – unilateral and coordinated effects. "*While coordinated effects refer to the scope of collision, facilitated by the lower number of competitors, unilateral effects refer to the risk that the merged firm, acting independently of any remaining rival, finds profitable to raise prices after the merger*"(Motis, 2007, p.6). The influence of unilateral effects, however, differs depending on the characteristics of the industry. If the participants in the industry compete on quantities and produce homogeneous products, then the unilateral effects will cause raise of the prices in the market. An increased level of prices can be impeded provided that the barriers for market entry are low (Motis, 2007) Yet, market power as motive for collision, includes more than just number of competitors – it involves considerations about the frequency of interaction, (a)symmetry of the information in the market, the transparency of the market and so on. Although, this motive for integration was widely considered mainstream in the beginning of the 20th century, limited evidence has been collected to support it since then (Haleblian et.al, 2009). Moving away from the traditional industrial economics and economic welfare motives for market power, dynamic factors such as growing demands, business cycles, innovation, shift in technologies or demand fluctuations, have been identified as motives for M&A activity (Motis, 2007).

- Efficiency

The Efficiency theory regards merger activity as being motivated by strive to achieve synergies. The researchers supporting this theory identify three major types of synergies – financial, operational and managerial. Financial synergies are related in strive to decrease the cost of capital. This is achieved by decreasing the risk of a firm's investment portfolio by acquiring a firm in an unrelated market. Additionally financial synergies may be materialized by simply increasing the company's size, thus opening the firm up to cheaper capital.

Another way is identified by establishing an internal capital market, which gives the firm access to insider information and resulting in efficient allocation of capital. Operational synergies may originate from knowledge transfer or merging operations, which previously have been separate. Both types of operational synergies theoretically lead to lower cost of business or providing access to new resources. Managerial synergies are realized by the bidder's superior planning and monitoring abilities and result in positive returns from the target's performance (Trautwein, 1990). Unlike the operational and managerial synergies, financial synergies have been strongly criticized for having no sound evidence to support them. Size advantages, seen as economies of scale are the only aspect of the financial synergies, which have been supported by empirical evidence (Trautwein, 1990).

- Resource redeployment

Economies of scope, or redeployment and recombination of assets as well as competency transfers have been a motive for engaging in M&A activity, scholar recognize. Researchers have found that especially horizontal acquisitions often were involved with significant resource realignment between the merging companies. Resource complementarity and relatedness between the resources of the two companies are a prerequisite for achieving abnormal returns for both acquirers and targets after the merger (Haleblian, 2009). Haleblian (2009) notes that two types of realignment of resources have been extremely beneficial for the acquirer – realignment of the resources involved in strong strategic existing areas and realignment of resources towards new areas. Thus, resource redeployment may also be referred to M&A activity towards innovation. The resource-based view of the firm regards M&As as "*'means for firms to exchange firm-specific resources and capabilities that are otherwise subject to market failure*" (James, 2010, p.300). Integration modes are recognized as providing the opportunity to get access to otherwise non-marketable resources as well as the opportunity to access new markets by realigning resource bundles and tackle resource-based entry barriers. In addition, within the resource-based view, M&A is seen as a mean to address competitive performance, by redeploying resources into strong areas of competency or shift them into new areas, developing new competencies. Furthermore, value can be created by improving or deepening the managerial skills of either the acquirer or the acquired company (James, 2010).

Managerial Self-Interest

Although researchers and theorists have operated under the assumption that M&A activity is motivated by the strive for value creation and maximization of the shareholder returns, there

are a number of studies, which show that managerial self-interest can also be a reason for acquisition activity and that this motive has destructive effects on the value of the firm (Haleblian, 2009). Surprisingly diverse number of financial studies have shown that acquisitive behaviour is motivated by mere upper management compensation and ownership (Sanders, 2001). One particular theory has devoted numerous academic works as well as empirical data on the behaviour of managers, shareholders when it comes to integration options. Haleblian (2009) points out that "*compensation contracts should be designed to reduce managerial opportunism and align managers' and shareholders' interests*" (p.475). Consistently with the concept of managerial opportunism is the evidence that overall the compensation of acquiring CEO's increase after they have engaged in a merger or acquisition. Furthermore, studies show (Harfort and Li, 2007, Grinstein and Hribar, 2004) that the bonus or other types of compensation in acquiring managers increase regardless of the performance of the acquisition. Overall, Haleblian (2009) claims that agency theory considers M&A to be overly attractive to managers.

In addition to financial incentives, managerial hubris is another concept, which grounds have been proven in numerous empirical studies. This concept relates to the behaviour of the manager and related confidence and ego gratification which may stem from engaging in M&A activity. Managerial hubris have been connected to inflated acquisition premiums which in turn have shown negative effects on the overall acquisition performance. The over-confidence of managers is shown to cause CEOs to overestimate their predictions and projections about the target, resulting in premiums for the target companies, and ultimately leading to value destruction. Haleblian (2009) discusses that the behaviour of overconfidence has been largely observed in companies where access to internal financing is present.

Target defence tactics are another financial motive for acquisition activity. Arguably, this motive is presented in literature to involve higher premiums and increased rate of deal completions rather than to serve as a deterioration of the bidder interest. Thus, empirical research presented by Haleblian (2009) serve to show that these types of self-interest techniques do not have homogenous effects.

Environmental Factors

The focus of strategic management have always been towards the relations between the environment and the strategy of the firm that motivates acquisition activity. Environmental uncertainty has been an underlying assumption in transaction cost theory when addressing governance modes and has proven theoretically that environmental factors do influence the

decision to engage in M&A activity. Research in environmental factors such as uncertainty or regulations, network ties or resource dependence have shown that "*environmental factors influence corporate portfolio restructuring generally and acquisition likelihood specifically*" (Haleblian, 2009, p. 476). Environmental uncertainty as a motive for M&A is addressed further in this thesis from the perspective of transaction cost theory and resource-based view of the firm.

Financial literature recognizes external factors such as public regulations as a major influencer on acquisition likelihood. Haleblian (2009) summarizes the studies conducted to examine the weight of regulatory actions on the M&A activity and points out that although targeting acquisition activity, antitrust laws and regulations do not seem to hinder the M&A likelihood. Moreover, he argues that countries with strict accounting standards and high shareholder protection actually presented with a higher volume of M&As than others. One rationale which has been raised to address this phenomenon is that firms from industries with high level of regulation engage in integration in order to form a strong political clout to impact policies in their markets (Haleblian, 2009).

In addition, external motives such as imitation and resource dependence have been suggested as environmental factors which govern the activity of integration of firms. Stearns and Allan (1996) and Palmer et.al. (1995) present two different theories – the interorganizational imitation theory and the resource dependence theory, where they explore the reasoning of "follower" type behaviour from companies which engaged in acquisitions because of recent successful M&As in their markets. Additionally resource dependence theory argues that acquisition behaviour was caused by the need of the firm to absorb required resourced through mergers. This argument has merits in the resource-based view of the firm as well where Barney (1991) have built on it to create his framework for competitive advantage.

Haleblian (2009) states network ties as another valid environmental factor which has an impact on acquisition activity. It involves engaging in M&As which are subsequently an imitation of the acquisition activity of a firm to which they were tied to. Interlock partners have been shown to positively affect the M&A activity of firms in their inner network.

Nature of the Firm

The experience a firm has with M&A activity has been identified to influence directly its acquisition behaviour. Additionally, a firm's mission and strategy as well as its position in the market may sway the company towards engaging in integration modes.

- Acquisition experience

Academic work in management have focused on the experience a firm has with integration modes since M&As are significant and altering events in the firm's history. Scholars have emphasized on answering the question whether firms "learn" to perform more successful subsequent acquisitions with time. Haleblian (2009) presents his research on this topic and reports that a positive correlation exists between the number of successful acquisition in the past firm history and the likelihood of engaging in another acquisition in the future. Yet, one key note should be made that acquisition type had shown to be a determinant in the likelihood of M&A activity. Haleblian (2009) found that a particular type of acquisition (horizontal, vertical or product extension) would be a prominent type of the firm's M&A activity all throughout its lifecycle. Additionally, the characteristics of the target firm were also important in making a decision. Baum et al. (2000) revealed that firms would engage in integration modes with other firms which had close geographical and psychic distance.

Firm's strategy and position has not been addressed as thoroughly as its experience when it comes to empirical research. The foremost argument in this factor is that firms with global strategy would engage in greenfield investments whereas firms with multidomestic strategy will engage mainly in M&A activity. Additionally, if the firm's position in the market is deteriorating or it is facing performance obstacles, it is more likely to be approached by other firms to engage in integration (Harzing, 2002).

An essential milestone for academics from all fields addressing mergers and acquisitions is the need for a unified approach to integration of firms. However, the diverse motivations and miscellaneous factor influencing the decision to engage in M&A activity, impedes the strive for a unified method of understanding this phenomenon.

3.4 Discount Cash Flow Model

Any valuation has at its function to determine the value of future cash flows. "*The value of an investment is the discounted value of all estimated future liabilities and benefits*" (French and Gabrielli, 2005, p 76), thus value is established on future forecasts, which can be implicit or explicit in their nature. A correct valuation is created in the case of a predetermined fixed cash flow, where unforeseen expenses or revisions create a "best estimate" valuation. However, cash flows are subjected to variation, such as growth, creating the valuation less certain (French and Gabrielli, 2005).

The more precise future expectations are the more close to reality the valuation becomes. Thus, the importance of future expectations and the adaptation to multiple scenarios make the

valuation process more proficient. "*All valuations are subject to uncertainty. The sources of uncertainty are rational and can be identified*" (French and Gabrielli, 2005, p 77).

"*There have always been investors in financial markets who have argued that market prices are determined by the perceptions (and misperceptions) of buyers and sellers, and not by anything as prosaic as cash flows or earnings*" (Moini 2013, slide 3, session 1). However, one should not only take into consideration only perceptions.

The literature presents some misconceptions about valuations: (1) valuations are biased, which assumes that the direction and the magnitude of the valuation is directly proportional to the firm that acquaints a person the valuate it. Thus, valuations' objective is not necessarily to pursue of the "true" value. (2) As much as analysts try to perform a valuation, it will be merely impossible to provide a precise estimate of value. (3) However, it should be kept in mind that complex valuations, which create the model very quantitative, does not imply that the valuation will be better. Analysts believe that simpler valuation models perform better than the more complex ones (Moini, 2013).

All valuations approaches have at their basis of their primary use concerning investment decisions that: markets are inefficient and mistakes are made when assessing value, thus, valuations assumption is to correct the inefficiencies. Valuation models assume that the market price is best estimated through value within an efficient market. Therefore, their purpose is to justify the calculated value (Moini, 2013).

The current literature has numerous valuation models, however, the most popular and known ones are: (1) discounted cash flow (DCF) valuation, (2) relative valuation and (3) contingent valuation. The following section will briefly present the relative valuation and contingent valuation models, following by a more thorough presentation of the DCF model and the arguments of choosing the DCF model.

3.4.1 Relative Valuation

The relative valuation is widely used in equity research reports or acquisition valuation where the firm is compared to the existing firms operating in the same business using multiples such as PE. These firms are called comparable. The popularity of the relative valuation streams from its easiness and fastness of applicability in comparison to the DCF model. This valuation is easier to understand as well as to present to clients and customers. The relative valuation also is able to reflect the present disposition of the market, due to the fact that it attempts to measure the relative value (John Wiley and Sons, 2012).

Relative valuation compares the asset value of the firm with those assessed by the market for products that are similar or comparable to those of the firm. When performing a relative valuation it is important to identify the comparable assets first. Next, is essential to get hold of the market value of those assets and convert the values into standardized values, creating therefore price multiples. In the end, the analysed asset is being compared to the standardized ones, and the difference between them presents whether the asset is under or overvalued (Moini 2013).

There are four steps that aid in understanding multiples. The first step assumes defining the multiple, which can be defined in various ways depending on the users using it. Critical here is understanding the manner multiples have been estimated when someone else was responsible for the estimation. Next step is describing the multiples, which is followed by their analysis and the relationships that stream between each variable and the multiple. The application of the multiple is the last step on the understanding of multiples.

When comparing the values of firms that are similar and are performing in the same market, standardizing the value through prices can be performed by employing variables such as cash flows, earnings, revenues or book values. There are four multiples according to the standardized values:

1. **Earnings Multiples**

Earnings multiples are considered "*one of the more intuitive ways to think of the value of any asset is a multiple of the earnings the asset generates*" (John Wiley and Sons, 2012, p 454). This principle contains the following multiples:

- Price / Earnings Ratio (PE) and variants (PEG and Relative PE);
- Value / EBIT;
- Value / EBITDA;
- Value / Cash Flow.

PE is expressed through Market Price per share / Earnings per Share (ESP), where the price is usually the present price or in some cases the average price for the year. PEG is expressed as PE / Expected Growth Rate in Earnings. Many portfolio managers use the PEG ratio to identify under or overvalued stocks, where firms having lower PE ratios then their expected growth rate are considered undervalued. However, when comparing the PE ratios, there are no relevant arguments stating that if a firm has a lower PE than its growth rate the firm is undervalued, an interest rate decrease and less stock can make a firm undervalued when performing this approach (John Wiley and Sons, 2012). Relative PE is expressed as PE of Firm / PE of Market. Relative PE ratios are generally equated over time. The two variables of

the equation will increase and respectively decrease the firm's growth rate when the PE of the firm is higher than the market, or the firm's risk will decrease if the firm's risk relative to the market increases (Moini, 2013). The enterprise value to EBITDA or EBIT multiple is obtained by netting cash out against debt to arrive at enterprise value and dividing by EBITDA or EBIT.

2. **Book Value Multiples** comprise the following ratios:

- Price / Book Value (of Equity) (P / BV)
- Value / Book Value of Assets
- Value / Replacement Cost (Tobin's Q)

When estimating the accounting book value is essential to apply the accounting rules, since they are the ones influencing the original price an asset was purchased as well as other accounting alterations like depreciation. The relationship between the stock paid price and the value of the equity in books accountings is usually taken into consideration by investors. The price-book value (PBV) ratio can oscillate across industries because of the potential growth and the quality of the investments made.

3. **Revenues multiples** are considered the following ratios:

- Price / Sales per Share (P / S)
- Value / Sales

This method takes into account variables of both book and value. The revenue variable is can be scaled to either equity or enterprise vale. The ratio price-sales (PS) is used for equity investors, where "*the market value of equity is divided by the revenues*" (John Wiley and Sons, 2012, p 455), and the value-sales (VS) ratio is used for enterprise value, "*where the numerator becomes the enterprise value of the firm*" (John Wiley and Sons, 2012, p 455).

4. **Industry Specific multiples**

These multiples such as: Price / kWh, Price per ton of steel, present two drawback when being employed. First, these variables cannot be associated with other sectors of the whole market, since they can over or under value sectors comparative the rest of the market. Secondly, is very difficult in relating industry specific variables to essentials, which is considered a fundamental function of the multiples (Moini, 2013).

Even though the relative valuation is considered and easy to apply model its weaknesses can be derived from its strengths. The easiness of performing the valuation and comparing the firm's assets with a group of comparable firms can lead to inconsistent estimations by ignoring important variables such as risk, growth and cash flow potential. Another drawback of the relative valuation method is estimating the value of an asset by comparing it to the

market mood. Multiples that reflect the market mood can overvalue an asset when comparing it to other firms, or the opposite, undervalue it by estimating a lower value of the asset. "*The lack of transparency regarding the underlying assumption in relative valuations makes them particularly vulnerable to manipulation*" (John Wiley and Sons, 2012, p 454). A biased analyst can also choose the multiple when performing the valuation, therefore, he/she can choose comparable firms then can in the end justify nearly any value (John Wiley and Sons, 2012).

3.4.2 Contingent Claim Valuation

This valuation method claims that "*the value of an asset may be greater than the present value of expected cash flows if the cash flows are contingent on the occurrence or nonoccurrence of an event*" (John Wiley and Sons, 2012, p 23). This model has received more attention in the past years, then the model's initial use of valuing traded options, being extended towards a more traditional valuation. The new model valuation believes that assets such as patterns and emergent reserves should be valued.

A contingent option drives its value from an underlying asset, making the payoffs of an option only when the value of the original asset is superior that an exercise price that is explicit at the time the option is created, thus, making the option having a fixed life (Moini, 2013).

The contingent valuation model has two types of options: direct and indirect. The direct options can be: listed options, warrants, contingent value right and scores and LEAPs. The listed options are the treated assets issued, listed and traded on an option exchange. Warrants are issued by the company, they can also be called traded stocks, and they are frequently traded on the market. Contingent value rights are issued by the firm and traded on stocks as well. Scores and LEAPs are "*long term calls options on traded stocks, which are traded on the exchanges*" (Moini, slide 34, session 2).

Indirect contingency options can be the equity in a firm with negative earnings and high leverage, where the stockholders of the firm are considering liquidating it, this option being called option on the assets of the firm. The natural reserves owed by the firm are also considered indirect options on the underlying resource. The patent owned by a firm or an exclusive license is considered an option on the underlying product. The last form of indirect options is the rights of the firm to expand a current investment into new markets or products (Moini 2013).

The option pricing model of the contingent valuation allows analysts to value assets that previously were not possible to value. It is especially useful for firms with upset equity or stocks of a SME firm with no revenues and profits, where the discounted cash flow approach is difficult to be applied. The option pricing model also provides new insights of the drivers of value. Nonetheless, the option pricing models present disadvantages when valuating real options, by creating difficulties in obtaining the value of many of the inputs such as valuating untraded projects because of their variance.

The option pricing models develop its value from a core asset, making it important to first valuate the assets, which is an approach that descends from another valuation approach. This can also create a double counting of the assets, influencing the growth rate when applying the DCF model (Moini, 2013).

3.4.3 DCF valuation

The finance literature favors the DCF approach when evaluating a firm because the model perceives that valuation is not being affected by accounting methods. Penman and Sougiannis (1998) argue that an attractive valuation is easy to put into practice and understand allowing the person performing a valuation estimate a better firm valuation. Penman believes that valuation approaches that measure and show the value creation and easier to understand then the valuations showing value distribution. This makes the value creation measurements more analytically attractive (Plenborg, 2002).

The DCF approach measures the value of a firm form the interest of debt and equity holders. DCF approach concentrates in estimating the cash flows of a firm, thus putting a great importance on the value drivers that affect cash flows (Plenborg, 2002).

The quality of the forecasts represents an important aspect when performing a firm valuation. The free cash flows are the main focus in the DCF approach.

According to financial theory, the conceptual framework of DCF valuation approach is known as "*the fair market value of an ongoing business is the present value of its expected cash flows*" (Larrabee and Voss, 2012, p 105)

The calculations to perform a valuation through the DCF framework are considered simple, they require an addition of the present values of the individual cash-flows estimates from specific years. DCF approach is perceived the correct way to technically value a company, which can be very complex and subjective to perform in practice, even though it is deceivingly simple in theory (Larrabee and Voss, 2012).

The DCF formula calculates the value of the firm by reducing the cash flow (CF) for each time period (n) until its present value through the use of the compound-interest term $[(1+i)^n]$. Thus, the sum of the values form n time period equals the value of the company. It is possible to produce an adequate estimation of the next year cash flow, however, the degree of accuracy lowers when estimating each additional year cash flows (Larrabee and Voss, 2012).

In the real world, time periods attributed in calculating the value of a business using the DCF approach, the distant future is combined into one value which represents the estimated sales price (terminal value) in a specific point in time. Therefore, the value of the company becomes the one in equation 1 where estimations for cash flows are made for 5 or 10 years (CF_1, CF_2, CF_3 , …., CF_t) and in the end, the value of the company at the end of the period is estimated (TV_t) for the time it could be sold. These estimations are afterwards discounted to their current value at the valuation date, afterwards adding the present values to create the valuation (Larrabee and Voss, 2012).

Equation 1 Value of the Firm

$$Value = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t}$$

where:

n = Life of the asset

CF_t = Cash flow in period t

r = Discount rate reflecting the risk of the estimated cash flows

Source: Carter and Ejara, 2008, p 64

It is important that the expected cash flows to have positive values in a certain time in the life on the asset. Thus, the earlier in their life assets generate cash flows, the more value they have, than those that generate cash flows later. Nonetheless, later assets can also generate growth at higher cash flows, thus, compensating their later contribution (Moini, 2013).

DCF model valuates both equity and firm. Equity valuation is performed to value only the equity stake in the business, and it is calculated by discounting expected cash flows to equity at the cost of equity.

Firm valuation is calculated by discounting the expected cash flows to the firm weighted by their market value proportions. The future cash flows to the firm (FCFF) is the most preferred model when applied to DCF among academics (Koller, 2010), since the FCFF valuation is used when applying the DCF model captures the value of all capital providers to the firm.

After being acquainted with the DCF definition model and the advantages of using the model, the following section presents the required steps that need to be performed when applying the DCF model.

Cash flow estimations – step 1

When evaluating a firm, traditionally, the information arises from three sources: (1) the current financial statements of a firm which states the profitable manner a firm's investments are or used to be and the amount of reinvestments are made to generate future growth. (2) The past history of the firm which includes its earnings and market prices, where earnings and revenue history provide results of the firm's growth, and price history are sources that assist managers in measuring firm's risks. Finally, (3)a general overview of the firm's competitors show the performance of the firm in comparison to its competitors and help in estimating key inputs on growth, risk and cash flows (Carter and Ejara, 2008).

Cash flow estimations represent the first step in applying the DCF approach. Free cash flows or net cash flows are the typically used, and they are calculated as:

Equation 2 Free Cash Flow

Projected adjusted income after income taxes + reported depreciation and amortization – necessary capital expenditures – necessary working capital increases – debt principal repayments, sometimes also adjusted for the insurance of new debt

Source: Larrabee and Voss, 2012, p 106-107

Thus, free cash flow (FCF) is the sum of the sources of cash subtracting the capital expenditures. It is important to include these expenses because capital expenditures assure the presence of a company and its growth through the utilized working capital (Larrabee and Voss, 2012).

FCF (free cash flow) represents the cash flows a firm produces within a year after all cash expenses have been discounted. FCF represents the actual amount of cash a firm has that can be taken upon to seek opportunities increase shareholder value. These opportunities are either the development of new products, disbursing dividends to investors or purchasing own shares

It is important to estimate the components of free cash flow accordingly in order to generate a better estimation of cash flows. In estimating the current earnings and cash flows on the asset assumes estimating the current earning of the firm, thus, operating earnings after taxes (EBIT) for cash flows to the firm is to be taken into consideration. Future growth investments are also important to be taken into consideration. Thus, if the investment is not expensed, it is considered as a capital expenditure, and in this case depreciation will pay an important role

covering a part of the expenditures and providing cash flow. Increasing working capital needs are also investments for future growth (Moini, 2013).

The working capital (WC) of a firm is calculating by discounting non-debt current liabilities to operating assets. This represents discounting account payables from non-cash current assets, such as short-term borrowings and other financial liabilities, and account receivables such as inventories, accounts receivable and other current assets. Therefore, if the WC increases, the cash flows of the firm will decrease, and if the WC decreases, the cash flows of the company will increase in that period. This makes the WC is an important element when forecasting future growth, because its effects into the cash flows influence significantly the cash flows of the firm (Moini, 2013).

Discount rate estimation – step 2

The estimation of discount rate is the second step of DCF process. The discount rate is the rate of return an investor would require to be induced to invest in the cash-flow stream being discounted. Discount rates meet six important aspects:

- they are affected by the market
- vary with time
- depend on what is being discounted
- must be risk adjusted
- are based on yields available on alternative investments
- are inflation adjusted (Larrabee and Voss, 2012, p 108)

Discount rates are affected by external and internal factors. The external factors are: the general economic conditions, yields available on alternative investments and the industry's conditions and outlook. These factors provide valuable information of how the discount rate can be affected, such as the stability of the industry, its growth. The internal factors affecting the discount rate are: financial risk, operating risk and the risk that is related when assessing the cash flow stream. The financial risk inputs (leverage, coverage, turnover, return and liquidity) rise or lower the discount rate, where the risk in financial measures are directly proportional to discount rates, the higher the risk the higher the discount rates. Operating risk inputs (management, accounting methods, and stability of market, customer base and competitive position) influence the discount rates as well, for example aggressive accounting measures lead to higher discount rates, and conservative ones create the opposite effect, a stable customer base can lower the discount rate, as well as fewer competition. The last internal factor addresses the uncertainty matter on sales and predicted earnings, where

discount rates are higher in this case, opposite to the stable operating history and created relationships (Larrabee and Voss, 2012).

The discount rate is made by risk-free rate, the risk premium of equity and industry risk, and the company's specific risk (Larrabee and Voss, 2012).

Discount rate can be of cost of equity or of cost of capital. Discount rates can be in nominal or real terms, here the type of cash flows are being taking in consideration, such as nominal (which reflect the expected inflation) or real cash flows. The type of cash flows and their riskiness is consistent when calculating the discount rate. When evaluating a firm, it is important to estimate its cots of equity and debt. The cost of equity represents the return rate investors expect to make through the investments made in the firm. The cost of debt is the current rate at which a company can borrow adapted to any tax benefits related with borrowing. The relation between default debt risk and costs of debt is directly proportional, thus, higher default risk make firm predisposed to higher costs of debt, and lower default risk leads to lower costs of debt (Carter and Ejara, 2008).

The formula calculating the cost of equity is expressed through the capital asset pricing model (CAPM) where the cost of equity is:

Equation 3 Cost of Equity

Cost of Equity = R_f + Equity Beta [$E(R_m) - R_f$]

Where:

R_f = Risk-free rate

$E(R_m)$ = Expected Return on the Market Index Diversified Portfolio)

$E(R_m) - R_f$ = Market risk premium

In practice, the cost of equity should be higher for investments that are riskier, and lower for the safer investments (Moini, 2013). Cost of debt represents the rate at which a firm can borrow, and it reflects both the default rick and the level of interest rates in the market.

The Weighted Average Cost of Capital (WACC) "*is the weighted average of the cost of equity and the cost of debt based on the proportion of debt and equity in the company's capital structure*" (Moini, 2013, slide 20, session 1).

Equation 4 Weighted-Average Cost of Capital

$$\mathbf{WACC = W_e K_e + W_d K_d (1 - t)}$$

$\mathbf{K_e}$ = cost of equity

$\mathbf{W_e}$= E/V = ratio of the company's equity to its total value (equity + debt)

$\mathbf{K_d}$ = cost of debt

$\mathbf{W_d}$= D/V = ratio of the company's debt to the its total value (equity + debt)

Evaluating the terminal value – step 3

The terminal value represents the value of the firm's cash flows when it has reached maturity or stable growth, and it represents the last step in applying the DCF model. Calculating the terminal value assumes creating assumptions about the long-term cash flow growth (Moini, 2013).

The formula of the terminal value is expressed in equation 5, where the basic assumption is that the cash flows of the last projected year will stabilize and their growth will carry on at the same rate. The long term cash flow growth rate is an average growth rate, it is not expected it will occur every year into infinity, since markets change, competitors as well, and the lifecycle of products as well.

Equation 5 Terminal Value

$$\text{Terminal Value} = \frac{\text{Final Projected Year Cash Flow}}{\text{Discount Rate} - \text{Long Term Cash Flow Growth Rate}}$$

Source: Moini, 2013, slide 4, session 2

The firm value is thus expressed in the following formula:

Equation 6 Firm Valuation

$$Firm Value = \frac{FCF_1}{(1+r)^1} + \frac{FCF_2}{(1+r)^2} + \frac{FCF_3}{(1+r)^3} + ... + \frac{FCF_H}{(1+r)^H} + \frac{Terminal\ Value}{(1+r)^H}$$

Source: Moini, 2013, slide 7, session 2

Because the financial projections have their limitations, the value of the company is expressed as the sum of: the present value of cash flows and the residual value of the company. The present value of the cash flows is the sum of the current value of the dividends the company can pay the shareholders as well as the supplementary capital injections made by shareholders. The residual value or the terminal value is the discounted value which

results from the cash flows when the company generates in the last projected period. Figure 15 presents the major steps in evaluating a firm according to the DCF model.

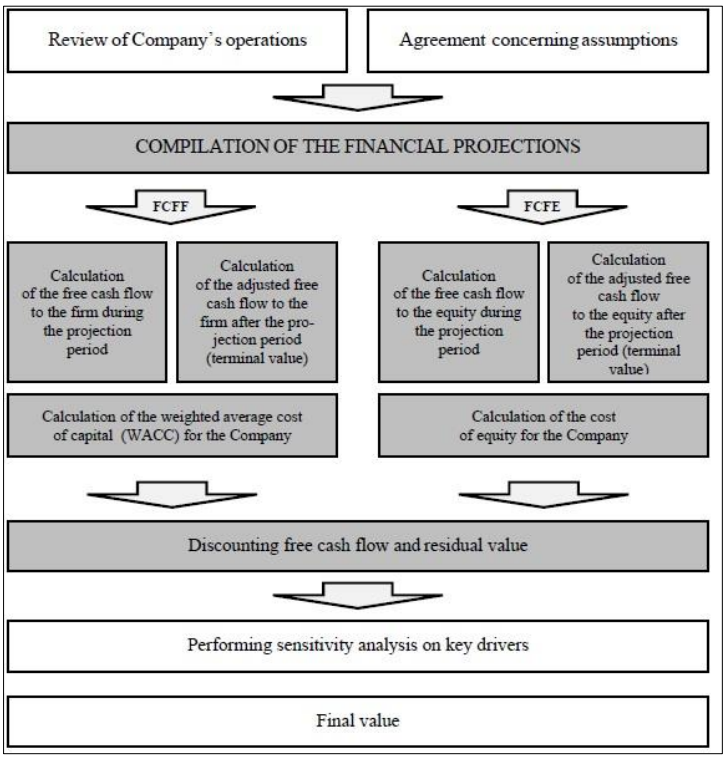

Figure 15 Steps in Evaluating a Firm through DCF Model

Source: Janiszewski, 2011, p 83

The length of financial projections is reliant on the projected performance of the valuated unit. Therefore, the length of financial projections is at least equal with the period a firm is expected to reach its stable growth, thus covering the time period of the mature cash before calculating the terminal value of the firm. The terminal value is determined when the firm reaches a stable growth rate (Janiszewski, 2011).

Future cash flow projections are less reliable in their estimations, therefore, it depends on the industry the firm is operating until calculating the stable growth of the firm. The longer the period of financial projections, the lower the impact of the terminal value of the company in the calculations (Janiszewski, 2011).

3.4.4 Discounted Cash Flow Limitations

When applying the DCF model, the forecasts of future cash flows and discounted rates encounter an issue of accuracy because forecasting the free cash flows and their values cannot be completely accurate due to unexpected changes of the market, unforeseen product attractivity or graduate changes in the macroeconomic environment. The terminal valuation of the company for the stable growth captures future cash flows, therefore, the level of cash

flows at the end of the forecasted period may be fault, making the calculations for the terminal value of the firm imprecise. It is difficult to estimate the fair value of the elements that lead to future cash flows results. Some of the growth estimations can have inaccurate levels of growth, changing overall the entire result of the terminal value (Wilson, 1997).

In terms of use of DCF, the model has been widely used by bankers and accountants. The DCF model and its techniques present considerable resistance when it comes to the adaptation of the standalone valuation. DCF valuations assume a high degree of numerical calculations, thus, they have become more popular from the 1980s due to the development of the desktops computing. Furthermore, the technique has been widely introduced and applied by a number of business schools, thus, it was mostly adopted by people who have been taught this method in academically institutions (Wilson, 1997).

Generally, DCF valuation calculates the absolute value of the firm, disregarding the comparative technique that is used by other valuation models. The problem of calculating absolute value arises when systematic errors affect the forecasts of future cash flows. DCF could be considered more suitable when assessing percentage differences between strategies.

The theory of DCF suggests that the model can be applied to any company, however, some practical difficulties arise. Since the model requires forecasting future cash flows for long periods of time, in case of highly cynical, volatile or exposed to dislocation cash flows, the technique is difficult to put into application. Lastly, a valuation performed by using the DCF model is influenced by the quality of the model used by the person calculating the future cash flows and the cost of capital. While some imputes of the calculations are correct, most of the growth estimations are based on the analyst estimation and perception, therefore, the DCF has a subjective side, where different people calculating the value of the company can reach to different values of the company based on their interpretations of growth (Wilson, 1997).

Nonetheless, the DCF model presents many advantages such as urging analysts to use a more rigorous modelling for future cash flows, the method is forward-looking and relies more on future expectations than on historical results. The method is also less influenced by changing external factors, relying more on the central prospects of the business or asset. The DCF is also more focused on cash flows and how future cash flow is generated, therefore, it is less influenced by accounting practices or suppositions[2].

[2] http://macabacus.com/valuation/dcf/overview

4 Analysis

The analysis chapter represents the result of combining transaction cost theory and resource based view. There the authors present how the theories are joined and how are they put into practice through the case of Activision Blizzard merger.

4.1 Theoretical Discussion

Transaction cost theory has been a dominant theoretical platform for discussion and analysis of the reasons and conditions for vertical integration of firms. It also offers well-established reasoning and arguments for alliances and thoroughly presents the "make-it-or-buy-it" dilemma. However, TCT falls short when it comes to explaining and investigating the conditions in which firms integrate horizontally. Although, theoretically the TCT does not refer to horizontal mergers and acquisitions, or horizontal alliances for that matter, the theory still has the underlying grand assumptions of uncertainty, asset specificity and bounded rationality. The authors consider that by combining the TCT underlying assumptions with the rationale and arguments of the resource-based view of the firm, the resulted combined framework will explain and showcase the conditions and essentials for achieving synergetic effects in horizontal mergers. This framework aims to explain the conditions and prerequisites which facilitate the achievement of synergetic effects when choosing horizontal integration. Transaction cost economics is a fundamental in economic theory and yet, its focus have always been vertical integration as an answer to minimization of transaction costs, safeguarding asset specificity and overcoming uncertainty in the environment. On the other hand, resource-based theory takes on another approach to reasoning why integration may be the optimal option and also extends its concepts and hypotheses towards horizontal integration and diversification. Combination of all the assumptions and reasoning of the two theories is impossible and would actually not serve the purpose of this thesis. What the proposed combined framework aims to do is to extend the underlying assumptions of TCT, relevant for the case of horizontal integration, and involve the rationale of resource-based theory, as an extension, to map out the pre-required conditions for achieving synergetic effect in horizontal integrations (see figure below).

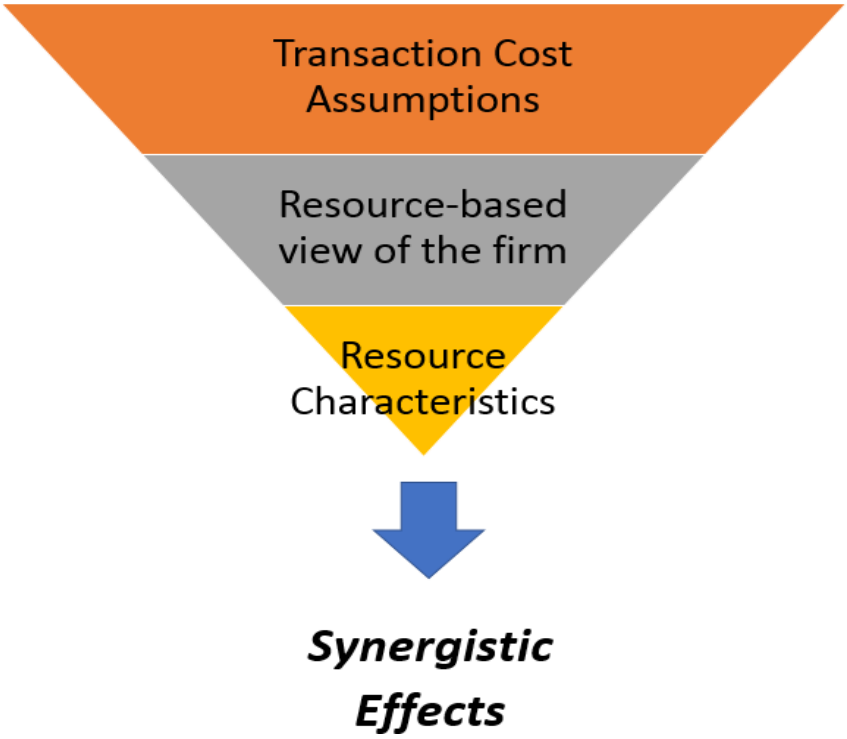

Figure 16 Combined TCT and RBV Framework

Source: own creation

In order to understand which of the arguments of TCT are most relevant to explain horizontal integration, below are compared contradicting arguments between TCT and resource based view:

- TCT claims that the existence of firms is caused by market failures. Coase (1937) as well as Williamson (1975) argue that when the costs of carrying out transactions in open market are greater than organizing these transactions, the firm is chosen as a structure to carry them out. Coase (1937) presents the key characteristic of the firm to be allocation of resources through authority relations, and not price mechanism. This view of the firm is the starting point of consideration of the firm as a bundle of resources, allocated through structured processes and authority relations to reach a goal. The RBV adopts this assumption as a starting point and develops further. Although RBV does not factor the reasoning behind the existence of the firm, this is not a contradiction but mere extension of the theory of transaction cost economics towards a different perspective.
- Where RBV differs from the TCT is that it does not concern itself as to why firms exist but rather why some firms perform better than others. For the RBV

firms are a collective of resources, some of which with potential to be transformed into productive services, bounded in an administrative framework (Penrose, 1959). The capability of the firm is defined by the capacity to perform an activity as a result of organizing and coordinating services of a group of resources. Penrose (1959) as well as Barney (1991) give thorough description of the firm from a resource perspective but the focus of discussion and arguments is on the different way that firms perform in the market. Thus, the RBV is relevant for this thesis because it seeks to understand and explain what makes firms outperform other firms.

- Key behavioural characteristics in TCT are bounded rationality and opportunism (Tsang, 2000) Opportunism in the eyes of transaction cost theorists refers to "*self-interest seeking with guile*" (Tsang, 2000, p. 217). Opportunism, however, is not considered relevant for the RBV. Bounded rationality refers to the behaviour of the agents in the business reality who strive to be rational but succeed only limitedly so. This is because of information asymmetry and limited rational perception of the business agents. This is an assumption recognized by RBV and is a fundamental factor in the uncertainty in the environment which influences the firm's strategy and performance. Bounded rationality in TCT refers to the complexity of business contracts and the impending opportunistic behaviour. Choosing a governance structure will minimize the opportunistic behaviour and will ensure safeguarding of the assets. In RBV bounded rationality is more concerned not with opportunistic behaviour of the opposing side but with the management's own bounded perspective of the reality. It is the manager's role to interpret the environment as well as the elements of the transaction and the RBV recognizes the inability of the individual to factor in all variables. Thus, the capabilities of the firm are bounded by the bounded rationality of its management (Tsang, 2000).
- The primary objective of the firm in TCT is economise on transaction costs through the choice of an appropriate governance structure, whereas the primary objective of the firm in RBV – "*maximisation of long term profits through exploitation of bundles of resources which create competitive advantage*" (Tsang, 2000, p. 217). One main criticism of the TCT is that it

concerns itself too much with the economizing of the transaction costs and does not pay any attention to value creation or striving for competitive advantage (Zajac & Olsen, 1993). Hence, the resource-based view moves away from the limited assumption that the ultimate goal is minimization of transaction cost and offers an objective which is more concerned with value creation – maximization of long term profits. Profits of course are roughly speaking the result of subtracting costs from revenues. So in technicality RBV takes into account both and can be considered an extension/expansion of the TCT (Tsang, 2000).

- The role of the manager/entrepreneur in the transaction cost theory is very limited. This is another key criticism towards the theory since it only assumes that the manager only "*coordinate [the] production within the firm by fiat*" (Tsang, 2000, p. 218). RBV recognizes the key role of the manager. Penrose's (1959) work of the growth of the firm pays much attention to the role of the manager who "*identifies and takes advantage of productive possibilities*" (Tsang, 2000, p. 218). The combination of TCT with RBV will enrich the transaction cost economics by introducing the perspective of manager's role in the creation of competitive advantage.
- Governance structure in TCT is determined by the degree of specificity of the asset in question. Asset specificity is related here to "*the degree to which the asset can be redeployed to alternative uses by alternative actors without loss of value*" (Tsang, 2000, 218-9). Certainly, in the analysis of asset specificity transaction cost theorists focus on the way that the asset specificity will influence the costs of the transactions. This is a limited view of the role of resource characteristics in the outcome performance of the firm. This is why, RBV is deployed to take a deeper, more thorough look at the assets characteristics and their influence on performance. Chandler (1992) develops the transaction cost theory and criticises earlier researchers by pointing out that if the firm is the focal point of analysis in the theory, then its resources, capabilities and skills should be the most significant aspect when arguing what should be produced by the firm and what by the market. The RBV takes a broader approach to resource characteristics and argues that resources do not

only influence the transaction costs but ultimately dictate the performance of the firm (Tsang, 2000).

Fundamental reason for opting for integration in TCT is high uncertainty over specifying and monitoring performance in addition to a high degree of asset specificity. The high degree of asset specificity means high transaction costs when trying to obtain the asset through factor markets. The high uncertainty over performance makes traditional transaction relationships costly to stipulate ex ante the complex conditions and contingencies for monitoring performance (Tsang, 2000). Relating to this argument, RBV can be viewed as an extension to the TCT; rethinking the TCT where some of the main arguments and assumptions which are still valid are kept and others are introduced to address gaps and areas not addressed by the original theory. TCT and RBV are complementary to each other because they both provide a partial view of reality and combining them will be beneficial. RBV compensates TCT when analysing transactions because it adds the value-creating perspective to the cost perspective. It also introduces and acknowledges the importance of the role of the manager. Thus, the transaction cost theory is enriched. Additionally, resource-based theory focuses on the nature of resources, their combination to create sustained competitive advantage and long-term profits. It expands the idea of just minimizing the transaction costs and completes the rationale of firm's strategy to perform.

Synthesis is required when addressing the boundaries of different theoretical perspectives. A comprehensive theory of the firm should be complex, integrating transaction cost, resource-based and performance-measuring reasoning (Tsang, 2000). The combined framework presented here seeks to do just that.

Arguments for initiating horizontal integration with this combined framework come from both TCT and RBV. The authors combine the arguments and reasoning for uncertainty in the environment as a fundamental cause of horizontal integration, relatedness of the resources from both TCT (when it comes to choosing a higher degree of integration in order to obtain and/or safeguard asset specificity) and RBV (integration is the right choice when resources of the acquirer and acquiring company are related, complimentary or co-specialized. The nature of the resources in question (both for the acquirer and the acquiring company) and the relatedness of the resources are determining factors to reach synergy when integrating.

With this combined framework the authors seek to extend the TCT by including theorising arguments for horizontal integration as well as the conditions in which these are profitable. In respect of RBV, the combined framework provides an extension to the positioning of the

theory relating to other theories and thus enriching the theoretical understanding of the resource-based view.

The first level relates to the conditions of uncertainty in the environment. Both TCT and RBV address this issue and as presented in the theoretical chapter, it is an underlying assumption. Uncertainty may be caused by the assumptions of bounded rationality and limited information as well as by the dynamics of the industry. In industries which are fast-changing and dynamic, the value of resources may change significantly ("is a subject of erosion"). The firms have to respond to these dynamic environmental conditions by redeploying, recombining or obtaining resources. Internal development of resources is a complex process, which is time-consuming as well as creates costs for the firm, so mergers and acquisitions is a way of firms to close any resource gaps they have identified and reconfigure their resource mix towards products which will ensure profit. The static characteristics of uncertainty are presented in the TCT, the dynamic ones are from the RBV (Eschen & Bresser, 2005).

The second level represents the characteristic of relatedness of the resources, offered by RBV. Resource-based and transaction-cost arguments suggest that firms are more likely to choose integrative governance forms when the activities that are subject to the transaction are similar to the firm's established activities (Coase, 1937; Penrose, 1959).

The relatedness between the firm and the activity that is subject to the transaction is associated with the choice of acquisitions over alliances, and alliances over divestitures. Research in both streams suggests proxying the level of information asymmetry by assessing the similarities in the parties' SIC codes. Their predictions yield a general asymmetric information-based hypothesis of governance choice that is consistent with the hypothesis of the resource-based and transaction-costs arguments (Villalonga & McGaham, 2005):

The relatedness between the focal firm and the target (or partner) firm is associated with the choice of acquisitions over other governance structures, because brand capital cannot be easily shared across partners except through extensive internal coordination of activities, advertising-intensive firms may opt for greater integration for their transactions. Because appropriability hazards are higher among direct competitors, these arguments are at least as likely to apply to horizontal expansion and contraction of firm boundaries as they are to diversification and internationalization. Thus:

- the firm's technological resources are associated with the choice of horizontal integration over other types of governance structures
- The firm's marketing resources are associated with the choice of horizontal integration over other options (Villalonga & McGaham, 2005).

Relatedness of the firms involved the addressing of the issue with the success of mergers and acquisitions. A number of studies has shown the low returns for acquirers in mergers and acquisitions (Eschen & Bresser, 2005). This is explained by the inability to relate the strategically valuable resources of the acquirer to the acquiring company. Eschen and Bresser (2005) argue that relatedness does not equal homogeneity, on the contrary, it relates to heterogeneity in the strategic bundles of resources of the firms. Only by combination of strategically valuable resources which is not applicable to other bidders, can a potential merger result in synergy. This is the only condition which will ensure synergistic effects for both the acquirer and the acquired company.

When horizontal merger (acquisition) is deployed in order to obtain new or recombine old resources, the resources and capabilities of both firms are transferred, redeployed or even divested in different entities within the combined firm. Resource-based theorists, however, point out that only resources and capabilities which are strategically valuable and complementary to each other can be combined to create synergy. "*The complementary recombination of existing and new resources may result in new bundles of resources that match external requirements in a better way than existing bundles in either firm prior to the merger*" (Escher & Bresser, 2005, p. 172)

The third level involves the characteristics of the resources and the combination of resources as a cause to seek horizontal integration. Companies aim to close their resource gaps by obtaining new resources or recombining existing ones. The main assumption in the argument for resource recombination is that resources are rarely valuable by themselves. In practice, no single resource may be attributed to the creation of sustained competitive advantage. Therefore, combination of resource is much more likely to be a source of value-creation. Value can be created by combining resources if the resources which are combined are complementary, related or co-specialized (Lockett, Thompson and Morgenstern, 2009). In the aspect of resource recombination it is essential to mention the role of firm capabilities. A capability is "*defined as the firm's ability to undertake a productive activity, which is created through the simultaneous deployment of resources and factors of production*" (Lockett, Thompson and Morgenstern, 2009, p. 14)

Generically complementary resources are such that are not specifically fitted to other resources. They are assumed to be easily replaceable but they are abundant and serve the operations of the firm. Specialized resources are resources which can only be deployed in combination with other resources. Specialized resources cannot create value if they are not paired with their correspondent resource. Co-specialized resources are those with bilateral

dependency. This means that when combined with correspondent resource, the value of both is enhanced. Co-specialized resources are strategically valuable independently but when combined they offer additional synergistic effects. Specialized resources can be strategically valuable only if combined with its correspondent resource. Thus synergistic effects can be sought from only specialized and co-specialized resources (Escher & Bresser, 2005).

Following the arguments above the authors propose arguments for combining TCT and RBV:

Argument #1 the TCT can be related to horizontal mergers when combined with resource-based view to explain horizontal mergers which occur in order for the companies to obtain complementary strategically valuable resources.

Argument #2: In the case of firms with large capital which have already a reputation in the market and growing revenues, hierarchical governance is more efficient than hybrid one due to the safeguarding issues as well as the contract implications signed between the parties involved. This will create a more trustworthy relationship between the parties and will enhance productivity such as superior skills and knowledge.

Argument #3: Firms will tend to form horizontal integration, but when it comes to high asset specificity and uncertainty, big companies with high financial power will engage in hierarchical governance to assure the safeguarding element.

Argument #4: The combined framework presents a structured synthesis of the arguments for entering a horizontal integration option in order to achieve synergistic effects (competitive advantage). It shows under what conditions and prerequisites can this be achieved.

Competitive advantage in the case of the horizontal merger would mean that the newly combined firm deploys a combination of resources which is unique to the industry and leads to abnormal profits. Synergy in the financial literature refers to the increased value of the combined firm in comparison to the sum of the values of the standalone firms (Escher & Bresser, 2005). A main assumption of the combined framework is that the synergy created from recombination of strategically valuable resources will materialize in a competitive strategy of the merged company and result in competitive advantage for the firm.

Taking into account all aforementioned arguments and assumptions, the combined framework proposed by the authors is depicted as such:

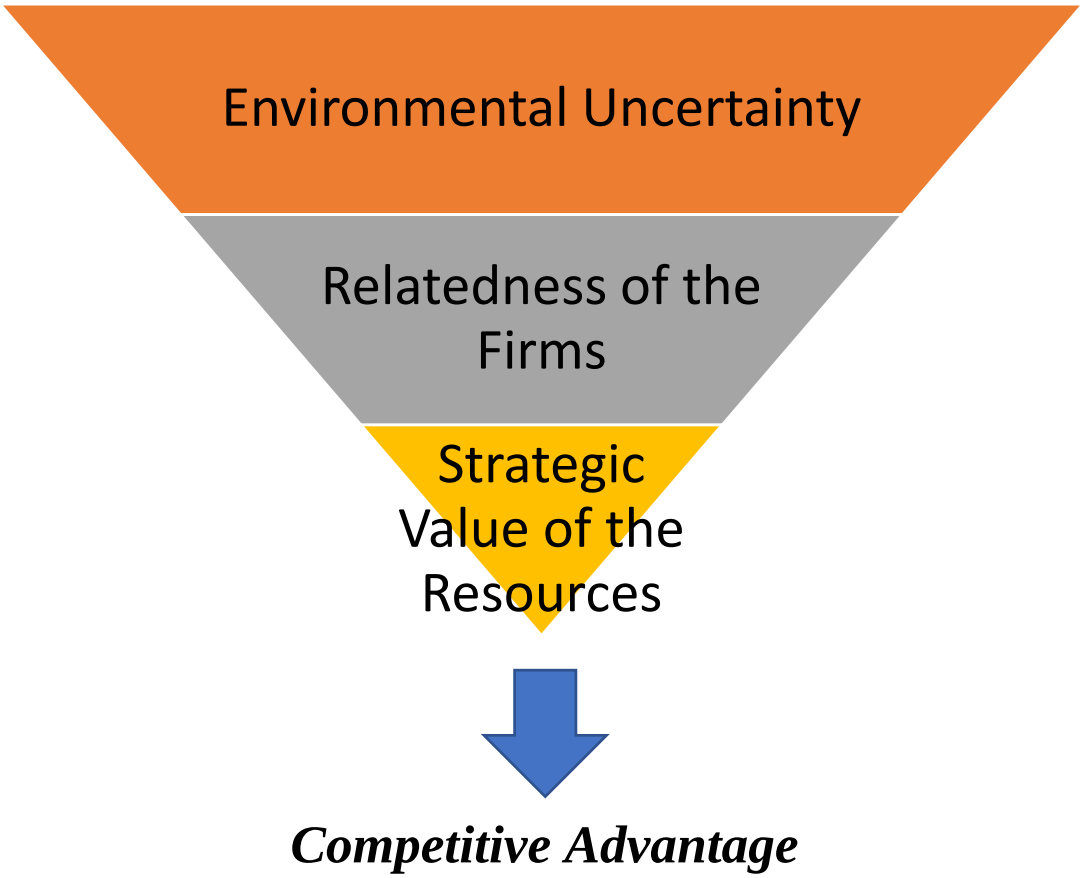

Figure 17 Combined Framework of Achieving Competitive Advantage

Source: own creation

Exploring the conditions and prerequisites for the creation of competitive advantage is just one side of the topic of this thesis. Once, the circumstances under which competitive advantage is created are presented, the authors move to put the combined theoretical framework into the case of the merger of Activision and Blizzard Entertainment in 2008. This is required in order to test the consistency of the framework, to explore if the circumstances and prerequisites, presented above, are valid in the case of the merger. Additionally, the authors seek to further the knowledge created and explore the consequences of synergistic effects on the industry and the competitors of the firm. The reasoning behind this analysis is not only to answer the problem statement but also to ensure that the theoretical framework is applied in practice.

In order to answer the second research question, the following arguments are proposed by the authors.

Argument #5: The synergy created from the horizontal merger will lead to increasing operational efficiency and cost savings thus creating competitive advantage

Argument #6: Following the horizontal merger, the overall performance of the industry will be positive.

Argument #7: Following the horizontal merger, the operating performance of the competitor will be negative.

Gennaro Bernile and Evgeny Lyandres (2013) have published a thorough quantitative study on "The Effects of Horizontal Merger Synergies on Competitors, Customers and Suppliers". The study involves quantitative data from a large number of horizontal mergers and a group of hypotheses on the effects of the synergy created by the merger on competitors, customers and suppliers in the industry. Inspired by their quantitative research, the authors seek to focus the conclusions of the quantitative study towards one qualitatively treated case of the merger of Activision and Blizzard. This thesis relates the quantitative study of the effects of synergy-creating horizontal mergers on the industry and the competitors, conducted by Berline and Lyandres in 2013, by seeking to test their hypotheses within this specific industry and in a qualitative manner. Thus, the authors aim to enrich their case research as well as prove the consistency of the combined framework.

The arguments are supported by presentation and valuation of the merger and an industry analysis of the interactive entertainment industry (gaming industry). The authors use a simple combination of description and historical following of the growth of the industry as well as its size, distribution, ratios and trends in the following section.

4.2 Industry Overview

The first section of the analysis chapter deals with the overview of the interactive entertainment industry in 2007-2008, the time of the merger between Activision and Blizzard Entertainment. It includes industry size and distribution as well as an overview of the growth and trends of the industry. It sets the grounds for understanding the nature of the industry as well as provides a point of reference to depict the influence the merger has had on the industry.

4.2.1 Size and Distribution

The size and structure of the interactive entertainment industry has undergone a drastic change from the beginning of the 2000s. Its size in terms of revenue has been growing even during the times of global recession (PwC, 2011). The following figure presents the growth of revenue in the industry across platforms.

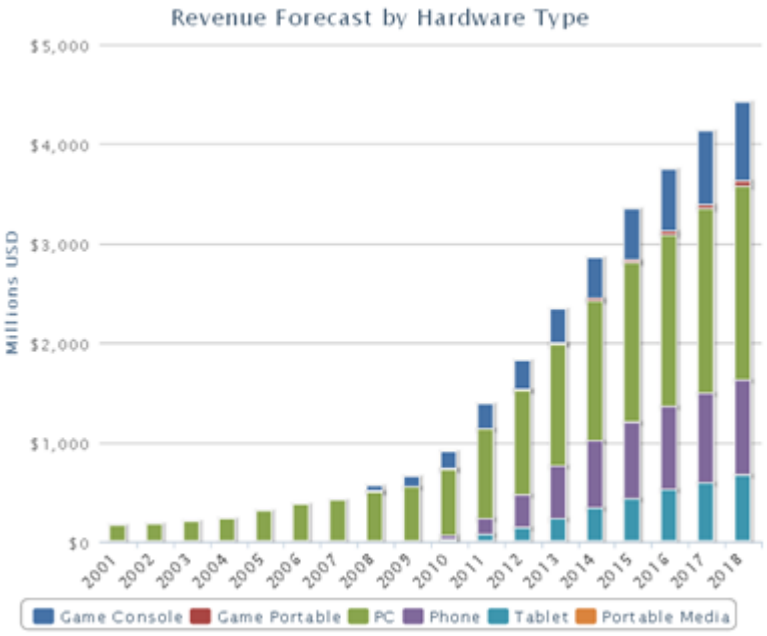

Figure 18 Revenues in the Interactive Entertainment Industry

Source: DFC Intelligence, 2014

The number of companies operating in the global interactive entertainment industry is unclear but only in the USA, 7462 companies are identified in the 51120 NAIC code. The size distribution shows a defragmented industry with majority of companies identified as micro companies with less than five employees (see graph below).

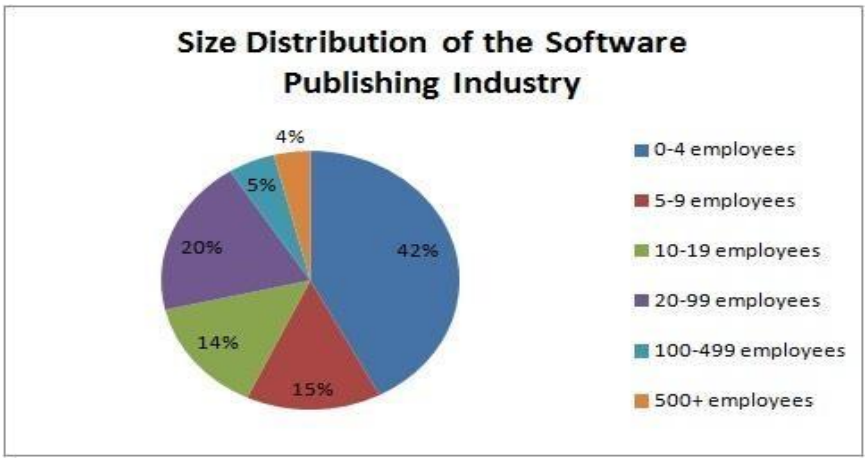

Figure 19 Size Distribution of the Software Publishing Industry

Source: own creation, data from the US Census Bureau 2012

The following graph depicts the revenue and market share distribution in the industry in the years before the merger of Activision and Blizzard Entertainment was initiated:

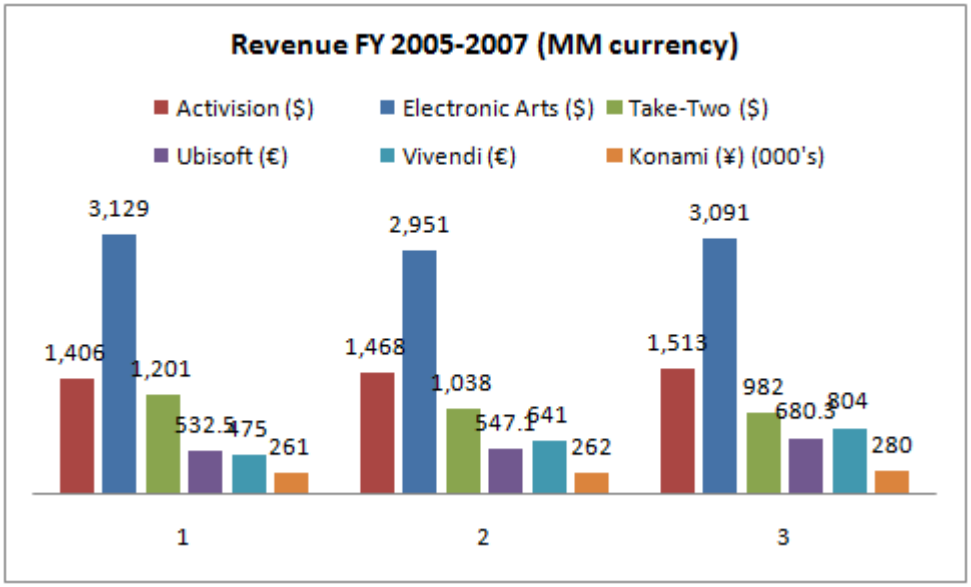

Figure 20 Revenues and Market Distribution 2005-2007

Source: Hsieh, Tan and Greene, 2007

Hsieh, Tan and Greene (2007) report $40 billion in revenues for the global interactive entertainment industry with Electronic Arts presenting the market leadership position during the three years. As seen from the graph Activision is the runner-up with $1.4 billion in revenues across the three years. Focusing on 2007, the authors present the following table including the revenues (converted in US dollars with average exchange rate for 2007) for the six companies and the percentage of market share.

Company	Revenue 2007 (mln $)	Share (%)
EA	3091	7.12%
Konami	2380	5.49%
Activision	1513	3.49%
Vivendi	1101	2.54%
Take-Two	982	2.26%
Ubisoft	931	2.15%
Total	9998	23.05%
Total Industry	43383	100.00%

Table 1 Revenue and Market Share in 2007

Source: own creation, data: Hsieh, Tan and Greene, 2007 and PwC 2011

As seen from the table, the market leader takes only 7.12% of the whole industry earnings in 2007. This is partly due to the fact that the overall software segment is fragmented, involving

a high number of small companies, taking less than 1% of the market share. Additionally, the hardware and infrastructure segments are not represented here, although they are accumulating significant revenues due to the prices of gaming consoles, hand-held consoles and distribution fees. Market share and leadership is represented by the revenues accumulated by the participants in the industry. Given the diverse revenue streams, which publishers possess – offline and online sales of games, in-game transactions; microtransactions and subscriptions, mere analysis of the game sales will not represent the reality of market which the participants control. Thus, the authors analyse the net revenues the companies indicate in order to evaluate their positions in the market.

4.2.2 Growth and Trends

The interactive entertainment industry includes personal computer games, console handled games, online games and wireless games (PwC, 2011). PwC (2011) conduct an extensive analysis of the interactive entertainment industry, showing consumer spending and revenues from 2007 with projections to 2016. The growth of the market in 2007 and 2008 was respectively 25.5% and 21.3%, which shows strong growing industry. With growth rates which are above 10% a year the industry offers attractive investment opportunities. In revenues the growth of the industry, presented in the following graph, shows that the industry is within its growth stage of life-cycle.

Global video game market by component (US$ millions)

Component	2007	2008	2009	2010	2011p	2012	2013	2014	2015	2016	2012–16 CAGR
Console games	26,964	32,006	30,106	28,946	27,493	27,106	26,861	27,703	28,899	30,477	
% Change	28.4	18.7	–5.9	–3.9	–5.0	–1.4	–0.9	3.1	4.3	5.5	2.1
Online games	7,897	10,829	12,921	15,019	16,796	19,475	22,225	25,071	28,176	31,394	
% Change	37.4	37.1	19.3	16.2	11.8	16.0	14.1	12.8	12.4	11.4	13.3
Wireless games	4,176	5,729	6,748	7,815	8,789	9,901	11,008	12,114	13,194	14,249	
% Change	25.1	37.2	17.8	15.8	12.5	12.7	11.2	10.0	8.9	8.0	10.1
PC games	4,346	4,055	3,798	3,777	3,462	3,375	3,312	3,252	3,195	3,141	
% Change	–3.1	–6.7	–6.3	–0.6	–8.3	–2.5	–1.9	–1.8	–1.8	–1.7	–1.9
Total end-user spending	43,383	52,619	53,573	55,557	56,540	59,857	63,406	68,140	73,464	79,261	
% Change	25.5	21.3	1.8	3.7	1.8	5.9	5.9	7.5	7.8	7.9	7.0
Advertising	1,066	1,403	1,628	1,902	2,183	2,492	2,800	3,103	3,414	3,715	
% Change	55.2	31.6	16.0	16.8	14.8	14.2	12.4	10.8	10.0	8.8	11.2
Total	44,449	54,022	55,201	57,459	58,723	62,349	66,206	71,243	76,878	82,976	
% Change	26.1	21.5	2.2	4.1	2.2	6.2	6.2	7.6	7.9	7.9	7.2

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Figure 21 Interactive Entertainment Industry in Revenues by Component

Source: PwC, 2011, p.350

Keppler (1997) identifies four stages in the life-cycle of an industry – introduction, growth maturity and decline (see figure below).

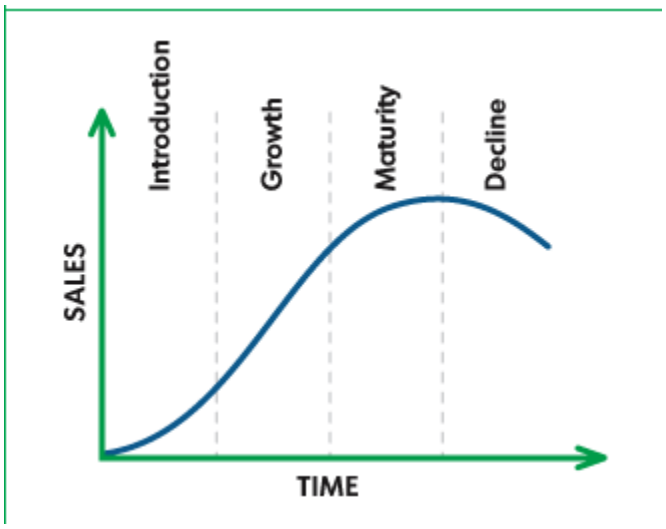

Figure 22 Industry Life-Cycle

Source: adopted from Keppler, 1997

In order to establish that the interactive entertainment industry is within its growth stage, a continuous growth should be proven. GameIndustry International (2011) offers a comprehensive data on the growth of the industry from 2004 onwards, congregated by platform.

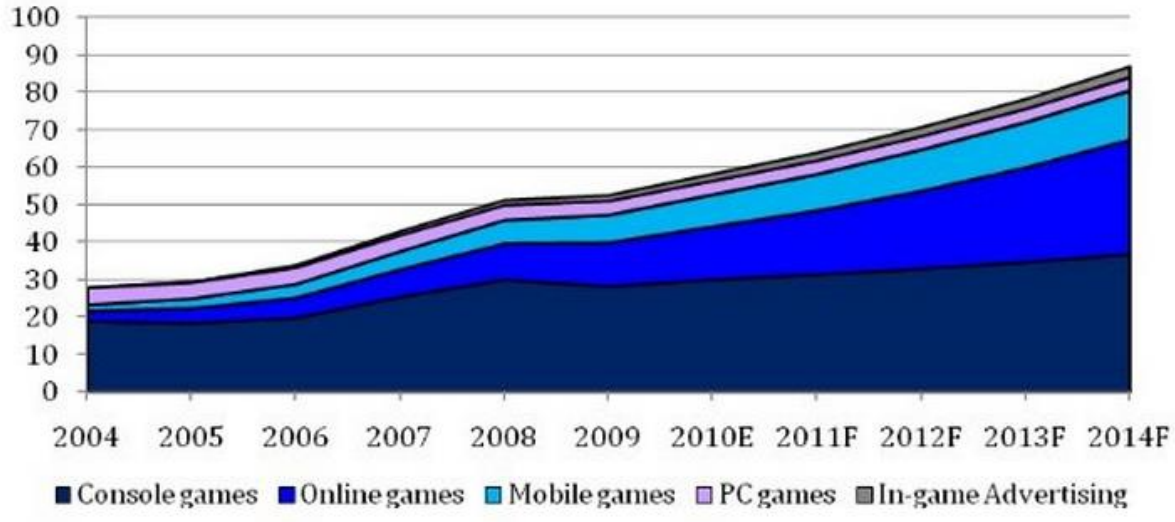

Figure 23 Growth of the Interactive Entertainment Industry from 2004 to 2014

Source: GameIndustry International, 2011

As depicted the largest segment is the console games, where Activision, Nintendo and EA are market leaders. Online games are the second biggest segment growing progressively

throughout the period. The continuous growth of the industry suggests that it was within the growth stage of its life-cycle. Additionally, the data for investments in the industry presented in the graph below further supports this.

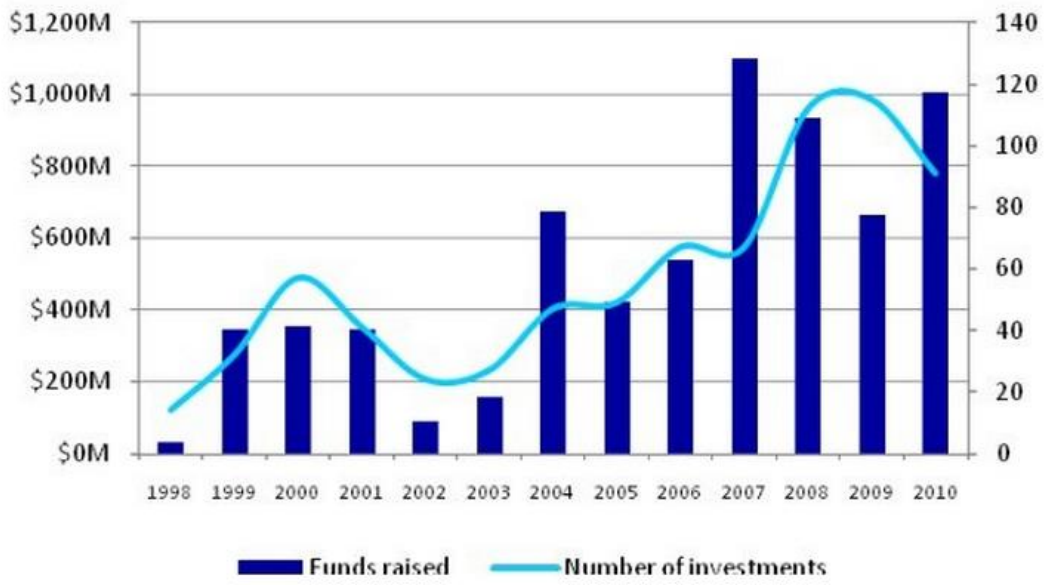

Figure 24 Size of Investments in the Industry between 1998 and 2010

Source: GameIndustry International, 2011

The above-presented data shows a growing, fragmented industry, with steadily growing investment opportunities and dynamically changing customer bases. Growth rate in 2007 for the global interactive entertainment industry was a little above 25% and the customer spending was $44.4bln (PwC, 2011). In order to explore if the merger between Activision and Vivendi's Blizzard Entertainment has caused the industry to grow, the authors offer another look at the performance of the industry in after 2010. It is important to be noted that the two year gap is taken to account for the time lag between post-acquisition integration and creation of synergistic effects.

4.2.3 EA overview in 2007

After having been introduced with the industry's definition, trends and growth rates, the biggest player in the entertainment industry is presented.

Electronic Arts (EA) is one of the largest publisher, developer and distributor of entertainment software for console, PC, handheld and mobile platforms in the world. The company has its headquarters in Redwood City, California and was founded in 1982 by Trip

Hawkins. The company offers a wide range of game genres such as: action-adventure, casual games, sports, family racing, music, strategy and role-playing.

In 1991, Trip Hawkins decided to leave the company and focus on other projects, giving the management of the company to Larry Probst, the former marketing director of the company[3]. Probst strategy was to aggressively pursue and acquire new companies. From the moment the company become public in 1989, EA began is expansion by investing heavily to assure its growth. Between 1991 and 1998 EA has made numerous acquisitions with the most famous company acquired in 1997 being Maxis, the hit developer of The Sims franchise. In 2004 EA signed a five years exclusivity contract with NFL and NFLPA, the exclusivity license being reported as of $400 million dollars and with the deal to be implemented from 2005. In 2005 EA acquired the ESPN license for a period of 15 years which would begin in 2006, for $800 million. EA also, purchased the sole third-party rights to Major League Baseball in 2005 for a period of seven years. EA's strategy was to become leader of the sports game market, which was estimated at a $1.2 billion in 2004.

In 2006 EA decided to enter the mobile market, therefore acquiring Jamdat Mobile, Inc. Mythic Entertainment, the leading independent developer in the online space, the studio developing MMORPG games such as Dark Age of Camelot and Warhammer Online was acquired in October 2006. EA acquired Digital Illusions CE, the creator of the Battlefield series and signed a 6 year licensing agreement to publish games such as Monopoly, Scrabble, Nerf, Tonka, and Littlest Pet Shop. VG Holdings was acquired in October for $800 million. Thus EA become the new owner of developers Pandemic Studios, responsible for the hit game Star Wars: Battlefront, and BioWare Corporation, responsible for the successful games of Baldur's Gate and Mass Effect[4].

At the end of 2007 EA had four distinct labels: EA Sports, EA, EA Sports Big and Pogo (EA, Annual Report 2007). EA Sports label is renowned for its successful franchises and bestseller of FIFA, NFL Hockey and its licensing contracts with NBA and NASCAR. The EA Sports franchise is considered one of the company's main strategic advantage, giving EA a monopoly in the sports game industry[5].

EA label has a great variety of non-related sports games with notable titles such as Skate, Speed Battlefield, Rack Band, Army of Two and the world wide successful game: The Sims.

EA Sports Big is the extreme sports brand that includes sports like snowboarding, soccer, etc.

[3] http://www.ea.com/history
[4] http://www.allgame.com/company.php?id=430
[5] http://www.allgame.com/company.php?id=430

Pogo label develops digital games for on most of the devices available. The main focus of the label is within the online environments and mobile devices, which are downloadable and online games. The most famous games within the label are The Simpsons, Monopoly and Tetris. Pogo platform can also be used for casual games, and it also has a subscription based system where consumers can download and upgrade their account of the Club Pogo[6].

In 2007 EA declared net revenue of $3.091 billion, which is a 5% increase compared to the net revenues in 2006, of $2.951 billion. The company's gross profit, which is the difference between revenues and cost of goods sold, achieved the value of $1.879 billion, with an overall increase yearly of 6%. This demonstrates EA's management ability to use the labour and suppliers in the production process. Net income demonstrates a company's ability to be profitable over time. EA's net income in 2007 was $76 million, which has decreased compared to 2006, which was of $236 million (EA, Annual Report 2007).

EBIT in 2007 was of $1,251 million 2007, $1,506 million in 2006 and of $1,866 million in 2005, it can be observed the decreasing trend of the EBIT by 22%.

An important event that occurred in 2007 was the change of EA's CEO. Larry Probst handed its position to John Riccitiello former President and Chief Operating Officer of EA between 19954 and 2004 (Friz, 2007). In 2007 the company announced that the company will reorganize its divisions and labels and will target an aggressive growth (EA, Annual Report 2007).

4.3 Rationale for the proposed merger

On December 1st 2007 the agreement to combine Vivendi Games with Activision in order to create Activision Blizzard was signed. The merger combines the number 1 software publisher in the US with the number one online PC Company in the world. The merger enables the newly emerged company to become one of the dominant players in the industry (Vivendi Annual Report 2007). This will allow Activision to add a new line of revenues from the online subscriptions of Blizzard, therefore, the company will have a more consistent perpetual revenue streams. Another advantage will be the allocation of revenues within the company, as well as the possibility to expand the working capital toward new investments and move towards the online segment of the industry. The combined companies will be able to compete on the same level as their biggest competitors. According to Bobby Kottick the

[6] http://danieljosephdemaiolo.files.wordpress.com/2011/10/ea-games-case-2.pdf

new merger is expected to create millions gain in synergies. The companies plan to expand their global customer base and enter new markets.

The merger will assure that the newly formed and wholly-owned subsidiary of Activision will become wholly-owned by Vivendi games, Vivendi receiving 295.3 million newly issued shares of the Activision common stock. The merger will assure that Vivendi pays a purchasing price of $1.731 billion in cash which is the equivalent of 62.9 million shares of Activision of a $27.50 price per share. This makes Vivendi owning 52.2% of the newly formed subsidiary (Vivendi Annual Report 2007).

After 5 business days after the transaction, Vivendi purchases at the amount of $700 million newly issues shares by Activision Blizzard, making Vivendi holding 68% of Activision Blizzard's issued and outstanding shares.

The new company (Activision Blizzard) creates new credit facilities for the company, allowing it to borrow up to $400 million, of which $375 million are designed for working capital purposes (Vivendi Annual Report 2007).

The new merger is predicted to create significant growth because of the announced release of hits such as WoW in 2008, which will have a great impact of the Activision Blizzard revenues streams and will assure a solid growth in the online segment. The year 2008 also predicts new console releases for hits as: Call of Duty: World at War, Guitar Hero World Tour and James Bond: Quantum of Solace and. In the PC area, the anticipated release of Starcraft II and Diablo III will continue to assure and strengthen the revenues.

If the two companies are able to integrate their activities and complement each other's resources and intellectual capital with a well management guidance, then then new company that emerges from the merger will be prepared to face competition better and influence and shape it in the future.

The merger allows is in line with the growth strategy of Activision, allowing the company to expand within the online games and increase its focus in a market that presents a great potential and development in the future.

The merger has positive effects for both of the companies allowing them to develop games at a better capability and utilize the knowledge of software and human resources to distribute software products to the end consumer.

In terms of the relevant market, both companies are developers and publishers of game software, however, Vivendi is active in the music publishing and recording through its wholly-owned subsidiary Universal Music Group. Because of this the company is licensing its rights to game publishers, Activision being one of the companies Vivendi is doing

business with. On the other side, Activision is a wholesale distributor of game software as well as a supplier of logistic services to third party game publishers. The transaction between the two companies will generate a great impact on the gaming industry within all the active areas the two companies are operating (European Commission, 2008).

Even though Activision and Vivendi Games are operating and competing on the general market of publishing of game software, the two companies are not considered in direct competition with each other. Even though the two companies are directly competing within the offline games for consoles and handhelds, the nature of activities within this sector is perceived as complementary. Activision generates approximately 80% of its revenues form offline games such as consoles, while Blizzard's revenues are mostly derived from online games, WoW generating $1, 221 million, which is amounted as for 70-80% of the overall Vivendi Games revenues. All of these aspects and the different focus on products classify the two companies as not direct competitors (European Commission, 2008).

The merger between Vivendi Games and Activision has the great potential of creating a leading publisher of software games. The merger between the companies is perceived as a horizontal merger due to the differences the two companies have in terms of product focus (European Commission, 2008).

In regards to the online games the effects of the merger will not impose great increments to the market. Vivendi Games have a strong position within the online games sector, with revenues of $1,527 million.

On the other hand, Activision does not currently generate revenues from online games. From this perspective, the mergers can be perceived as a horizontal merger. Activision is not considered as a competitor to Vivendi games in the online sector, therefore, Activision will not add any additional market share to the already high market share of Vivendi Games (European Commission, 2008).

4.4 Stand-alone and Merged Valuation

The following section comprises of the valuation of the companies before and after the merger. The aim of this section is to provide an analysis of the companies in order to support the following argument:

Argument #5: The synergy created from the horizontal merger will lead to increasing operational efficiency and cost savings thus creating competitive advantage

The literature review chapter presented the valuation theories where the DCF model has been chosen to evaluate the merger as well as the value of the combined companies. Before reaching the value of the merged companies and the values of the synergy streaming form the transaction, it is important to first perform a separate valuation for each company. Thus, it is necessary forecasting future performance for each company and modeling it in accordance to the potential value creation opportunities. This comes in the form of potential growth which gives the necessary information to execute the valuation. The valuations of the companies are done based on the gathered data of the companies' past performance and their past growth. The past performance is assessed using public information available through the companies' web site and annual reports. Internal or private information of the companies available to the management of employees is not included in the valuation. Three years historical information of Activision and two years historical information of Vivendi is employed to create growth comparisons and to forecast future growth and cash flows. The high growth rate of Activision and Vivendi is estimated to be of 5 years, following a stable growth of 7.9%. It should be noted that assessments for future performance are subjected to uncertainty, because as the DCF model states, the valuation and the future cash flows depends on the predictions made in the time the calculation were made.

It should also be taken into account that the following valuation is purely executed as an exercise to calculate the merger of the companies. The 5 years estimation of the high growth period has been chosen because of the difficulty of estimating adequate future cash flows, of the degree of accuracy that lowers for estimating the additional year cash flow. Since the literature acknowledges that cash flow estimations are made for 5 to 10 years, and based on both the company's annual reports and industry trends, a more accurate calculation of future cash flows can be done based on the information of future trends for the next 5 years.

In regards to the growth estimations, the literature notes three sources of predicting growth: (1) the current financial statements of a firm, (2) the past history of the firm which includes its earnings and market prices, and (3) a general overview of the firm's competitors. The firm's historical growth rate has been chosen to estimate the growth rate of past earnings. This method has been chosen because it can be employed for firms with stable growth, and both Activision and Blizzard are companies operating on the market for at least 15 years, thus, making the calculations more reliable. It should be taken into consideration that the method of comparing the companies' performance in comparison to its competitors has been dismissed due to the overall purpose of the thesis, which is not creating financial calculations on an analyst level, but to present arguments on a theoretical level. The DCF model and the

valuation of the companies is perceived as part of estimating synergies and market performance of the merger, however it is not the central focus.

The arithmetic growth rate has been chosen to estimate future growth because of the small differences encountered when performing either arithmetic or geometric average when evaluation a historical growth of less than 3 years (Carter and Ejara, 2008).

The stable growth of 7.9% in the case of Activision was chosen based on the calculations performed by done by PricewaterhouseCoopers in 2007, which is considered a reliable institution of providing data in regards to future trends of the industry. The stable growth applied for the valuation of Vivendi Games is of 3.5%, this growth being stated in the annual reports of Vivendi group, and is considered a more reliable tool when valuating Vivendi Games due to the inside information the financial analysts of the company have at their disposal. The last step of identifying the synergies streaming from the merger is to valuate both of the companies in 2010. The year 2010 has been chosen because the merger is announce at the end of 2007, and is expected to be completed in July 2008, therefore, a more accurate financial information about the performance of the merged companies between 2008 and 2010 will be possible, as well as a better indicative of estimating future cash flows and their growth based on three years historical reports. The stable growth of Activision Blizzard is once again chosen from the estimations of PricewaterhouseCoopers in 2010, making the overall entertainment industry growth of 5.7%.

The currency aspect should be also taken in consideration when performing the valuation, therefore, the authors have applied the equivalent of €1 for $1.50 based on an assumed exchange rate according to Vivendi 2007 Annual Report.

4.4.1 Activision Standalone Valuation

The following section presents the valuation of Activision stand alone. The revenues evolutions, as well as the most important components in calculation the FCFF are reviewed.

Revenues

The table below shows that Activision revenues stream mostly (75%) from the console platforms. The console platform generating $ 1.125 billion, hand-held amounting of 275.61 million and the PC amounting for 111.9 million from the total 1.513 billion in 2007.

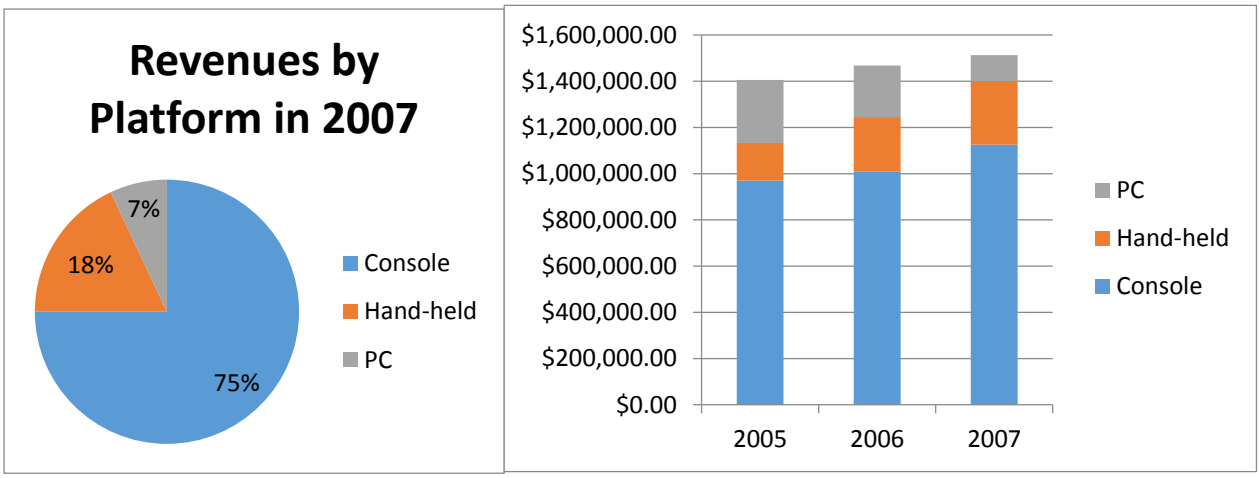

Table 2 Activision Revenues by Platform in 2007

Source: own creation, data: Activision Annual Report 2007

Revenues by platform and their changes in growth for three financial years in table 2 shows that Activision has managed to increase its revenues in the console platforms having an average of 8% increase. The hand-held platform has increased its revenues as well with an average of 31%, however, the PC revenues have shown a decrease of revenues, with an average of 34%.

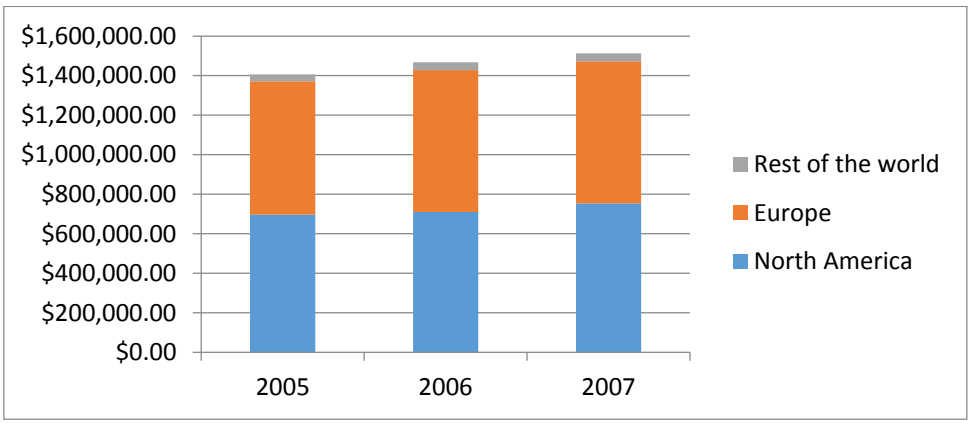

Table 3 Activision Revenues by Region 2005-2007

Source: own creation, data: Activision Annual Report, 2007

The revenues by region in table 3 shows that Activision is mainly focusing on North America and Europe, where the revenues from the total annual revenues of 2007, 2006 and 2005 represented on average 50% for both North America and Europe, while the rest of the world would generate revenues of 3% on average for the company.

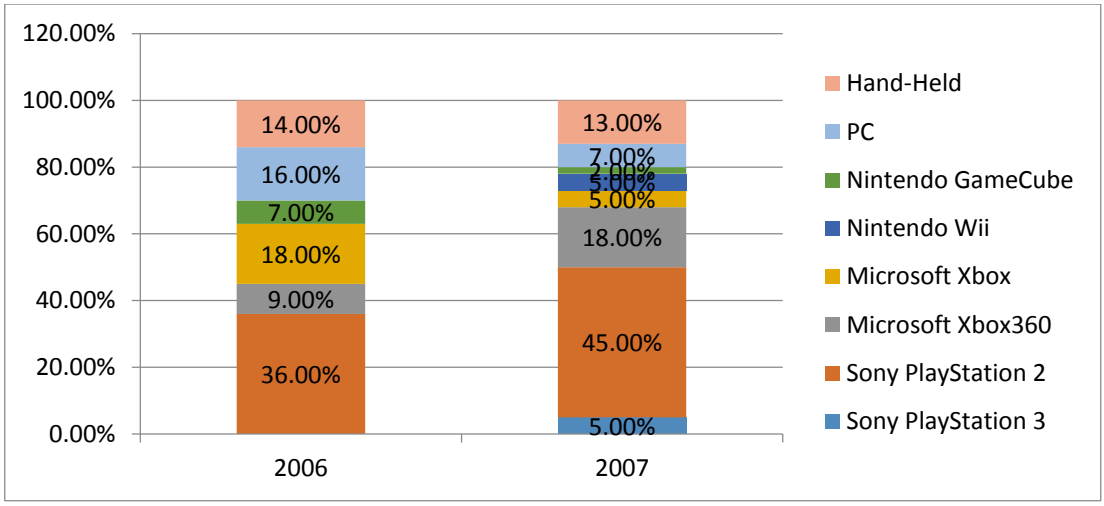

Table 4 Share of Net Revenues per Platform

Source: own creation, data: Activision Annual Report 2007

The following table presents the percentage of each of the platforms in terms of the total publishing net revenues. Overall, Activision's publishing net revenues have decreased by 3% from 2007 to March 2006.

The net revenue from sales titles for PC has decreased because of the number of released titles in 2007, the revenues were primarily derived from catalogue sales of Call of Duty 2 released previously in 2006. Nonetheless, the PC revenues are expected to rise because of new titles being released such as Call of Duty 3, as well as new scale movie titles: Spider-Man 3, Shrek the Third, and Transformers (Activision, Annual Report 2007).

The play station revenues are expected to remain overall constant in their growth. 19% changes will be sensed in the PS2 revenues because of the new generation platform of PS3, however, PS2 will continue to have significant net revenues in 2008, Activision planning to release new games for this platform.

The new generation for Microsoft Xbox360 has increased by 95% from its release in 2006, achieving net revenues of $200.4 million, the trend of more than 50% increase will continue in the following year, and will stabilize further. This will impact the revenues generated from Xbox, where the decrease was of 74%, Activision will stop developing titles for this platform in 2008.

The Nintendo Wii revenues are also expected to growth because of the new generation console that was launched in November 2006, Activision planning to develop new tiles for this platform in the upcoming years and ending the development of releasing titles to Nintendo GameCube because of its 72% decrease in revenues in comparison to 2006.

The revenues of the hand-held platform have decreased by 3% from $158.9 million in 2006 to $153.4 million, however, the investments in the hand-held base are expected to generate an increase of revenues in the flowing years.

Overall, Activision's revenues and profits stream from fairly a small number of hit tiles and brands where, 29% of the consolidated net revenues in and 39% of worldwide publishing net revenues in 2007 originated from the following three titles: Call of Duty 3, Guitar Hero II, and Marvel: Ultimate Alliance. Activision will continue reducing the number of titles and focusing on the brands that produce the largest amount of revenues and profit.

EBIT

The company's EBIT has oscillated within the last three years, from a $192.7 million in 2005, to a decrease of 76.20% in 2006, following an increase in 2007, reaching $109.825 million. Even though the EBIT has oscillated in the 3 financial years, the company has managed to stabilize its EBIT. The average growth rate of EBIT of the three financial years is of 31.65% growth, which is similar to the overall company's EBIT growth of the past five years. Therefore, the future increase of EBIT is expected to growth with a similar rate in the following 5 years.

Capital expenditures

Capital expenses' main purpose is to assure that the company's assets continue their operation and generate future economic growth. Due to the nature of the company, intangible assets such as software development and intellectual property licenses and short term investments expenses are part of the capital expenditures core operations.

In its annual report, Activision states that capital expenditures, acquisitions of private software development companies and publishing companies represent the main source of cash investments. Activision declared that short term investments' aim are to increase return and decrease risk, maintaining liquidity and harmonizing its activities in estimating the working capital needs and provide a vigilant investment diversification.

Activision has used $35.2 million in 2007 and $85.8 million in 2006 cash flows to invest in its activities. The main investments in 2007 were done for business acquisitions capital expenditures and short term investments. The decrease of cash flows in 2007 in investing activities is due to net processes from maturity on the short term investment activity.

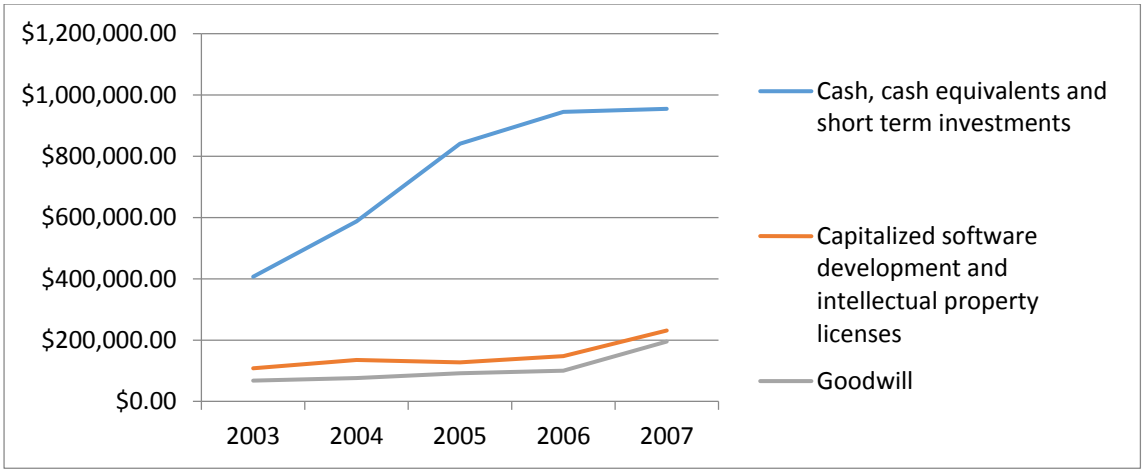

Figure 25 Short Term Investment Growth

Source: own creation, data: Activision Annual Report 2007

Figure 25 presents the growth in short term investments, where from a $406,954 thousands was invested in 2003, the company has reached to a $954,849 thousands in 2007. This continuous growth is on average of 25.43%. It should be noted that short term investments and intellectual property licenses are one of the most important capital expenditures for Activision, the success of the company relying on its ability to foresee efficient and valuable private software development companies that can bring value to the company, as well as the investments in the software development assure that the company is up to date with the market trends and is able to deliver games for the new generation consoles.

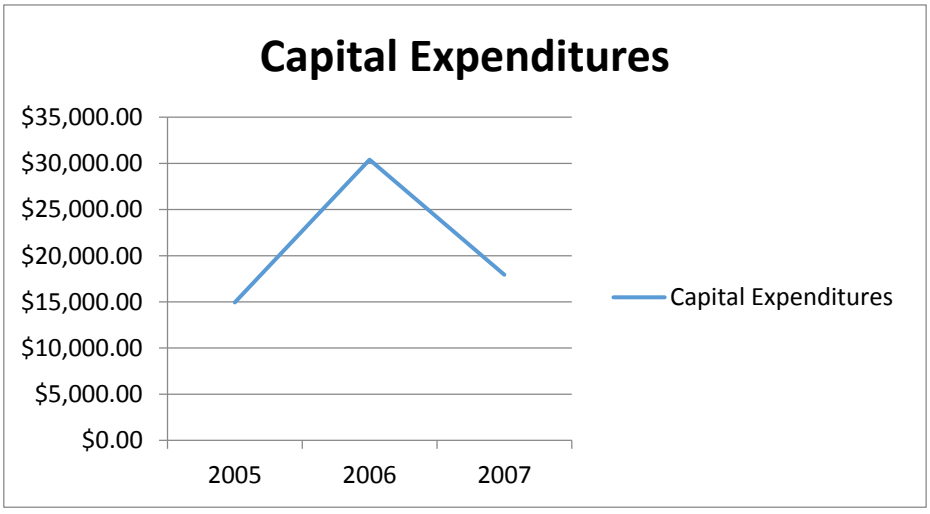

Figure 26 Development of Capital Expenditures 2005-2007

Source: own creation, data: Activision Annual Report 2007

The oscillation in capital expenditures can be observed in figure 26, where the average rate of variation between 2005 and 2007 is 31.25%. Since the company intends to continue the

further evaluate potential acquisition candidates in accordance to its growth strategy, the rate of the expenditures is assumed to remain constant for the following 5 years.

Working capital

The working capital measures the company's ability to manage its current liabilities. A company should optimally be able to found its short term liabilities through its short term assets dismissing the company form its obligations. Activision's working capital over the last three years indicates that the company is able to found its short term liabilities through short term assets. One can observe the increase of working capital over the 5 years, where the company has reached from an initial $913.819 million, to a $1.060 billion in 2007. On average, the working capital has increased by 15%. The working capital is expected to continue increasing with the same relate based on the average calculated form the past 3 years and consistent with historical vales of the working capital.

Depreciation and amortization

The applied depreciation and amortization is established on historical rates. The depreciation rate is applied for the tangible assets of the company, such as property and equipment expenses. Amortization rate is applied to the intangible asserts. Overall, the ratio for 2007 and 2006 for the depreciation and amortization of the tangible and intangible assets is of 8.73% and 3.21%. An average rate of 4.41% will be applied to the forecasted period of 5 years.

Cost of capital

Once all the important components of the free cash flow have been estimated, the next step is to calculate the cost of capital. The cost of capital is being applied to the future free cash flows so that the current levels would be farther discounted and consequently calculate the value of the company. As the literature review chapter notes, the cost of capital for FCFF is the weighted-average cost of capital (WACC). Since the cost of capital is based on the CAMP model, the WACC is being calculated by the following formula:

Equation 7 Weighted-Average Cost of Capital (WACC)

$$\mathbf{WACC = W_e K_e + W_d K_d (1 - t)}$$

$\mathbf{K_e}$ = cost of equity

$\mathbf{W_e}$= E/V = ratio of the company's equity to its total value (equity + debt)

$\mathbf{K_d}$ = cost of debt

$\mathbf{W_d}$= D/V = ratio of the company's debt to the its total value (equity + debt)

The company's beta is being 1.31 according to the Yahoo finance calculations. The company's debt is $382.415 million, representing 21.32% from the D/(D+E) ratio, and the equity represents 78.68% from the total capital, $1.411 billion. Table 5 presents the values that are being imputed to perform the calculation of the cost of capital.

Valuation parameters for Activision	
Risk-Free interest rate	4.50%
Market Risk Premium	5.00%
D/(D+E)	21.32%
E/(D+E)	78.68%
Activision Beta	1.31
Pre Tax Interest Rate	5.04%
Company Tax Rate	22%
WACC	9.53%
Long Term Sustainable Rate	7.9%

Table 5 Activision Valuation Parameters

Source: own creation

Once the FCFF of the company are estimated and cost of capital is calculated, the next step of the DCF is to calculate the terminal value of the company according to the formula:

Equation 8 Terminal Value

$$\text{Terminal Value} = \frac{\text{Final Projected Year Cash Flow}}{\text{Discount Rate} - \text{Long Term Cash Flow Growth Rate}}$$

Thus, the terminal value of Activision in 2012 with a stable growth rate of 7.9% is $ $1.865 billion. As a result, the stand alone value of Activision is $987.522 million. Appendix 1 shows the calculations of the FCFF for the upcoming 5 years from 2008 until 2012, as well as the growth of the EBIT, depreciation and amortization, capital expenditures and working capital. Even though the company presents a negative FCFF from 2007 until 2011, it manages to stabilize its FCFF and to have overall positive results.

4.4.2 Vivendi Games Standalone Valuation

The following section presents the Vivendi Group valuation. The division is chosen due to the available information from the Annual repost 2007 of the Vivendi group and the lack of a more detailed information about the Blizzard Entertainment financial information. The overall Vivendi group analysis is presented. The analysis provides results in growth of the company for some of the characteristics that are not included in the Annual reports of the Vivendi Games, making some of the calculations of the division hard to estimate. The overall analysis of the Vivendi group will provide important insights that will allow estimating FCFF for Vivendi Games division. It is assumed that the company's growth is able to provide a

better estimation than other assumptions such as the market assumptions, since the company's annual report is the closest to forecasting more reliable future cash flows.

Vivendi is the leader in the digital entertainment having operations in the following sectors: music, television, internet, games and mobile. Appendix 2 presents the group's listed companies. The most successful companies form Vivendi's operations are:

Universal Music group, which is the number one music company in the world

Canal+ Group which is a major player in France for its premium and theme channel distribution, having more than 10.5 million subscriptions.

SFR is the French number 2 mobile telecommunications operator with 18.8 million customers

Maroc Telecom is the leading mobile, fixed line and Internet access operator in Morocco with 14.6 million customers.

Vivendi Games is the world's number one player in MMORPG games with more than 10 million subscribers worldwide.

Vivendi group revenues

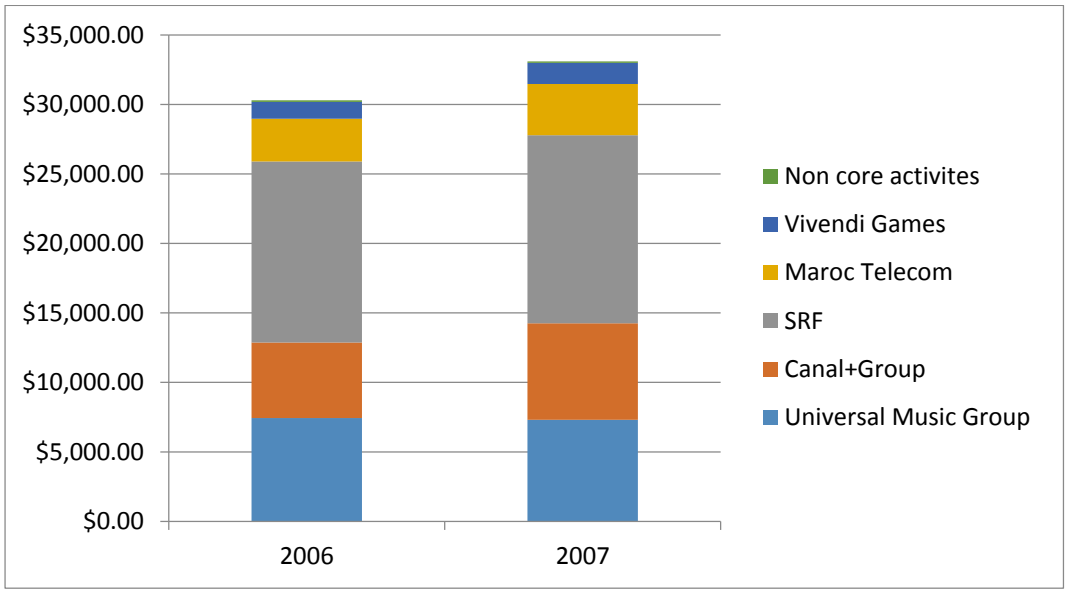

Figure 27 Vivendi Revenues by Component

Source: own creation, data: Vivendi Group Annual Report, 2007

The company's revenues were of $32,485.5 million in 2007, with $2,419.5 million more that in 2006 ($30,066 million). This amounts of an increase 8% change of revenues and according to the company's statements, the constant rate of change will continue to be of 9.7%.

Revenues by geographical zone

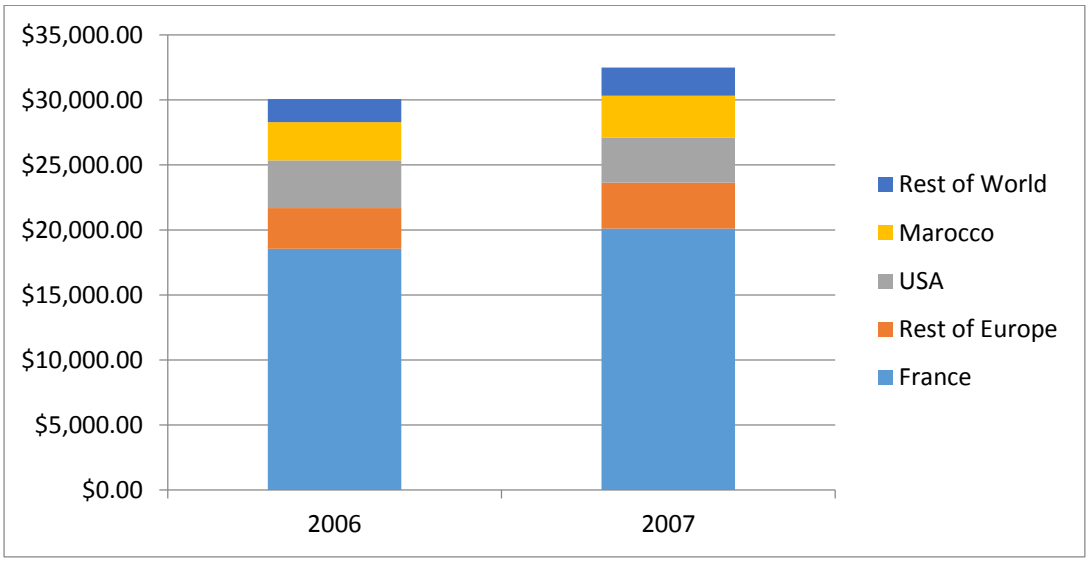

Figure 28 Vivendi Revenues by Region

Source: own creation, data: Vivendi Annual Report 2007

It can be observed in figure 28 that Vivendi's revenues are mostly attributed to France, with $20.104 billion revenues in 2007, an increase of $1.546 billion from 2008. It is obvious that Vivendi group has a greater focus on the French region since the group' most successful companies are SFR, the French number 2 mobile telecommunications operator and Canal+ Group, a major player in France for its premium and theme channel distribution. The other geographical regions that have revenues within approximately the same numbers are rest of Europe, USA and Morocco, with revenues respectively of $3.528 billion, $3.478 billion and $3.208 billion in 2007.

Vivendi group EBITA and EBIT

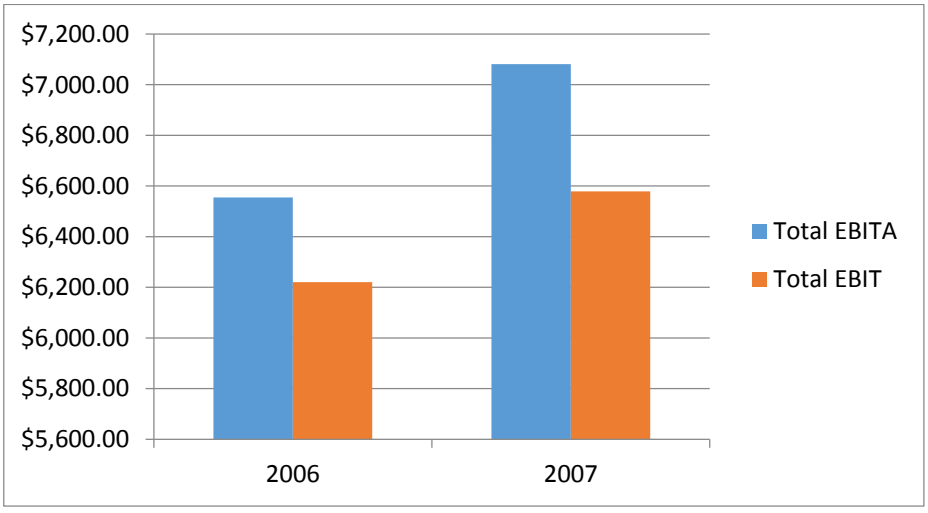

Figure 29 Vivendi Group EBITA and EBIT

Source: own creation, data: Vivendi Group Annual Report 2007

The difference between EBITA and EBIT is the discounted amortization of intangible assets acquired through business combinations and the impairment of goodwill and other intangibles acquired through business combinations that are included in EBIT.

Overall EBITA amount to $7,081 million (compared to $6,555 million in 2006), representing an increase of $526 million (+8.0%, +9.1% at constant currency). EBIT amounted of $6,579 million (compared to $6,579 million in 2006), having an increase of $358.5 million (+5.8%).

Capital Expenditures

The capital expenditures of Vivendi group consist of the company's processes of property, plant and equipment and intangible assets.

In 2006 and 2006 Vivendi's capital expenditures were mainly realized in France by SFR, Canal+ Group, and in Morocco by Maroc Telecom. The SRF's capital expenditures were realized in order to develop the coverage and capability of the 2G and 3G networks. Capital expenditures for Canal+Group amounted for $214.5 million and $1530 million for SRF. The capital expenditures for Canal+Group were necessary so that the company could respond to the French media and network development. Maroc Telecom has increased its capital expenditures by 42.4%, $544.5 million in 2007 in comparison to $382.5 in 2006, so that the company could respond to the of the mobile and modernize and develops its existing network infrastructure.

Overall, the capital expenditures of the Vivendi group in 2007, 2006 and 2005 have amounted of $2,439 million, $2,467.5 million and $1,936.5 million, making an average of 13.14% of the already stated financial years. The group declared that it will continue to invest in its businesses to develop their products and services, therefore, the 13.14% if capital expenditures is expected to increase with the same rate in the following 5 years.

Working Capital

When evaluating Vivendi's working capital, the net operating working capital formula is applied:

Equation 9 Net Working Capital

NWC = Current Operating Assets excluding cash – Current Operating Liabilities

The operating assets of Vivendi encompass: Inventories, Accounts Receivable and Other Current Assets. The operating liabilities consist of: Accounts Payable, Short-Term borrowings and other financial liabilities, and other current liabilities.

In estimating the future evolution of the working capital, an average of the historical two financial years is applied. In 2007 and 2006 the company had a working capital of $9,037.5 million and $8,406 million. The change in working capital is amounted of 7.51%. The growth of future working capital of 7.51% will be applied for the following 5 years for the company, and represents the average of two years and is consistent with the historical values of the working capital.

Depreciation and Amortization

The applied depreciation and amortization in the valuation calculation is based on the company's historical rates. The depreciation and amortization of the tangible and intangible assets stream from the selling expenses, general and administrative or cost of revenues. The company's depreciation and amortization, excluding intangible assets through business combinations, has reached $2,247 million in 2007 in comparison to $2,035 million in 2006. The depreciation of the tangible assets has reached $1,399.5 million in 2007 in comparison to $1,357.5 in 2006. The rate of depreciation is of 20.67% in 2006 and of 19.57% in 2007, therefore, the average depreciation rate is of the tangible assets is of 20.31% and it is expected to continue in this way within the following 5 years. Amortization of intangible assets was of $757.5 million in 2007 and $678 million in 2006. The amortization rate of the intangible assets of 3.46% in 2006 and of 3.27% in 2007, making the average rate of amortization of the intangible assets of 3.37%. Taking in consideration the annual report statements, the overall rate of depreciation and amortization of the company is of 11.84%, which will be used in predicting the future depreciation and amortization rate within the following 5 years of the company.

Having in mind Vivendi's overall growth rates for revenues, EBIT, capital expenditures, depreciation and amortization and working capital, the following section presents the financial performance of Vivendi Games division.

Vivendi Games Overview and Valuation

Vivendi Games is a global developer, publisher and distributor of multi-platform interactive entertainment. The company consists of three divisions fully owned by Vivendi group: Blizzard Entertainment, Sierra Entertainment and Vivendi Games Mobile.

Blizzard Entertainment is an American developer and publisher globally famous for its: World of Warcraft, Diablo, StarCraft and Warcraft. The Blizzard Entertainment history was presented in the case approach. Sierra Entertainment is a creator and publisher for console, PC and handled games. The company features four studios, and has developed a number of

franchises and hit products such as: World in Conflict, Crash Bandicoot, Spyro the Dragon and F.E.A.R. Sierra also has an online division which develops and publishes casual online games for PC, Xbox Live Arcade and all other viable platforms. Vivendi Games Mobile is responsible for creating and publishing games for the global mobile market. The company publishes a wide range of action, strategy, casual and arcade games and also licenses Sierra Entertainment titles, which are distributed to operators and web portals worldwide. The Vivendi Games division maintains relationships with the company's strategic partners such as NBC Universal, Universal Music Group and 20th Century Fox.

The Vivendi Games division revenues have increased by 26.6% to 2006 and are expected to increase at a 33.5% on a constant currency bias. The division of Blizzard Entertainment was higher by 58% in comparison to 2006, while Sierra Entertainment, Sierra Online and Vivendi Games Mobile have lowered their revenues by 29%. According to Vivendi's analysts, the business segments were influenced by unfavorable exchange movements. Blizzard Entertainment has experienced such a great increase in revenues due to its hit game WoW and its release of World of Warcraft: The Burning Crusade in 2007. The initiatives of Blizzard Entertainment subscriber acquisitions in 2007 have increased the WoW's subscriber base by 2 million, the company exceeding 10 million players worldwide.

Sierra Entertainment's revenues have lowered in 2007, while Sierra Online and Vivendi Games Mobile division have experienced growth. The PC and console releases of Sierra were lower in 2007 in comparison to 2006.

2007 was an outstanding year for Vivendi Games not only in terms of revenues increase but also the EBITA growth has proven to be strong, 57.4% higher than 2006 (and 59.7% on a stable currency constant), Vivendi Games displayed a 17.8% operating margin. Blizzard Entertainment's EBITA of $517.5 million has shown a 37% increase in comparison to 2006. The EBITA performance of Blizzard Entertainment was a result of the very successful release of World of Warcraft: The Burning Crusade and the launch of its expansion pack of subscription base.

However, a negative impact on the EBITA was created by development costs for Sierra Entertainment, Vivendi Games Mobile and Sierra Online with an overall negative impact of $120 million.

The capital expenditures for Vivendi Games' division was lower in 2007 than in 2006 since 2006 assumed higher investments in server upgrades and further capacity for World of Warcraft in preparation for the 2007 launch of The Burning Crusade. Future capital

expenditures are expected to grow because of the development of World of Warcraft: Wrath of the Lich King and of StarCraft II.

Table 6 present the Vivendi Games EBIT, Amortization and Depreciation, Capital Expenditures and Working Capital for the years 2006 and 2007 in millions of $.

Cash flows	2007	2006
Revenues	1221	772.5
EBIT	271.5	172.5
Total assets	597	642
Total liabilities	603	496.5
Amortization	16.5	13.5
Depreciation	64.5	42
Depreciation and amortization	81	55.5
Increase of tangible and intangible assets	56	86
Capital expenditures	84	114
Working capital	(6)	145.5

Table 6 Vivendi Games Valuation Components

Source: own creation

Having the information about Vivendi Games' cash flows, their future growth can be estimated. Analyzing the EBIT, its growth has increased by 57.4% in comparison to 2006. Even though the division's EBIT has experienced such a considerable increase, it is unlikely that the division will continue this increase within the following 5 years. The future growth of EBIT in the following years will be chosen as the division's operating margin on 17.8%. This growth is more likely to occur in the following years since the operating margin represents the ratio of operating income divided by revenues.

Analyzing the capital expenditures variation, it can be observed that the overall capital expenditures have decreased by 26.32% in 2007 in comparison to 2006. This decrease in 2007 is lower because the company invested less since WoW was already been released in at the beginning of January 2007, which represented most of the cost in 2006 for the development of the game release. However, it is unlikely that the company will continue to experience this decrease because of the expected game releases of World of Warcraft: Wrath of the Lich King and of StarCraft II in the following years. Thus, it will be appreciated that the company will continue to increase its capital expenditures on an average rate as Vivendi group, which is at 13.14% rate.

The overall growth of depreciation and amortization over the tangible and intangible assets cannot be appropriately estimated because of the lack of information in the annual report of Vivendi group. The average ratio of growth between depreciation and amortization over the

tangible and intangible assets is of 104.59%, a growth that cannot be applied for the stand alone valuation calculations. However, the Vivendi group growth of depreciation and amortization can be applied for the calculation since it provides a closer and more reliable truth about the company's evolution, and is also similar to the Activision's depreciation and amortization growth, a company that is operating in a similar market as Vivendi Games. Thus, a growth rate of 11.8% of the overall rate of depreciation and amortization will be used in predicting the future depreciation and amortization rate within the following 5 years of the company.

Based on the formula of calculating the NWC it can be observed that the working capital has changed dramatically from 2006 to 2007. In 2006 the working capital has experienced a positive figure, which represents that the division was able to optimally found its short term liabilities of its short term assets. However, in 2007 the division has experienced a negative WC, which is also an indicative of performance which represents that the working capital has been favorably impacted by the timing of new releases as 2007 included the very successful release of World of Warcraft: The Burning Crusade in the first quarter of 2007, while 2006 was heavily dependent on revenues from releases in the fourth quarter. Taking in consideration these factors, it will be again assumed that Vivendi Games will experience future growth of working capital as the Vivendi group, thus, the WC increase will be of 16.41%.

Having estimated the FCFF of Vivendi Games, the standalone valuation of the division can be calculated.

Cost of Capital

The cost of capital and for Vivendi games is applied to the valuation of the Vivendi Games division is the discount rate estimated by Vivendi group analysts, who have predicted a discount rate of 11% and a long term growth rate of 3.50%, thus, these rates are applied to the valuation. The table below presents the FCFF growth with the already mentioned values.

	2007	2008	2009	2010	2011	2012
EBIT	$271.50	$319.83	$376.76	$443.82	$522.82	$615.88
EBIT(1-tax rate)	$222.63	$262.26	$308.94	$363.93	$428.71	$505.02
Depreciation and amortiation	$121.50	$135.84	$151.87	$169.79	$189.82	$212.22
Cap exp	$84.00	$95.03	$107.52	$121.64	$137.62	$155.69
Working cap	$6.00	$6.98	$8.13	$9.47	$11.02	$12.83
Change in working capital	$101.00	$0.98	$1.15	$1.33	$1.55	$1.81
FCFF	$159.13	$302.08	$352.14	$410.74	$479.36	$559.74
PV	$143.36	$245.17	$257.48	$270.57	$284.48	$4,429.04
TV						$7,724.41
Value of the company						$5,630.11

Table 7 FCFF Growth

Source: own creation

The terminal value of Vivendi Games reaches $7.724 billion, and the value of the company is estimated to be $5.630 billion. The calculations of the valuation which are performed based on the same formula as for Activision.

4.4.3 Valuation of the Merged Company

In 2007, according to Vivendi annual report, the company estimated an outlook for the merged companies in 2009, where it was expected that the merged companies would generate revenues of $4.3 billion, operating income of $1.1 billion, operating margin above 25% and earnings per share above $1.20. The following section presents the performance of the merged companies and valuates their standalone value to demonstrate that the companies have managed to achieve the estimations and create a successful company which is able to influence the industry and their main competitor performance, which is EA.

Overall performance

In 2010ActivisionBlizzard net revenues have reached $4.8 billion and grew the earnings per share by 14.5% reaching at a level of $0.79.The company enhanced its financial position by achieving approximately $3.5 billion in cash and investment. The company's operating margin reached of 29%, which is considered an industry record, and a return on invested capital of 30%. The company declared to continue investing in its franchises and new potential franchises, as well as in its systems capabilities to expand the company's products and services to new markets around the world. The company also declared that it will continue investing its capital in profitable proprietary products or services which are expected to generate greater financial returns than the company's weighted average cost of capital.

Activision Blizzard most valuable franchises in the interactive media are Call of Duty, World of Warcraft and StarCraft, which were launched in 2010 and executed record sales figures. World of Warcraft continues to be the world number one subscription based MORPG, reaching 12 million subscribers worldwide. The StarCraft II: Wings of Liberty release generated 3 million units in its first month and nearly 4.5 million after its launch. Call of Duty franchise has also continually increased its sales in 2010.

Revenues

Activision Blizzard international sales have continued to be part of the company's important business. Net revenues from international sales accounted for approximately 46%, 48%, and 50% of the total net revenues for the years ended 2010, 2009 and 2008.

Revenues by territory

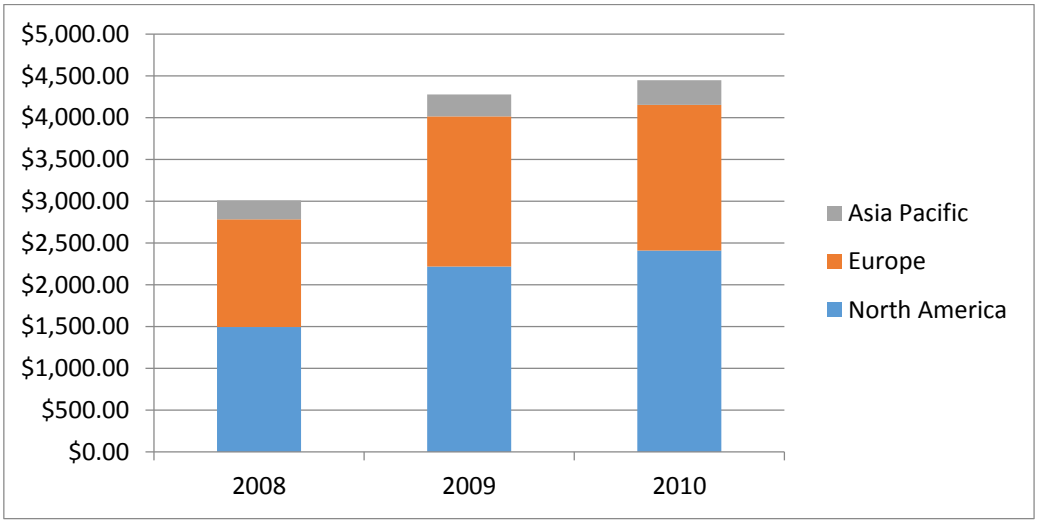

Figure 30 Activision Blizzard Revenues by Region

Source: own creation, data: Activision Blizzard Annual Report 2010

Revenues by platform

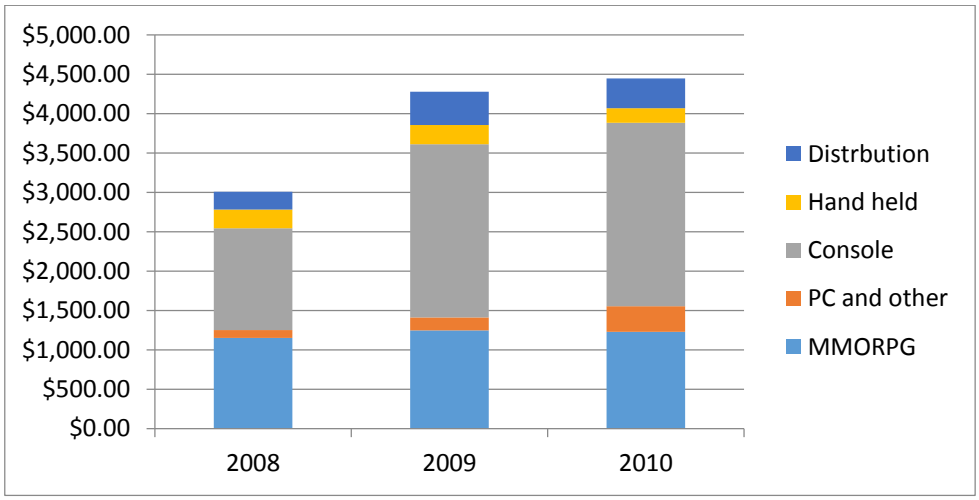

Figure 31 Activision Blizzard Revenues by Platform

Source: own creation, data: Activision Blizzard Annual Report 2010

The company's digital revenues generated by Blizzard Entertainment property have continued to growth, their contribution to the company's business being increasingly important. The console games and their current generation consoles remained important business drivers, the console revenues reaching $2,330 million.

The company's key titles accounted for 23% of the sales in US in 2010 in comparison to 21% in 2009. The three main franchises of the company are responsible mostly for the company's revenues. Call of Duty and World of Warcraft, accounted for over 62% of our net revenues in 2010.

The MMORPG revenues represent 28%, 29% and 30% form the consolidated net revenues in 2010, 2009 and 2008 respectively, their decrease in 2010 was a primary result of lower deferred and box revenues. However, Blizzard is expected to release a new version of World of Warcraft which is expected to be perceived in the revenues of 2011. The PC net revenues represented 7% in 2010, 4% in 2009 and 3% in 2008 of the overall net revenues, their increase in 2010 was the result of StarCraft II: Wings of Liberty release in 2010.The console revenues represented 52%, 51% and 43% of the net revenues of the company in 2010, 2009 and 2008. Their increase is due to the success of Call of Duty franchise from Sony PlayStation 3 and Microsoft Xbox 360. The revenues form handheld devices decreased because of the emergence on the market of new handheld devices such as: Apple's iPhone, Apple's iPad and other mobile devices.

EBIT

The company's EBIT presented in the annual reports shows that the company has experienced a negative EBIT for the years 2008 and 2009, with -187 million and -8 million respectively, the company managing to overcome this in 2010 by reaching a positive EBIT of $492 million. Having a closer look at the annual reports of 2008, 2009 and 2010, the company declared the implementation of the restructuring plan of its business combinations to integrate the merged companies' operations. The main restructuring goals of the organization are to rationalize the titles portfolio, which assumes evaluating present games developed by both of the companies and to keep in function only the successful ones that have potential to generate future revenues. The second goal of the restructuring plan is to consolidate the overall corporate functions so that the Business Combination would realize synergies. For the years 2008, 2009 and 2010, the company's restructuring cost have been of 93 million, 23 million and 3 million. The company has also presented detailed restructuring plans of other operations such as the Vivendi Games restructuring plans, general and administrative restructuring expenses from Activision and other such restructuring costs the company has implemented in 2008. These detailed statements have aided in calculating the accurate EBIT of the company in 2008, which has resulted in $401.2 million. In July 2009 the company decided to separate the None-Core activities, which present a detailed restructuring financial information. Because of the lack of information in the annual report at the restructuring plans further performed from 1st of July, an accurate EBIT for 2009 such as the one in 2008 is impossible to calculate. However, since the 2008 and 2010 EBIT present accurate figures for the EBIT, it can be observed that the overall growth within the 2 years has been of 23.94%. This growth is expected to reflect in the following 5 years for the stand alone valuation calculation.

Capital expenditures

When discussing the capital expenditures of Activision Blizzard it is important to take into consideration the investments the company makes into its tangible and intangible assets, such as property and equipment, inventories, and its software development and intellectual property licenses.

In 2008, 2009 and 2010, the main capital expenditures of $46, $69 and $97 million were made primarily for property and equipment. The company expects that its total capital expenditures will reach $100 million in 2011, their main purposes being for computer hardware and software purchases and various corporate projects.

The company's inventories and software development and intellectual property licenses in considered an important capital expenditure of Activision Blizzard. Therefore, the company is expected to keep the growth rate of these intangible assets.

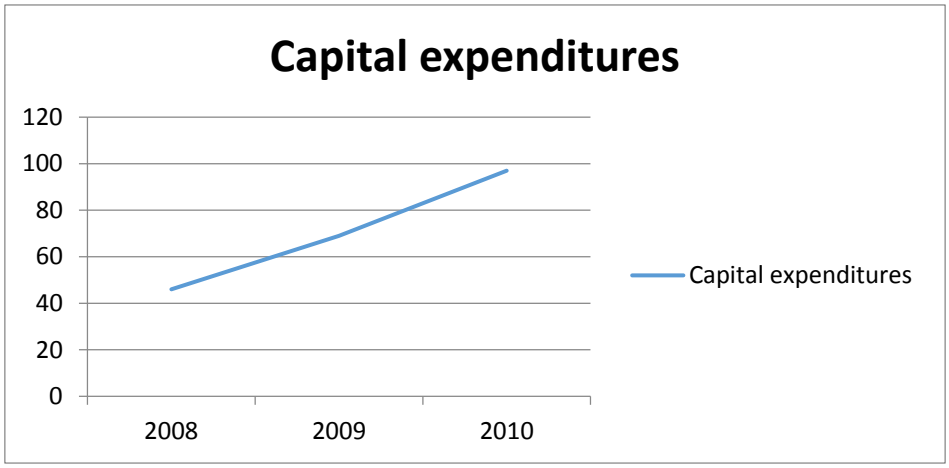

Figure 32 Activision Blizzard Capital Expenditures Development

Source: own creation, data: Activision Blizzard Annual Report 2010

Analyzing the table of capital expenditures, it can be observed the growth trend of the capital expenditures, their increase of 50% in 2009, and 40% in 2010. The average growth of capital expenditures cumulated between 2008 and 2010 is of 45%, and is expected to follow the same trend within the following 5 years then calculating the company's valuation.

Working capital

The company has declared a working capital of approximately $2.8 billion in 2009, and of $2.5 billion in 2010. This capital is utilized to finance the company's operational requirements such as purchase of inventory and equipment, as well as the development of production, marketing and sales, and acquisitions of intellectual property rights for future products. The decrease in working capital can be observed to be of 10.71%. The decrease of the company's working capital is unlikely to be at the same level in the future years has since the company will continue to use its capital in future investments and acquisitions that are in accordance to the company's growth strategy. It should also be taken inconsideration that the company has decided to focus in future investing in its hits franchises and also that the company's decisions after the merger to pursue this goal is to close its non-successful games and divisions, concluding in disabling the Guitar Hero division in 2011, and the development of other games, creating in a reduction of 500 employees in 2010. It is therefore assumed that the company will stabilize its working capital in the following 5 years and the growth rate of the working capital will be of 5%.

Depreciation and amortization

The depreciation and amortization rates are estimated based on the tangible and intangible assets of the company. The overall depreciation and amortization of the company was of $198 million, $347 million, and $385 million for the years 2010, 2009 and 2008. Analyzing the annual reports the depreciation expenses were of was $68 million, $76 million, and $79 million for the same years with an overall average of 16.62, which represents a decrease of the depreciation costs. On the amortization side of the intangible assets, amortization expenses were of $130 million, $271 million, and $306 million for the years 2010, 2009 and 2008, with an average of 21.82%. Analyzing the decreasing overall depreciation and amortization expenses for the same years, it is assumed that the depreciation and amortization will continue to decrease in the following 5 years, with an average of 18.97%.

Cost of capital

Once the growth of future cash flows has been predicted, the next step of the valuation analysis is to calculate to discount rate. This is done using the same method of calculations as for the Activision standalone valuation. Table 8 presents the main components which are used in calculating the discount rate. The applied beta is the entertainment technology beta in 2010, which has the value of 1.32. The risk free rate remains constant, however the market risk premium is 5.20, this market risk premium is taken from the 2010 annual report of the Activision Blizzard. The declared pre-tax interest rate of the company is of 3.97%, and the company's debt ratio from the D/(D+E) ratio is of 23.89%, while the equity represents 76.11% from the total capital, $13.406 billion. Based on the estimations of PricewaterhouseCoopers in 2010, in the global entertainment media outlook for years 2011-2015, the stable growth rate is of 5.70%. Table 8 presents the values that are being imputed to perform the calculation of the cost of capital.

Valuation parameters for Activision Blizzard	
Risk-Free interest rate	4.50%
Market Risk Premium	5.20%
D/(D+E)	23.89%
E/(D+E)	76.11%
Entertainment technology	1.32
Pre Tax Interest Rate	3.97%
Company Tax Rate	15%
WACC	9.45%
Long Term Sustainable Rate	5.70%

Table 8 Valuation Parameters for Activision Blizzard

Source: own creation.

Based on the FCFF growth and their estimations for the year 2011-2015 the terminal value of the company is of $14,581.25 million and the overall value of the company is $10.851 billion. The overall value of the company has increased from the merger in 2007. The calculations of the standalone value of Activision Blizzard are shown in Appendix 3, where in 2010, the changes in working capital has a negative value because of higher working capital value in 2009, which influences the FCFF in 2010, making them $819.20 million, higher than the FCFF in 2015, which are of $518.53 million. Once the working capital is stabilized and it shows a 5% growth yearly from 2011, the changes in working capital have positive values, making the FCFF of values that are more reliable.

Valuation Conclusion

The valuation chapter's aim is to evaluate the standalone Activision and Vivendi Games in the year 2007 and their value in 2010 after the merger. In December 2007 Vivendi Group has agreed to pay for the acquisition of Activision $2.431 billion, from which $1.731 billion in cash and $700 million in shares, resulting that Vivendi owes 68% of the newly merged company. The standalone value of Activision resulted of $987.522 million and Vivendi Games standalone valuation has resulted in $5.630 billion. The premium that Vivendi group has paid for the acquisition was of $1.143 billion. According to Vivendi's outlook of for the year 2009, the company anticipated the merger to result in revenues of $4.3 billion, operating income of $1.1 billion, operating margin above 25% and earnings per share above $1.20.

The standalone valuation of the Activision Blizzard in 2010 reveals that the merged companies value of $10.851 billion which demonstrates that the companies have managed to achieve synergy and operational efficiency. The value of the synergy streams from the overall value of the combined companies, which indicates that their values if greater than the combined value of the standalone value of the companies in 2007.

Analyzing the expectations Vivendi had for the merger in 2009, the 2010 Annual Report shows that the operating margin of Activision Blizzard reached values of 24%, 26% and 29% for the years 2008, 2009 and 2010. This demonstrates that the company has managed to achieve the previsions made at the end of 2007. The operating income was of $(233), $(26) and $469 in 2008, 2009 and 2010, the negative results came from restructuring costs the company has undergone to manage the merger and assure synergy creation. Even though the company has failed to attain the expected operating income predicted in 2007, the company has succeeded in capturing the expected revenues of $4,447, $4,279 and $3,026 for the years 2010, 2009 and 2008. The earnings per share in 2010 have reached $0.79, which are lower than the anticipated $1.20. The failure in achieving the expected previsions are a result of the

expense that came from the Business Operations Activision Blizzard have to undergo to assure that the merger is putting into operation. As of 30 June 2009, the company declared that the merger was finalized and from now on the company will not undertake further restructuring costs.

As predicted at the announcement of the merger, the new company, Activision Blizzard, expected to experience significant growth from the labels: World of Warcraft, Call of Duty, Starcraft and Diablo. The only label that has shown unexpected decrease was Guitar Hero. Because of the label's underperformance, Activision Blizzard decided to close the franchise and exit the music games market by the end of 2011. The three main franchises of the company World of Warcraft, Call of Duty and Starcraft were responsible mostly for the company's revenues. Call of Duty and World of Warcraft, representing 62% of our net revenues in 2010.

The merger of the companies anticipated an expansion of the newly formed company's global customer base and the entrance in new markets. From this perspective Blizzard produced Battle.net, which is fully integrated online gaming platform representing an example of innovation. This platform will be applied to the company's Call of Duty's global audience, integrating therefore the knowledge of the companies and sharing across its existing franchises.

Taking into consideration the developed framework of the combined theories of truncation cost and resource based view, the horizontal merger is in accordance to the proposed levels of uncertainty and firm relatedness. The relatedness of the firms streams from the companies' activities, Activision being a leading software developer for console, PC and handheld devices, while Vivendi Games' leading company Blizzard is globally renowned developer and publisher and the number one developer of the most successful game of MMORPG in the world. The nature of the firms, their technological resources and their relatedness in the interactive entertainment industry, as well as the combination of their strategically valuable resources have assured the competitive advantage of Activision Blizzard in the industry.

4.5 Industry Performance Analysis

The analysis chapter is concluded with an overview of the performance of the industry in 2010, as well as the development of the performance of one of the company's major competitors Electronic Arts. This section of the analysis chapter presents the evidence for:

Argument #6: Following the horizontal merger, the overall performance of the industry will be positive.

Argument #7: Following the horizontal merger, the operating performance of the competitor will be negative.

Bernile and Lyandres (2013) present a comprehensive quantitative study on the synergistic effects of mergers and acquisitions occurring from 1990 to 2006 and involving a sample of 3935 unique mergers. They focus on publicly traded companies while using traditional depiction of industry identification as well as Text-Based Network Industry Classification in order to identify the defined horizontal mergers. Bernile and Lyandres (2013) test a number of hypotheses related to the effects of the synergies created by horizontal mergers on the key participants in the industry – competitors, suppliers and customers. Their statistic results show "that merger-related synergies have a statistically and economically significant impact on the profits and valuations of the merging firms' rivals" (Bernile and Lyandres, 2013, p. 3). They identify synergistic effects as operating efficiency as well as cost savings, which reduce marginal costs and increase the overall output produced. Bernile and Lyandres (2013) prove that the overall output increase is related to an overall increase in the output of the industry. The researchers argue that the synergistic effects are positive when it comes to the customers in the industry, since they receive a more efficiently produced and increased volume of output. However, the most significant effect is on the rivals where Bernile and Lyandres (2013) report significant negative effects on the overall output as well as on the valuation of rivals in the industry. The compare EBITA-to-Sales ratio of rivals during the announcement of the merger as well as two years after the finalization of the merger and discover the following:

- During announcement of the merger the positive abnormal returns for rivals are consistent with increased industry concentration which leads to raised values for all participants (Bernile and Lyandres, 2013 and Porter, 1985).
- After two years synergies from the horizontal merger will have negative effects on the rivals' profits and valuations (Bernile and Lyandres, 2013).

In order to answer the question of what the synergistic effects in the case of the merger of Activision and Blizzard Entertainment are on the industry and on one of their direct competitors EA, the authors analyze the interactive entertainment industry and its performance in 2010.

4.5.1 Interactive Entertainment Industry in 2010

The Joint Research Centre of the European Commission reports in 2011 that the interactive entertainment industry is still a young industry, which overruns the traditional media and

entertainment market four times in the next five years. In 2010 the global industry accumulated %55 billion and was projected to reach over $80 billion by 2015 (see graph below).

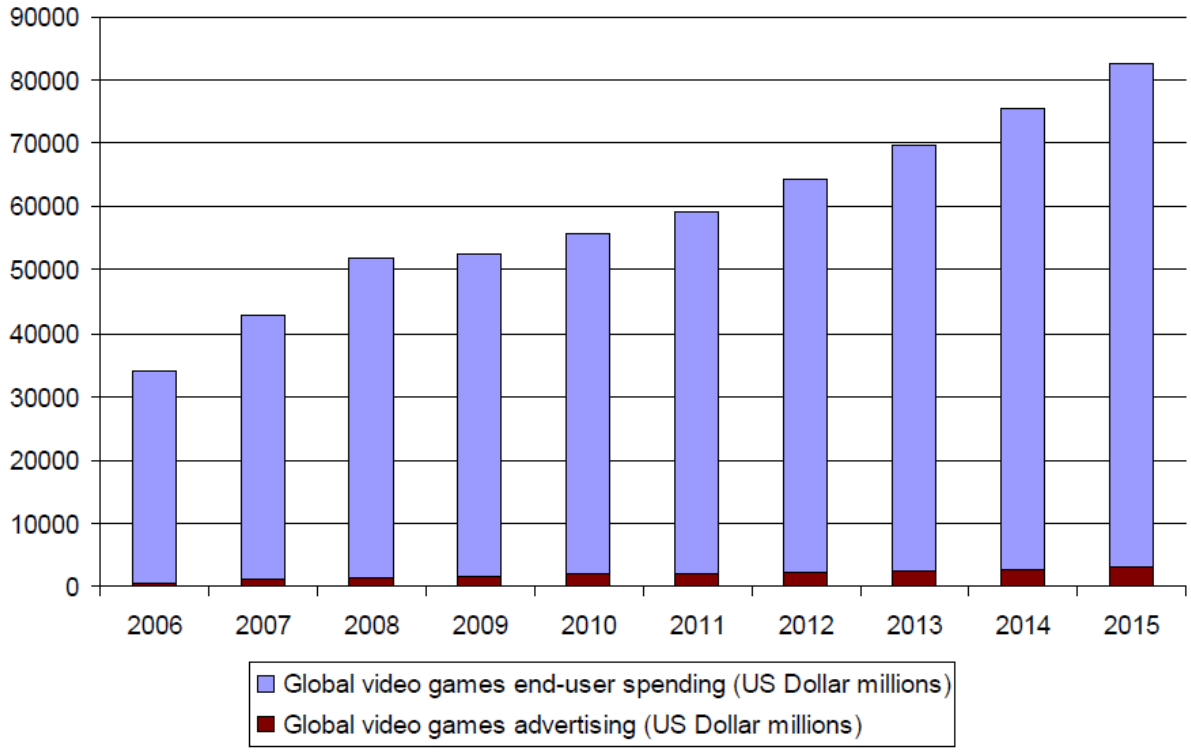

Figure 33 Global Video Game End-User Spending

Source: JRC, EC, 2010, p. 5

As seen from the graph the global consumer spending has seen growth significant growth since 2006, with a slowdown in 2008 and 2009, partially due to the global recession. PwC (2011) present similar results from their analysis of the global consumer spending for video games. It is important to be noted that the best performing regions in 2010 were EMEA and the Asia Pacific region, where the newly merged Activision Blizzard has very strong customer base from their PC MMORPG Games – World of Warcraft, StarCraft and Diablo (ActivisionBlizzard, 2010).

	2006	2007	2008	2009	2010p	2011	2012	2013	2014	2015	2011-15 CAGR
Global video games†											
Advertising	660	1,032	1,361	1,574	1,845	2,075	2,310	2,530	2,765	2,967	10.0
End-user spending											
North America	9,981	12,492	15,507	14,426	14,175	14,669	15,155	15,639	16,334	17,568	4.4
EMEA	11,353	14,031	16,555	16,109	16,407	17,180	18,209	19,326	20,532	21,945	6.0
Asia Pacific	11,394	14,449	17,154	19,339	21,866	24,029	27,111	30,651	34,401	38,187	11.8
Latin America	720	940	1,159	1,187	1,237	1,340	1,438	1,547	1,655	1,769	7.4
Total	33,448	41,912	50,375	51,061	53,685	57,218	61,913	67,163	72,922	79,469	8.2
Total	34,108	42,944	51,736	52,635	55,530	59,293	64,223	69,693	75,687	82,436	8.2

†At average 2010 exchange rates.
Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Figure 34 Global Video Game End-User Spending by Region

Source: PwC, 2011, p. 349

Although losing growth in 2010, the console segment was still the best performing in the industry with revenues of almost $29 billion. The following segment, the online games, accumulated $15 billion, an increase of 16%. With Call of Duty: Black Ops ranking as the top best-selling game in 2010 with revenues of more than $650 million for the first five days and the release of StarCraft II: Wings of Liberty becoming the fastest-selling strategy game of all times, the revenues driven by Activision Blizzard made them a market leader in North America and Europe for the console as well as the online segments of the industry (Vivendi Reports, 2010). The reports for the interactive entertainment industry are consistent with increased total output as well as increased revenues for the whole industry in the years following the merger. The stagnation in the end-user spending in 2008 and 2009, shown on Figure 23 and Figure 24, are consistent with the assumption that post-acquisition integration and synergy requires time to be implemented and created. Growing consumer spending is also in coherence with the assumption of positive effects of synergy on the customers.

4.5.2 EA performance in 2010

Activision merger with Vivendi Games in 2007 come as a surprise in the interactive entertainment industry. The merger between the two companies meant that EA will face a serious competitor that is similar to its size. Being posed in front of a potential competitor, EA has chosen to expand and invest as heavily and to send large amount of cash into new acquisitions. Because of the online success of Blizzard's World of Warcraft in the MMORPG games, EA has put up head to heat competition with the company by pushing its Bioware studio to release sequels of its franchise MMO games such as: Star Wars: The Old Republic, Dragon Age and Mass Effect. EA has responded to Activision Blizzard's franchises by

investing substantial resources into developing games that are similar to Blizzard's franchise (Takahashi, 2013)

In 2008, EA has reorganized its four labels, whose main purpose is to be aligned with the company's strategy of achieving aggressive growth targets. The four labels were organized as such:

- THE SIMS – which is the former EA label. The label's approach is to reach grow into the world's most popular PC franchise.
- EA GAMES – includes the hit titles such as Need for Speed, Battlefield, Medal of Honor and others. EA Partners, which includes the external development studios, will also become part of the label.
- EA SPORTS – which is the strangest brand of the company will expand its activities by creating new partnerships and games with new content, services and online integration whose aim is to increase the sports experience
- EA CASUAL ENTERTAINMENT – former Pogo label, will include games created for non-traditional EA consumers such as: women, youngsters and elderly people. The label will comprise of: the casual offerings of Pogo.com, the mobile division and the casual and family-oriented franchises. The main purpose of the label will be to create games for existing and future platforms such (EA, annual report 2007).

Since the company has changed its CEO in 2007, John Riccitiello's objective was to further carry on the diversification of the company by continuing the acquisitions line. The advantages of acquiring new companies gave EA the opportunity to increase its customer base, especially within the casual games through Pogo franchise and to foresee future trends in the mobile industry with the acquisition of Jamdat Mobile (Takahashi, 2013).

EA strategy to enter the mobile gaming market proved to bring substantial benefits. The acquisition of Jamdat Mobile assured that EA was investing in this market before Apple released the iPhone, thus making EA an important player in the mobile gaming market (Takahashi, 2013). In 2009 EA acquired Playfish, the developer of successful game tiles as: Pet Society, Restaurant City for the sum of $400 million. The company is a developer of free-to-play social games for social networking platforms such as Facebook, MySPace, iPhone and Android. With the acquisition of Playfish, EA is entering the social games market and to launch social games on EA's key IPs (IP is the abbreviation for Inter Protocol, which represents a method information is transmitted between two computers). The acquisition of Chillingo, the Angry Birds and Cut the Rope publisher, in 2010 of only $20 million, in

comparison to the great amount of money EA has invested by acquiring other successful companies also assured EA's high revenues and leadership in the market (Wagner, 2013). EA's acquisition of the mobile developing and publishing companies have assured that the company is in trend with the growing market of casual games played on phones, being able to catch the growing women audience. This advantage gave an upfront lead to EA in comparison to Activision Blizzard, which do not have strong mobile gaming operations as EA.

EA is famous for its acquisitions of small game developers such as Mythic Entertainment, Digital Illusions, Headgate Studios, Phenomic and SingShot, the company's premise being to acquire the smaller companies who pose threats to EA's activity7.

The long chain of acquisition that started form 1991, until present, has proven to be successful for EA in the short run, such as the Marxis label, Mythic Entertainment, Bioware and Jamdat Mobile. In the case of Bioware, for example, the great potential of the studio made EA to further develop and heavily invest capital in the successful and profitable franchise Mass Effect. Nonetheless, the company has failed to create original content in the long run, due to EA's decision to further stretch and create more sequels. EA's strategy in countless acquisition created the reputation for the company of putting fewer efforts in creating integration with the acquired companies, and to focus on "hit corporate deadlines over supporting creative vision" (Thorsen, 2007). In its strategy, EA pursued the growth, development and its main costs towards companies that had the potential on becoming hits, ignoring therefore the smaller projects or the creation of new games that could possibly become hits (Waugh, 2006). Even though EA is the owner of a number of hits in the interactive entertainment industry which had a great success in the market having had great sales, the company is struggling in creating new games that would be able to achieve the same popularity as its franchises The Sims and FIFA.

The games' platform and their trends have a great importance for developers and publishers in the entertainment industry. In order to compete in the online market with Activision Blizzard's Word of Warcraft franchise, EA Mythic label, the successful developer of the popular online game Dark Age of Camelot in 2006 from EA Games label, seeks to pursue the MMORPG opportunity through Star Wars: Old Republic, the sequence of the successful Star Wars: Battlefront in 2006. However, the company failed to succeed with the new games in

[7] http://www.wikinvest.com/stock/Electronic_Arts_(EA)

the MMORPG market, which lead to a drop of 50% stock price in 2008, from which EA did not manage to recover until now.

In 2008 EA announces to postpone the release of Tiberium, the Command & Conquer series, until its 2010. The same year the game is announce to be cancelled due to EA's internal quality-control audit, resulting in employee layoffs[8].

Another failure is the launch of Bioware's Dragon Age: Origins in 2009. The game was launched to be played on PC, and required users to register on Bioware platform for access and bonus content purchase. However, many games encountered problems in login in, problems caused by server error[9]. This increased the customer dissatisfaction and lead to a general discontent in regards to the previously successful game. Further unsuccessful partnership of Bioware and Pandemic Studios collaboration, which initiated in 2005, resulted in closing the Pandemic Studios in 2009. Originally the Pandemic Studio was acquired in 2007 together with Bioware of a total of $800 million. The studio is famous for developing titles such as: Full Spectrum Warrior, Star Wars: Battlefront, Star Wars: Battlefront II and many more. However, due to poor performance of the Dark Knight game, the studio was shut down in 2009[10].

In 2010 EA was forced to shift its resources in developing games for Sony PlayStation 3 because of the lower sales on this platform and the new emerging trends on the Nintendo Wii platform. EA's inability to predict this trend influenced the company's revenues due to the great sales on Wii's platform and the poor performance on PS3.

EA People and Strategy

According to EA's 2010 annual report, the company had developed a restructuring plan through which EA wishes to diminish its product portfolio and to focus on titles that have higher margin opportunities. The restructuring plan also includes the reduction of the company's workforce, EA planning to let go 1,200 of its employees. These activities are anticipated to be finalized by March 2010. EA problems in retaining its key people after the acquisition process also imposed difficulties on the company. The talented people from companies would shift to working for EA's competitors, or create their own companies which would produce future successful games.

The issues that stream from the acquisitions are reflected in the post-acquisition integration stages, where the strategic fit "*is a necessary condition for synergy realization, it merely*

[8] http://www.gamespot.com/articles/tiberium-terminated/1100-6198367/
[9] http://arstechnica.com/gaming/2009/11/dragon-age-launch-fails-some-cant-play-others-no-dlc/
[10] http://kotaku.com/5406830/confirmed-ea-closes-pandemic-studios-says-brand-will-live-on

creates synergistic potential that can only be realized through effective integration of an acquired firm. In line with this view, studies have shown that integration enhances acquisition performance" (Barkema and Schijven, 2008, p. 696). In the case of EA, the company lacked the ability of creating synergy with its acquired firms, leading to the departure of the talented from the acquired company. Therefore, the heavy investments made in the newly acquired companies did not create the predicted synergetic potential.

The investments made by EA assure that the company is up to date with the games of the latest and trending devices such as mobile phones, smartphones iPads and so on. However, these investments would increase the company's cost of development. "*By 2008, EA had seen its development costs skyrocket with the transition to the high-def consoles, the Xbox 360 and PlayStation 3*" (Takahashi, 2013). The high costs would not assume that the developed games are better, the ambition to continue and push the top hits games of the company and create sequels yearly decreased the customer satisfaction because of the games predictability (Takahashi, 2013).

Because of increased costs of development EA has to compensate this with employee reduction and discounting in creating stronger relationships with their highly talented developers. This leads to an overall decrease in the games quality, creating greater pressure on the developers responsible to create and release the games before the settled date of release. An example of rushed release was the Mass Effect which created general customer dissatisfaction. In one of its press release Riccitiello declared that: "*The investors give a shit about our quality. They care about our earnings per share*" (Takahashi, 2008).

Figure 35 illustrates the main financial elements of EA's activity from 2008 until 2010. EA's net revenues reached 4,159 million in 2010 and were merely driven by FIFA 10, Madden NFL 10, and The Sims 3. Other important contributions to the revenues came form from the sales of Dragon Age that was released in 2010 and produced $149 million of sales. The overall Sims label amounted of a $137 million and EA SPORTS Active of $131 million. The unsuccessful sales of Rock Band however offset the revenues by a decrease of a $329 mil. Apart from the increase of revenues, the company had a third consecutive year of negative net income, from a $454.00 loss in 2008, the company reached to a $1,088 million figure, which increased the negative net income by 140%. In 2010 EA has managed to reduce the loss, however, the company is still experiencing a high negative loss of $677 million. The company's operating expenses are relatively within the same figure between 2008 and 2010, EA having on average a $2,5867million operating expenses. This is also reflected in the

EBIT, which has maintained its line of $1,291 million, $1,300 million and $1,180 million in 2008, 2009 and 2010 respectively (EA Annual Report 2010).

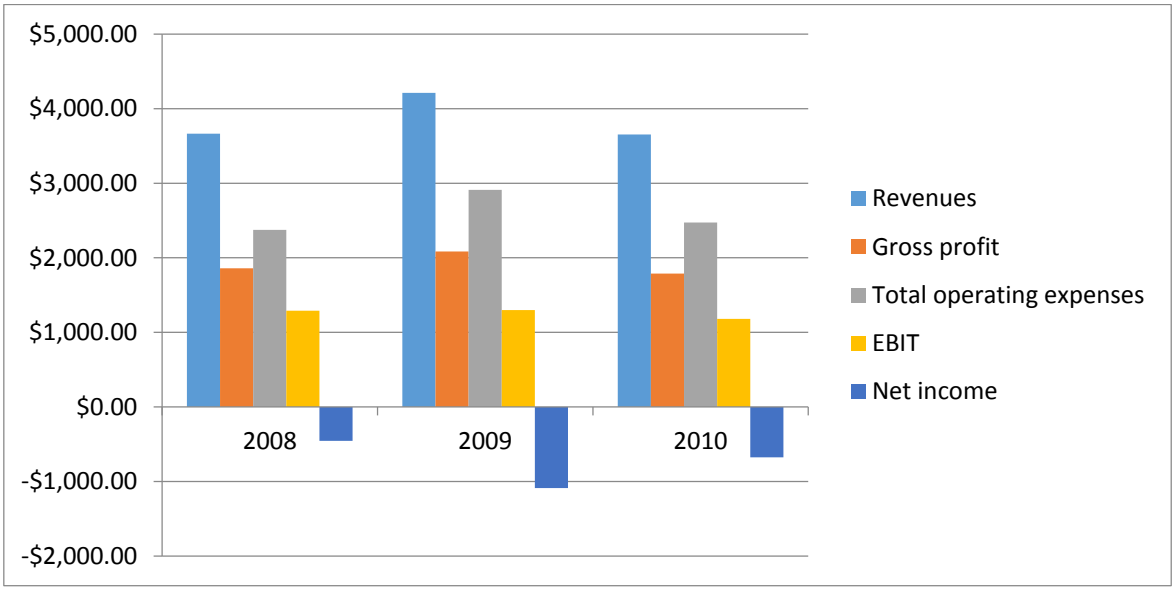

Figure 35 EA Performance 2008-2010

Source: own creation, data: EA Annual Report 2010

Overall, the aggressive strategy of EA can be described as: "*find a company that made a really popular game, acquire the company and its properties; then set the team on churning out sequel after sequel to the game in question. Sometimes, likely not by design, the staff leaves or burns out, or one of the products sells poorly; the studio is closed or subsumed"* (Waugh, 2006).

The company's desire to capture as much as possible of the interactive entertainment industry lead EA to fight with competitors across numerous sectors at once, creating a lack of focus over the strategically important resources and developing new main capabilities.

Even though EA's is experiencing lower results in the overall company performance and has lower financial results year by year, the company does not cease to invest in its short term investments, announcing to further target companies in in the mobile games market as well as the social media games.

Concluding remarks

The analysis chapter provides the authors' academic contribution towards the extension of transaction cost theory to addressing horizontal integration by positioning it with the perspective of resource-based view of the firm. The combined framework is a first approach in combining resource-based view assumptions and logics with transaction cost theory assumptions to investigate under what circumstances the horizontal integration will foster synergistic effects, in the terms of competitive advantage. Competitive advantage is presented

by increased operational efficiency and cost savings, which are two aspect of respectively resource-based view and transaction cost theory.

By analysing the merger between Activision and Blizzard Entertainment, the authors aim to identify the relatedness of the firms, their strategic resources and the environmental uncertainty as well as to explore whether there is synergy created in the case and how it affects the industry and the main rival Electronic Arts. By analysing the standalone valuations of the two companies in 2007 and the combined firm in 2010 the authors prove the argument that the synergy created from the horizontal merger will lead to increasing operational efficiency and cost savings thus creating competitive advantage. Presenting the rationale for the merger and the overview of the industry in 2007 the authors argue that in the case of firms with large capital which have already a reputation in the market and growing revenues, hierarchical governance is more efficient than hybrid one due to the safeguarding issues as well as the contract implications signed between the parties involved. This will create a more trustworthy relationship between the parties and will enhance productivity such as superior skills and knowledge. Activision and Blizzard opt for a horizontal merger, when it comes to high asset specificity and uncertainty, in order to obtain and safeguard the assets, responsible for creating synergistic effects.

A look at the industry performance and the rival's performance in 2010, when synergy from the merger has materialized, shows that following the horizontal merger, the overall performance of the industry will be positive. The overall output of the industry increased in 2010, compared to previous years. Additionally, consumer spending showed significant increases in 2010, after stagnation in 2008 and 2009. Regarding the synergistic effect of the merger on the competitors, it is negatively related to the operating performance of the rival Electronic Arts, which reported lower revenues in 2010 from 2009 as well as decreased portfolio and downsizing.

5 Conclusions

The following section embodies the conclusions that arise from the theoretical investigation which was further applied to the Activision Blizzard merger. The thesis's aim is to answer the formulated research question with its supporting questions:

In regards to the theories exploring horizontal mergers, how can transaction cost theory and resource-based view of the firm be employed to explain the conditions under which the merged companies achieve competitive advantage and the consequences from synergy-creating M&As?

After conducting a broad literature review in regards to the employed theories, and elaborating an extensive analysis, the authors have concluded the following in addressing the first supporting research question:

1. *How can transaction cost theory and resource-based view be combined in order to understand the conditions under which horizontal mergers will achieve competitive advantage?*

The authors have identified that TCT is a dominant theory in the case of choice of governance mode through its characteristics: asset specificity, uncertainty and transaction frequency. TCT addresses the reasons and conditions under which firms engage into vertical integration, alliances or market governance modes. The theory lacks the same amount of theoretical platform for explaining and investigating the conditions of horizontal integration. Nonetheless, the theoretical underlying assumptions of asset septicity, uncertainty and bounded rationality can be employed when addressing the horizontal merger. Analysing the resource-based view theory, the main approach standing behind the theory in regards to horizontal mergers are the potential resources of a firm that are able to create competitive advantage for the firm through diversification.

The authors combine the assumptions of transaction cost and resource-based view of the firm to illustrate the synergistic effects in horizontal mergers. The authors start from the assumption that RBV is considered as an extension/expansion of TCT elements of high degree of uncertainty and asset specificity into choosing the governance mode that assures the economization of transaction costs. RBV passes these premises by focusing more on the company and its resources that are responsible for value creation and performance. TCT and RBV are therefore considered complementary, both theories providing a partial picture of the reality. Combining the two views offers a broader picture of the phenomenon of horizontal

mergers, where RBV compensates TCT through its value creation perspective over transaction costs and nature of the resources employed in the transaction. The overall result leads to expanding the idea of minimizing costs argued by TCT and completing it with the perspective of value creation.

When elaborating the combined framework of the two theories, the authors start from the arguments and reasoning of environmental uncertainty as a cause of horizontal integration. The uncertainty level prevails in TCT, where the safeguarding of asset specificity leads to choosing a higher degree of integration. Uncertainty is caused by bounded rationality and the limited information available to companies, operating in a dynamic industry. The safeguarding of the resources in a dynamic environment, where internal development of resources is a complex process, urges firms to engage in mergers and acquisition activity to diminish the gaps and assure profitable product diversification.

The second level of the framework addresses the relatedness between firms. This level belongs to the RBV and according to the relatedness of the firms' activities, firms will choose acquisitions over alliances, and alliances over divestitures. These choices result from the difficulty of renowned firms sharing brand capital only through extensive internal coordination of activities, or the hazards that may come from relationships between direct competitors. In choosing acquisitions as a governance mode in the horizontal mergers and acquisitions the firm's technological resources and marketing resources are considered the most important arguments in the choice of horizontal integration than other governance modes. The relatedness of the firm also addresses successful M&As, where only the resources and capabilities which are strategically valuable and complementary to the firms generate synergy, which is applied to the horizontal merger and acquisition cases.

The last level of the framework treats the characteristics of the resources and their combination as defining factors for competitive advantage. Firms engaging in horizontal mergers and acquisitions seek to diversify their activity by reducing their product specialization gap. Therefore, value creation streams from combining specialized and co-specialized resources of two companies, or recombining their resources with the potential firms' capabilities to undertake a productive activity.

Overall, the framework treats horizontal mergers from environmental uncertainty, to relatedness of the firms engaging in the transactions with their resource characteristics. If appropriately combined all of these aspect, a horizontal merger will generate synergy from the recombination of strategically valuable resources, which will create competitive advantage to the firm.

2. *Taking into consideration the merger between Activision and Blizzard Entertainment in the interactive entertainment industry, how did the merger of the companies lead to operational efficiency and competitive advantage?*

Based on the developed framework, the authors have chosen to apply its assumptions to the interactive entertainment industry with the one of the biggest horizontal merger the industry has experienced. To answer the second supporting research question the authors have employed the discounted cash flow model in evaluating the stand alone value of both Activision and Vivendi Games in 2007, the year before the merger, and in 2010, two years after the merger was completed in June 2008. The calculation of DCF model applied to Activision revealed that the company values of $987.522 million when the company reaches a stable growth of 7.9% in 2012. On the other side, Vivendi Games, which is part of the Vivendi group, with its three divisions fully owned by the group: Blizzard Entertainment, Sierra Entertainment and Vivendi Games Mobile, was evaluated based on the information provided from the 2007 annual report of Vivendi Group, which comprises of two years of financial information. Taking into consideration the evolution of the group and the overall evolution of Vivendi Group, Vivendi Games was valued at $5.630 billion in 2007, based on a stable growth of 3.5% and discount rate of 11% which was estimated by the company's analysts.

Vivendi offered a price of $2.431 billion out of which $1.731 billion in cash and $700 million in shares for the acquisition of Activision, owning therefore 68% of the company. Based on the calculations of the standalone value of Activision, Vivendi Group paid a premium of $1.143 billion. This premium represents a great investment Vivendi Group has taken upon. In order to identify weather the merger of the two companies created synergies, the companies are valuated in 2010, based on the same framework of the DCF model. The Activision Blizzard valuation of 2010 revealed that the newly formed company has reached a standalone value of $10.851 billion, which clearly demonstrates that the merger of the companies has led to operational efficiency. The company declaring to finalize its organizational restructuring activities as a result of the merger in June 2009.

The competitive advantage of the companies arises from the profitability of their operations, and the continuous growth the companies have experienced through its main franchises: Call of Duty, World of Warcraft and StarCraft, from which World of Warcraft continues to be the world's number one subscription-based MORPG, reaching 12 million subscribers worldwide. The ability of Activision Blizzard to bring continuous high profits and growth in its operating

margin from a, 24% in 2008, to 26% and 29% in 2009 and 2010 respectively, indicates that the level of profitability is in continuous growth.

3. *What are the consequences from the synergistic effects of the merger on the overall structure and performance of the industry?*

In order to answer the last supporting sub-question, the authors have analyzed the interactive entertainment industry and its evolution from 2007 until 2010, as well as the main player of the industry, which is Electronic Arts.

The overall size and structure of the interactive entertainment industry has experienced strong changes from the beginning of 2000, the industry reaching a $40bln in revenues globally, with EA being the market leader for the last three years. The overall growth rate reaching in 2007 25.5% and customer spending of $44.4 billion. Because of the high growth of the industry with prospects of 5.7% in the future, EA's strategy was to assure the company's growth was through aggressive acquisition in companies showing great potential of success and profits. Through its acquisitions EA has assured its presence in all of the entertainment industry sectors, from console, handheld and PC, to the attractive mobile market. EA's profitable and renowned labels such as EA Sport, The Sims, and Pogo assured the company's popularity among customers. The EA Sports franchise being considered one of the company's main strategic advantage, giving EA a monopoly in the sports game industry. In 2007 EA declared net revenue of $3.091 billion, a new CEO and a reorganization of its divisions and labels.

As of 2010, the global interactive entertainment industry accumulated $55 billion and was projected to reach over $80 billion by 2015. From the global customer spending, the global recession influenced the customer sending in 2008 and 2009, however, the expenditures are expected to continue its growth due to new technological developments and game releases. The announced merger in December 2007 between Activision and Vivendi Games in 2007 come as a surprise in the interactive entertainment industry, threatening EA with a new competitor which is similar in size with the company. The threat of a potential competitor which EA could not acquire had urged EA to invest into new acquisitions and invest a greater amount of capital into developing games that are similar to World of Warcraft franchise. Nonetheless, the great amount of capital invested in EA's long chain of acquisition which started in 1991 until present has come to haunt EA's performance. Even though on the short run EA has managed to be successful with its labels such as the Marxis label, Mythic Entertainment, Bioware and Jamdat Mobile, on the long term, the company has failed to

create original content and loose valuable human resources in its process of acquisitions. Even though the revenues of EA have been increasing, the company was facing already three years of consecutive negative net income, reaching its peak of $(1,088) million in 2009, and then lowering to $(677) million in 2010.

From the analysis of the industry and EA before and after the merger of Activision Blizzard, the authors have managed to demonstrate that the horizontal merger has increased the overall performance of the interactive entertainment industry, where the newly merged Activision Blizzard has proven to have a very strong customer base from their MMORPG Games – World of Warcraft, StarCraft and Diablo, making the company the market leader in North America and Europe for the console as well as the online segments of the industry. The analysis also has proven that the merger has impacted the operating performance of their competitor, EA, where EA has lost ground to Activision Blizzard successful labels because of its desire to capture as much as possible of the interactive entertainment industry and to choose head to head competition by creating similar games with Activision Blizzard MMORPG franchise.

The contribution of this thesis is towards a deeper understanding of the components of transaction cost theory and resource-based theories and their extension towards explaining horizontal integration. The authors offer a combined perspective of the conditions under which a horizontal integration may create synergy and consequently influence the market and its rivals. It is the belief of the authors that the theoretical discussion and combined theory present an opportunity to extend both theories towards horizontal integration options and provides a starting point for future academic discussion.

6 Recommendations and Reflections

This thesis is an exercise in analyzing theories and positioning them against each other in order to explore their consistency in understanding of business phenomena such as horizontal mergers. Given the theoretical focus of the thesis it is not an exercise of solving a real business problem but rather attempt at tackling a knowledge gap identified by the authors. Thus, the thesis is devoted to literature review and theoretical discussion in greater length and uses the case of the merger of Activision Blizzard.

Naturally, this thesis serves as a preliminary research into the combination of transaction cost theory and resource based view when studying horizontal integration. The aim is to give a first glance into the assumptions and logical frameworks which can be derived from such combination and to spark interest in further theoretical work.

Additionally, from an empirical aspect, the combined framework requires testing in quantitative as well as further qualitative methods in order to determine its consistency and merits.

A key shortcoming of this thesis is the lack of primary source of information when regarding the case. Since the thesis objective is not empirical, its scope is to offer a greater descriptive overlook of the theoretical foundations and methodologies in addressing this academic knowledge gap. The inductive nature of the qualitative research and the abstract character of the combined framework may be considered weak points of the thesis but if considered a first approach towards a grander investigation of the positioning of the resource-based view with the transaction cost theory, the thesis offers a unique starting point with various directions for further research.

One direction for a further research may be testing the consistency of the combined framework by conducting a quantitative research of horizontal mergers which have created competitive advantage in diverse industries. Thus, the assumptions and conditions described can be tested against cases from different industries in order to create a theoretical framework relevant across fields.

Additionally a qualitative research with primary data of the case of the merger may ensure that the results of this thesis are consistent with the real intentions, motives and effects of the merger. This merger is a significant case in the interactive entertainment industry so the authors recognize the potential knowledge which can be brought about by such extensive research.

Barney (2001) argues for the continuous revision of theoretical frameworks such as the TCT and RBV in order to ensure that its logic is still relevant. Additional theoretical discussion of the positioning of the resourced based view and the transaction cost theory towards understanding the motives and effects from horizontal mergers would be beneficial to bring depth and additional perspectives and ultimately to enrich the theory.

Positioning the RBV with theoretical work may provide logical framework for understanding the internal behavior of the components which produce synergistic effects in horizontal mergers. A more focused research on the manner of how the elements of the RBV and TCT are combined to produce synergistic effects.

From the TCT perspective and the case of Activision Blizzard, further association of the TCT elements of asset specificity and uncertainty with a new theoretical framework can be employed, creating thus a new framework to address the same case. Through the association of TCT with a new theory the consistency of the previous findings of TCT and RBV can be developed.

The developed framework of TCT and RBV can be tested on a higher level by implementing it to more cases of mergers and acquisitions in the interactive entertainment industry. It would be interesting to gather more information about the merger and acquisition process of the other players of the industry and complete the created framework by adding knowledge about an overall trend.

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Appendix

Appendix 1

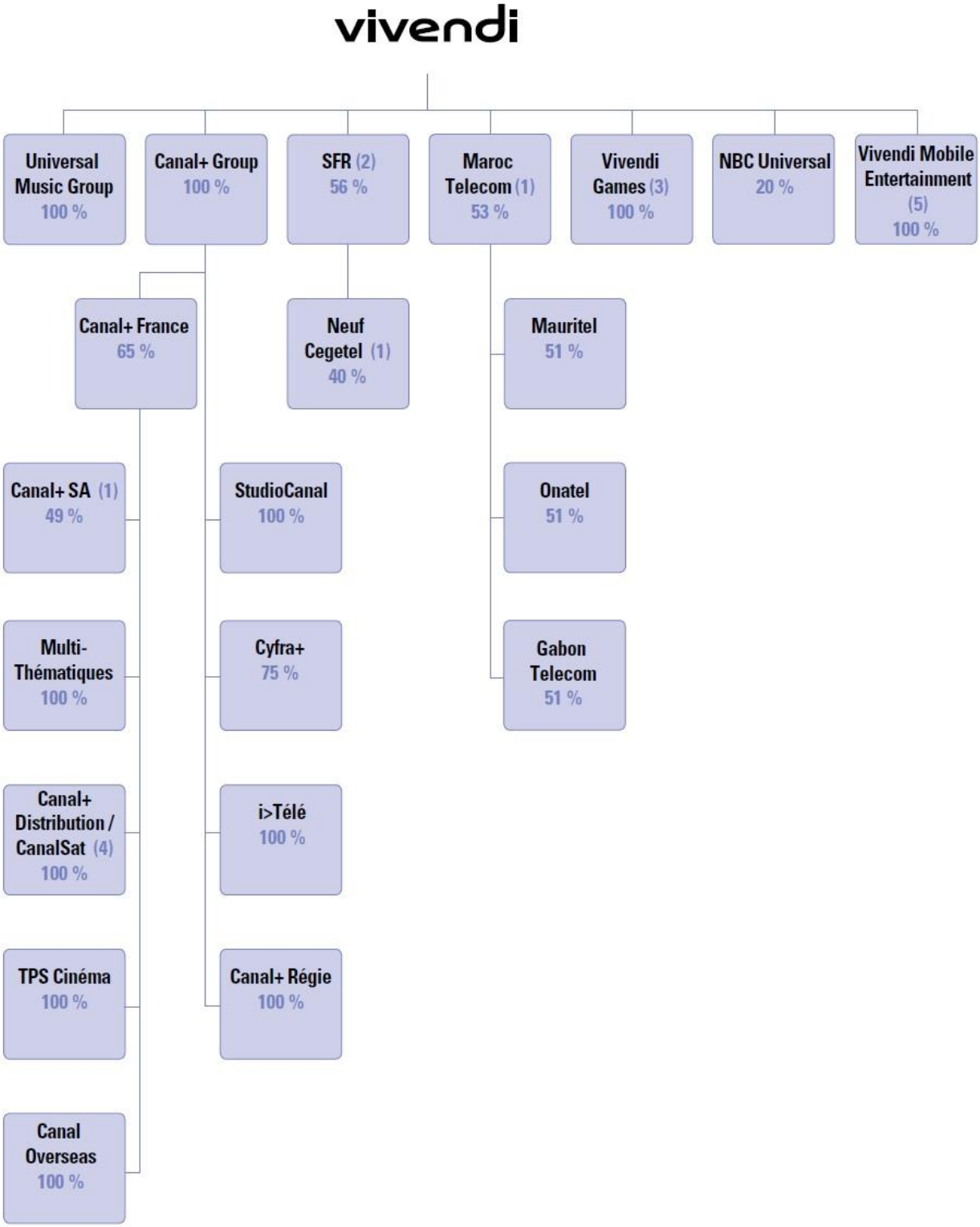
Activision Standalone Valuation

The following figures are expressed in thousands of $

	2006	2007	2008	2009	2010	2011	2012
EBIT		$109,825.00	$144,584.61	$190,345.64	$250,590.04	$329,901.79	$434,315.70
EBIT(1-tax)		$85,663.50	$112,776.00	$148,469.60	$195,460.23	$257,323.39	$338,766.25
Depreciation and amortization		$30,155.00	$31,484.84	$32,873.32	$34,323.03	$35,836.68	$37,417.07
Cap Exp		$17,935.00	$23,539.69	$30,895.84	$40,550.79	$53,222.91	$69,855.07
Revenues		$1,523,012.00	$1,585,227.04	$1,649,983.56	$1,717,385.39	$1,787,540.59	$1,860,561.62
Work Cap	$922,199.00	$1,060,064.00	$1,219,073.60	$1,401,934.64	$1,612,224.84	$1,854,058.56	$2,132,167.35
Changes in WC		$137,865.00	$159,009.60	$182,861.04	$210,290.20	$241,833.73	$278,108.78
FCFF		($39,981.50)	($38,288.45)	($32,413.96)	($21,057.73)	($1,896.57)	$28,219.46
PV		($36,501.96)	($31,914.05)	($24,666.26)	($14,629.84)	($1,202.97)	$1,096,437.70
TV							$1,865,177.52
Value of the company							$987,522.63
Debt	$382,415.00	21.32%					
Equity	$1,411,532.00	78.68%					
Total	$1,793,947.00						
Risk free rate		4.50%					
Market risk premium		5.00%					
Beta		1.31					
Tax rate		22%					
Pre tax interest rate		5.04%					
Growth in stable period		7.90%					

Appendix 2

Vivendi Group Listed Companies



Appendix 3

Activision Blizzard Standalone Valuation

The following figures are expressed in millions of $

	2010	2011	2012	2013	2014	2015
EBIT	$492.00	$609.78	$755.77	$936.70	$1,160.94	$1,438.87
EBIT(1-tax)	$418.20	$518.32	$642.40	$796.19	$986.80	$1,223.04
Depreciation and amortiz	$198.00	$160.44	$130.00	$105.34	$85.36	$69.17
Cap exp	$97.00	$140.65	$203.94	$295.72	$428.79	$621.74
Working cpital	$2,500.00	$2,625.00	$2,756.25	$2,894.06	$3,038.77	$3,190.70
Changes in WC	($300.00)	$125.00	$131.25	$137.81	$144.70	$151.94
FCFF	$819.20	$413.11	$437.21	$468.01	$498.67	$518.53
PV	$748.43	$344.82	$333.42	$326.07	$317.42	$8,781.20
TV						$14,581.25
Value of the firm						$10,851.35
Debt	$3,203.00	23.89%				
Equity	$10,203.00	76.11%				
Total	$13,406.00					
Risk free interest rate	4.50%					
Market risk premium	5.20%					
Beta	1.32					
Tax rate	15%					
Pre tax interest rate	3.97%					
Growth in stable period	5.70%					