EUROPEAN MASTER IN BUSINESS STUDIES

INVESTIGATING THE PERCEPTION OF FIN-TECHS:

DISRUPTIVE INNOVATION IN THE BANKING INDUSTRY?

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“ Our understanding is correlative to our perception. ”

Robert Delaunay

ABSTRACT

Title	Investigating the Perception of Fin-Techs: Disruptive innovation in the Banking Industry?
Keywords	banking industry; Fin-Tech; perception; strategic positioning; technological progress; disruptive innovation;
Background	The growing importance of innovations, as well as the wide use of technologies, have a big impact on the banking industry. Financial technologies (Fin-Techs) have become an important member of the financial scenario, but their relationship with traditional banks nowadays is still not well defined. Some members of the financial services industry see the flourishing of Fin-Tech as a threat to the traditional banking industry, whereas others believe that Fin-Tech has become a challenge that can be turned into an opportunity. The perception Fin-Tech companies have of themselves is essential to understand the strategy they will adopt in both short-term and long-term. Furthermore, the perception banks themselves have of Fin-Techs is also crucial for future strategic co-operation.
Purpose	Consequently, the purpose of this research is to investigate how the perception of Fin-Techs impacts their strategic positioning in the market. This is going to be examined from two different perspectives: traditional banks and Fin-Techs. The research will lead to a better understanding of Fin-Techs positioning in the market in both short-run and long-run.
Methodology	Semi-structured interviews will be held within Fin-Techs and Bank. The first step will be to interview expert operating in the banking sector to investigate their perception of Fin-Techs. The second step will be to interview Fin-Techs specialists and understand how Fin-Techs perceive themselves in the market and how this perception affects their collaborations with Traditional Banks.

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LIST OF ABBREVIATIONS

Fin-Techs: Financial Technologies

Fin-Tech: Financial Technology

P2P: Peer to peer

DIT: Disruptive Innovation Theory

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1 INTRODUCTION

Chapter one intends to give a first framework of the thesis content. The growing importance of innovation and the latest developments in technologies have affected the banking industry (Romānova & Kudinska, 2016), for this reason, it is important to examine the behavior of Fin-Tech companies in the Banking Industry. Consequently, the theory of disrupted innovation is introduced with the main aim to understand if Fin-Techs are sustaining or disrupted innovators. Moreover, this chapter describes the research question which aims to investigate how the perception of Fin-Techs impacts their strategic positioning in the market, in both the short and long run. Finally, purpose and contributions will be presented as well as limitation and boundaries of the research.

1.1 BACKGROUND

The introduction of the most recent digital developments in the banking industry have seen the flourishing of new members. Financial Technologies (Fin-Techs) have the potential to reshape the financial industry by cutting costs, improving the quality of financial services, and creating a more diverse and stable financial landscape (The FinTech Revolution, 2015). Even if Fin-Techs have become an important member of the financial scenario, their relationship with traditional banks is still not well defined, as well as their position in the market. Thus, it is necessary to analyze the perception of Fin-Techs in the market and the extent of innovation they are bringing to this field. Clayton Christensen developed a framework for evaluating those innovations and choosing the most suitable business strategies to respond to technological changes (Hungenberg, Koening, Jelassi, & Enders, 2007). By doing so, he defines two different types of innovation: sustaining innovation and disruptive innovation.

"Sustaining innovations generate growth by offering a better performance in existing markets. Usually, regardless of whether they are incremental or radical, these innovations are exploited successfully by the established players in an industry and do not lead to revolutionary changes in an industry's landscape. On the other hand, disruptive innovations initially have a lower performance in the traditionally most important performance criterion (such as functionality, speed, or size). Even though in most cases, disruptive innovations are less complex from a technological viewpoint, they are usually brought to the markets successfully by new entrants" (Hungenberg et al., 2007, p. 67).

Fin-Techs' innovative potential will be analyzed in this research with a focus on the perception Fin-tech have of themselves, as well the perception traditional banks have of Fin-Tech. The aim is to understand if they represent a challenge or an opportunity for banks. Indeed, "some members of the financial services industry see the boom in Fin-Tech as a threat to the traditional banking industry. Others believe that Fin-Tech has become a challenge that can be turned into an opportunity as it provides more flexibility, better functionality in some areas, and aggregation of services" (Romānova & Kudinska, 2016, p. 21).

Thus, the temporal dimension will be taken into consideration as well. In fact, short and long term perception is essential for understanding the Fin-Techs' strategic positioning in the market. Chris Rentner, founder and the CEO of Akouba, said about Fin-Tech companies: "Phase one may be to partner with banks but phase two is to infiltrate bank customer bases at every level (…). They are not going to stay niche players" (North Western Financial Review, 2016, p. 16).

1.2 PROBLEM STATEMENT

This study is set up to address the question of how Fin-Techs' perception in the banking industry can influence their strategy? The structure used to build the research question can be divided into three main parts: disruptive innovation, financial technologies and banking industry.

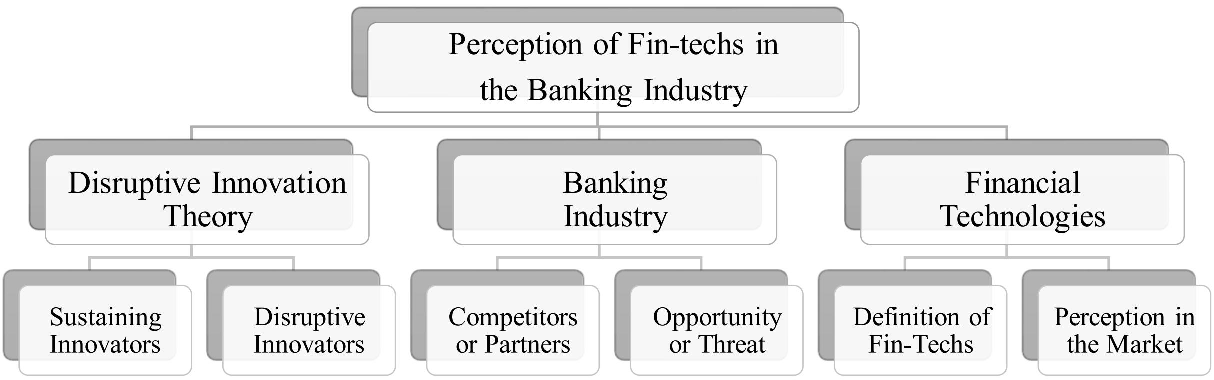


Figure 1: Perception of Fin-Techs in the Banking Industry: three main parts. Own source

Regarding the first one, disruptive innovation theory (DIT), the main aim is to understand if Fin-Techs are having a disruptive nature by reshaping the banking industry, or if they are simply actors that aim to improve the existing services offered by traditional banks. In fact, many researchers and practitioners believe that Fin-Tech can reshape the future of the financial services industry, whereas others are skeptical about their adoption (Ryu, 2018).

The second one, the banking industry, will explore possible co-operation between Banks and Fin-Techs. The difficulty is to understand the competitive and collaborative dynamics in the Fin-Tech innovation (Drasch, Schweizer & Urbach, 2018).

Lastly, financials technologies, have as the main aim to comprehend the perception Fin-Techs have on themselves in the banking industry as well as the perception Banks have of Fin-Techs. Indeed, it is not possible to define Fin-Tech companies on the basis of its use in legislation or legal documents. Fin-Techs have different kinds of legal and regulatory obligations due to their differing business models and the extremely diverse products and services they offer (Dorfleitner, Hornuf, Schmitt & Weber, 2017).

In fact, it will be helpful to understand if Fin-Techs and banks consider Fin-Techs as banks or as technology companies. All three sections will be analyzed from both the short and long run dimensions, to understand the current situation and predict the future effects Fin-Techs will have on the banking industry.

1.3 RESEARCH GAP AND CONTRIBUTION

Nowadays, there is no specific agreement on the term Fin-Techs. (Dorfleitner et. al., 2017). Moreover, their position in the market is not well defined neither their belonging to the banking sector. Built on previous research and the abovementioned problem statement, the purpose of this study is to investigate: "How the perception of Financial Technologies' (Fin-Techs) in the banking industry can influence their strategy in both, short and long run?"

Specifically, the aim is to contribute to the current theoretical framework with a qualitative study that will help us to understand if Fin-Techs are sustaining or disruptive innovators. Moreover, it will enable members of the Banking Industry to comprehend short and long run strategic intention of Fin-Tech companies as well as the possibility to understand if Fin-Techs place themselves as competitors of banks or as merely partners. Additionally, this research will allow a better definition of the terms Fin-Tech.

The study is focusing on the general market where Fin-Techs are operating, there is no specific focus on one country or continent. This choice was taken as the Fin-Tech phenomenon is lacking in academic papers in specific areas or countries. Furthermore, the adoption of Fin-Tech companies are still at a relative infancy around all over the world (EY Fintech Adoption Index, 2015). Further limitations of the study will be better examined during the last stage of the research when all the possible variable will be identified.

1.4 STRUCTURE

In order to introduce the topic, a systematic literature review on Disruptive Innovation Theory (DIT), Banking Industry and Financial Technologies are presented. A theoretical framework follows that will largely describe reasons this research question exists, as well as a deep analysis of theories and useful definitions used in the study, will be illustrated.
Subsequently, chapter three will define the research question and the assumptions implied. The research is based on a qualitative research method which implies semi-structured interviews for both: Traditional Banks' Experts and Financial Technologies. Moreover, a list of Fin-Tech companies contacted as well as the method used to gather interview contacts will be broadly explained. The final chapters provide the reader with results and conclusions of the research.

2 THEROETICAL FRAMEWORK

2.1 LITERATURE REVIEW

This section is devoted to present the most significant academic papers, articles and books for the conduction of the study. They will be used to get a broader comprehension of the three different fields that are considered to have a particular importance for the conduction of the research: Disruptive Innovation, Financial Technologies and Banking Industry. Moreover, the chart below represents a useful tool to build the theoretical basis for the research. Therefore, Table 1, 2 and 3 summarize all the relevant elements of each academic paper, article or book.

FIELD	AUTHOR	TITLE	SOURCE	CONTENT	KEY FINDINGS
DISRUPTIVE INNOVATION	Christensen, Raynor and McDonald (2015)	What is Disruptive Innovation?	Harvard Business Review	Revisits the central tenets of disruptive innovation theory, its developments over the past 20 years and its limitations.	Definition of the four important points of disruptive innovation: - Innovation is a process; - Disrupters build business models different from those of incumbents; - Some disruptive innovations succeed, some don't; - The mantra "Disrupt or be disrupted" can misguide us.
	Christensen (2013)	The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail	Harvard Business Review Press	Demonstrates how successful and well managed companies can collapse because unexpected competitors enter in the market.	Difference between sustaining and disruptive innovation; Importance to match the market by focusing on resources, processes and values (not only on management); Possibility to solve the Innovators dilemma by acquiring of founding subsidiaries.

DISRUPTIVE INNOVATION	Dombrowski and Gholz (2009)	Identifying Disruptive Innovation: Innovation Theory and the Defense Industry	Innovations: Technology, Governance, Globalization	Improves Christensen's theory in a way that makes it more analytically useful, which means making the theory more predictive than descriptive.	Redefinition of both disruptive innovations and sustaining innovation; Innovations in the defence market; Investment in sustaining innovations.
	Oshodin, Molla, Karanasios and Ong (2017)	Is FinTech a Disruption or a New Eco-system? An Exploratory Investigation of Banks' Response to FinTech in Australia	Australasian Conference on Information Systems	Creation of a new Fin-Tech ecosystem and investigation of how traditional financial institutions are responding to the Fin-Tech.	Embracement of Fin-Tech by creating mechanisms for inbound Fin-Tech knowledge flows; Monitoring and facilitating Fin-Tech activities of start-ups, crowd-sourcing Fin-Tech ideas, setting up innovation hubs to encourage internal Fin-Tech innovations; Modernizing their platforms with the adoption of technologies commonly associated with startups, partnering, and investing in Fin-Tech start-ups.
	Gomber, Kauffman, Parker and Weber (2018)	On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption and Transformation in Financial Services	Journal of Management Information Systems	Presents a new Fin-Tech mapping that enables the assessment of the extent to which there are changes and transformations in four key areas of the financial services industry.	The four key areas of the financial services are: - operations management in financial services, - technology innovations that leverage the execution and stakeholder value associated with payments settlement, cryptocurrencies, blockchain technologies, and cross-border payment services; - Fin-Tech innovations that have impacted lending; - investments, financial markets, trading, risk management, robo-advisory and related services that are influenced by blockchain and Fin-Tech innovations.

DISRUPTIVE INNOVATION	Enders, Jelassi, König and Hungenberg (2006)	The Relativity of Disruption: E-Banking as a Sustaining Innovation in the Banking Industry	Journal of Electronic Commerce Research	Examines if the Internet and also the business models of pure e-banks constitute a disruptive innovation to the retail banking.	Demonstration of how Internet has been a sustaining innovation; Deduction pure e-banks are unlikely to create a disruptive innovation in the retail banking industry.

Table 1: Literature review - Disruptive Innovation. Own source

FIELD	AUTHOR	TITLE	SOURCE	CONTENT	KEY FINDINGS
FINANCIAL TECHNOLOGIES	Schueffel (2016)	Taming the Beast: A Scientific Definition of Fintech	Journal of Innovation Management	Explores the complexity of Fin-Techs and attempts a definition of the term Fin-Tech.	Offer a definition which is succinct and distinct in its communication. It is concluded that Fin-tech is a new financial industry that applies technology to improve financial activities.
	In Lee and Jae Shin (2018)	Fintech: Ecosystem, business models, investment decisions, and challenges	Business Horizons	Fin-Tech business models, investment types and technical and managerial challenges for both Fin-Tech start-ups and traditional financial institutions.	Five elements of the Fin-Tech ecosystem; Six Fin-Tech business models; Six challenges in the Fin-Tech sector.

FINANCIAL TECHNOLOGIES	H-Y Chiu (2015)	Fintech and Disruptive Business Models in Financial Products, Intermediation and Markets	Journal of Technology Law & Policy	Intends to offer a framework to understand the disruptive potential of Fin-Techs. Appreciate to what extent Fin-Techs is disruptive, and whether its disruption is relevant to financial regulatory.	Nature and development of Fin-Techs; Implications of the framework in the regulatory field and suggestions to regulators; Regulators should leave financial innovations to be evaluated only by financial elites and do not adopt knee-jerk reactions to new developments.
	Temelkov (2018)	Fintech Firms Opportunity or Threat for Banks?	International Journal of Information, Business and Management	Analyses how Fin-Techs are shaking the banks' comfort zone and in what way they are a danger for banks or an opportunity. Importance of banks approach and desire for cooperation.	Exploration of the financial service environment and the relative investments; Impact Fin-Techs companies have on banks; Strategic moves for both Fin-Techs and Banks and potential benefits and risks arising from their cooperation.
	Drasch, Schweizer and Urbach (2018)	Integrating the Troublemaker: A Taxonomy for Cooperation between Banks and Fintechs	Journal of Economics and Business	Understands how technology-driven companies and banks can cooperate and reshapes the financial sector.	The results suggest structuring and describing bank- Fin-Techs cooperation through 13 dimensions. Furthermore, the empirical examination of this study allows to identify the prevailing cooperation patterns.

FINANCIAL TECHNOLOGIES	Policy Department for Economic, Scientific and Quality of Life Policies (2018)	Competition issues in the Area of Financial Technology (FinTech)	European Parliament	Fin-tech companies can bring new competition challenges to the playing field. Some factors can result in anticompetitive behaviours.	Provide both descriptive analysis and normative tools to anticipate and manage anticompetitive behaviours given by the increasing number of Fin-Tech services.
	Frame and White (2014)	Technological Change, Financial Innovation, and Diffusion in Banking	The Oxford Handbook of Banking	Describes the role of the financial system in economies and how technological change and financial innovation can affect social welfare.	Understand which are the financial innovations; Characteristics of users and adopters of financial innovations and the attendant welfare implications.
	Buchak, Matvos, Piskorski and Seru (2018)	Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks	Journal of Financial Economics	Shadow bank market share nearly doubled in the last few years, with a bit growth among online “Fin-Techs” lenders. Two forces, regulatory differences and technological advantages, contributed to this growth.	Difference in tests exploiting geographical heterogeneity reveal that traditional banks contracted in markets where they faced more regulatory constraints and shadow banks partially filled the gaps; Fin-Techs lenders appear to offer a higher quality product; Fin-Techs use different information to set interest rates; Regulation accounts for roughly 60% of shadow bank growth, while technology accounts for roughly 30%.

FINANCIAL TECHNOLOGIES	Dolata, Schwabe and Zavolokina (2016)	FinTech: What's in a Name?	Thirty Seventh International Conference on Information Systems	Understands how press and other popular media frame Fin-Techs and discusses definitions that represents the meaning of it for the press.	Deliver the conceptual framework to be used in research and scientific literature; Identify drivers of Fin-Techs.
	Gomber, Koch, and Siering (2017)	Digital Finance and FinTech: current research and future research directions	Journal of Business Economics	Reviews the current state of research in Digital Finance that deals with innovative business functions.	Digital Finance Cube, which embraces three key dimensions: - Digital Finance Business functions; - Digital Finance Technologies and Technological Concepts; - Digital Finance Institutions.

Table 2: Literature Review - Financial Technologies. Own source

FIELD	AUTHOR	TITLE	SOURCE	CONTENT	KEY FINDINGS
BANKING INDUSTRY	DeLaCastro, Vaidyanathan and Shankar (2016)	Digital Marketing in Banking: Evolution and Revolution	Cognizant	Effectiveness of bank marketing strategies beyond brand-building.	Revelation of the four key forces that are shaping banks' marketing priorities and spending: socioeconomics, shifting demographics, new digital marketing capabilities and disruption and consumerization. The confluence of these forces, powered by new digital technologies and models, is now driving the rapid transformation of banking's marketing function into a true revenue centre.

BANKING INDUSTRY	Gianiodis, Ettlie and Urbina (2014)	Open Service Innovation in the Global Banking Industry: Inside-Out Versus Outside-In Strategies	The Academy of Management Perspectives	Comparative case study of two global banks which adopted two different strategies: inside-out open innovation and outside-in open innovation.	The deployment of open innovation processes produced strong results such as greater top-line growth and bottom-line efficiency gains; Results' translation into theoretical framework and empirical investigation.
	Alraja and Malkawi (2015)	E-Business Adoption in Banking Sector: Empirical Study	Indian Journal of Science and Technology	Research model to study critical factors that affect E-Business Adoption in the Banking Sector based on Technology, Organization and Environment (TOE) framework.	Perceived benefits, competition intensity and technology readiness are significant factors that shape and also affect the e-business adoption.
	Cornaggia, Mao, Tian and Wolfe (2015)	Does banking competition affect innovation?	Journal of Financial Economics	Exploits the deregulation of interstate bank branching laws to test whether banking competition affects innovation.	Innovation increases among private firms that are dependent on external finance and that have limited access to credit from local banks; Banking competition enables small, innovative firms to secure financing instead of being acquired by public corporations; Banking competition reduces the supply of innovative targets, which reduces the portion of state-level innovation attributable to public corporations.

BANKING INDUSTRY	Kotarba (2016).	New Factors Inducing Changes in the Retail Banking Customer Relationship Management and Their Exploration by The Fintech Industry	Foundations of Management	Growing levels of regulation force financial institutions to change their business models toward lower risk levels, higher capital adequacy, service quality, and more stable revenue pools. At the same time banks are subject to pressure from accelerated technology development.	Strategic actions that need to be undertaken in order to prepare the financial services industry for managing customer relationships: - Inclusion of the technology and social behavior into the strategic business development and risk evaluation framework; - Definition of a clear digitalization strategy for the core value proposition; - Segmentation based on the sensitivity of technological and social matters;

Table 3: Literature Review – Banking Industry. Own source

2.2 FINANCIAL TECHNOLOGIES

What is a Fin-Techs? The word Fin-Techs is a contraction of “financial technology”, but currently there is not a universally accepted definition of this term (Dorfleitner et. al., 2017).

A scientific definition extracted from a process of reviewing more than 200 articles containing the term Fin-Tech and covering a period of more than 40 years says: “Fin-Tech is a new financial industry that applies technology to improve financial activities” (Patrick Schueffel, 2016, p. 15). Another definition describes Fin-Techs as: “technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services”. (Financial Stability Board, 2017, p. 7).

Even if at the moment there is no general agreement on a definition nor universal understanding, the investments in those companies have been phenomenal (Lee & Shin, 2018). According to KPMG (2018), global investments in Fin-Tech companies during the first half of 2018 hit $57,9 billion. This number, across venture capital (VC), private equity (PE) and merger and acquisition (M&A), already exceed the total amount of Fin-Techs funding seen in 2017. Anton Ruddenklau, Global Co-Leader of Fin-Techs KPMG International says: “We continue to see technology giants around the world explore, collaborate and invest in Fin-Tech related opportunities” (KPMG, 2018, p. 8).

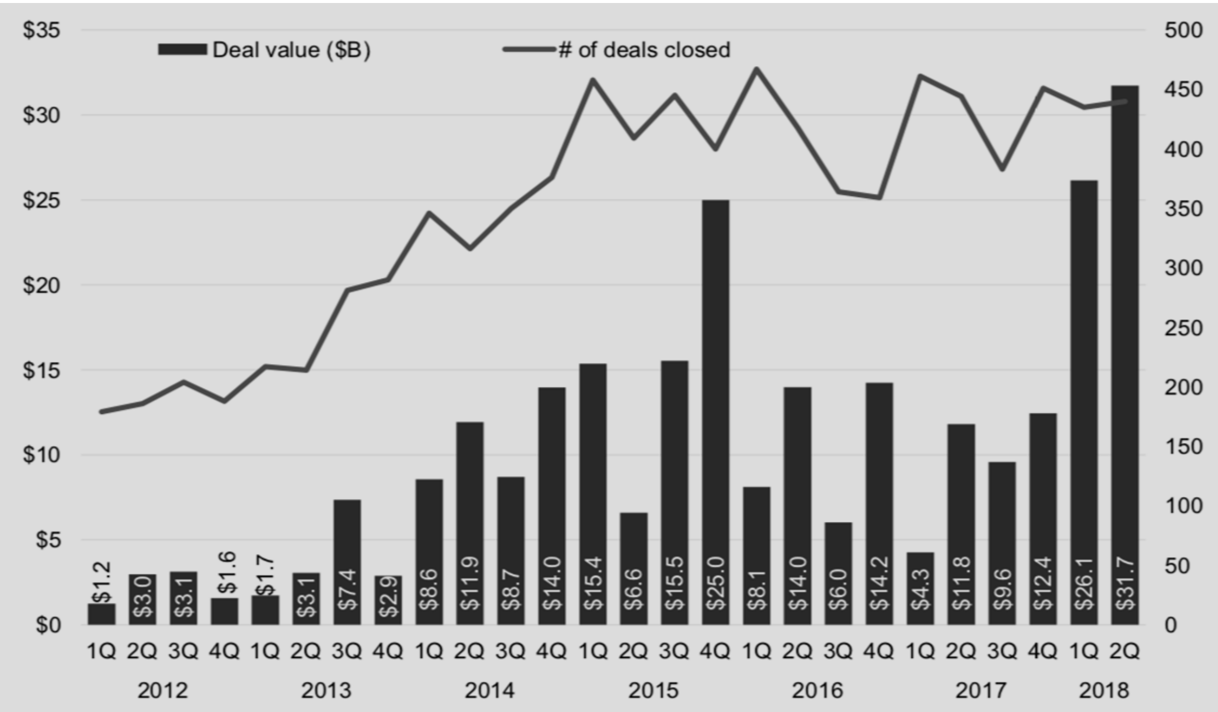


Figure 2: Global investment activities in Fin-Tech companies. Source: Pulse of Fintech 2018

The leading country in Fin-Tech startups is China as it dominates the Fin-Tech landscape, by representing five of the Top ten Fin-Techs companies in 2017 (Fintech100 KMPG, 2017). This data follows the trend from previous years, as Chinese incumbents scale the world Fin-Tech environment with an emphasis on payments and insurance. Moreover, the EY Fin-Tech Adoption Index studies the percentage of digitally active population using Fin-Tech. The average adoption of Fin-Techs across twenty different markets is 33% and the leading country is again China followed by India and UK (EY Fintech Adoption Index, 2017).

According to this data, it is clear that Fin-Tech has become a major player in the financial world (Lee & Shin, 2018) but let's analyze deeper the types of Fin-Tech companies existing in the market. Nowadays, there are six different Fin-Tech business models implemented, as illustrated below (Lee & Shin, 2018).

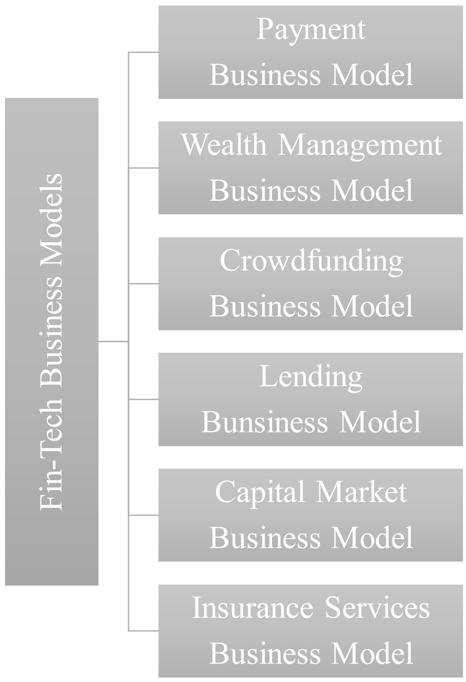


Figure 3: Fin-Tech Business Models: Six business model operating in the market. Own source

Fin-Tech companies offering payment experiences acquire customers rapidly and at a lower cost than banks and are one of the fastest growing in terms of innovation and adoption of new payment capabilities. Moreover, those Fin-Techs improve the customer experience in terms of speed, convenience and multi-channel accessibility. In fact, payments are one of the most used financial services on a day-to-day basis, as well as one of the least regulated (Lee & Shin, 2018). This business model includes mobile wallets, peer-to-peer (P2P) mobile payments, foreign exchange, real-time payments, and digital currency solutions (BNY Melon, 2015).

A different business model is given by wealth management. The most famous example regards automated wealth managers (robot-advisors) and provides financial advice for a fraction of the price of a real-life adviser. These robot-advisors suggest a mix of assets to invest using algorithms and based on a customer's investment characteristics and preferences (Lee & Shin, 2018).

Differently, crowdfunding Fin-Techs enable networks of people to control the creation of new products, media, and ideas. The most popular crowdfunding business models are: rewards-based crowdfunding, donation-based crowdfunding and equity-based crowdfunding (Lee & Shin, 2018).

Another tendency in Fin-Tech is P2P consumer lending and P2P business lending that allows individuals and businesses to lend and borrow between each other. The main characteristics of this model are: low-interest rates and an improved lending process for lenders and borrowers. Moreover, Fin-Techs are technically not involved in the lending themselves, as they are simply matching lenders with borrowers, and this represents a huge difference from a bank. (Lee & Shin, 2018).

Some other new Fin-Tech businesses are operating in some capital market areas such as investment, foreign exchange, trading, risk management, and research. The most promising ones are trading and foreign currency. Trading Fin-Techs allow investors and traders to connect with each other and discuss, place orders to buy and sell commodities and stocks. Foreign currency transaction Fin-Techs lower barriers and costs for individuals. Additionally, they are able to do so via payment methods that are much more familiar to individual clients or businesses (Lee & Shin, 2018).

In the insurance business model, Fin-Techs allow a more direct relationship between the insurer and the customer and it is the most well-embraced by traditional insurance providers. Fin-Techs use data analytics to analyze and match risk and customers are offered products to meet their needs. In fact, the technology allows insurers to expand their data collection to non-traditional sources, improving their risk analysis (Lee & Shin, 2018).

According to EY Fin-Techs Adoption Index (2017) the most popular Fin-Tech products in 2017, among digitally active users, were money transfer and payments (50%) as well as insurance (24%), whereas the less popular were financial planning (10%) and borrowing (10%). Moreover, the use of Fin-Tech products is highest among young adults at an early stage of their career. The most likely to use Fin-Techs are 25 to 34 year old consumers and Fin-Tech use declines with consumers aged 45 years and older. In fact, customers between 25 to 44 year old are comfortable with the internet and mobile technologies but they also require a wide range of financial services as they achieve life milestones, such as completing their education, starting full-time employment and having children. The difference is that consumers aged 45 years and above had already established relationships with incumbent providers before the arrival of Fin-Techs (EY Fintech Adoption Index, 2017).

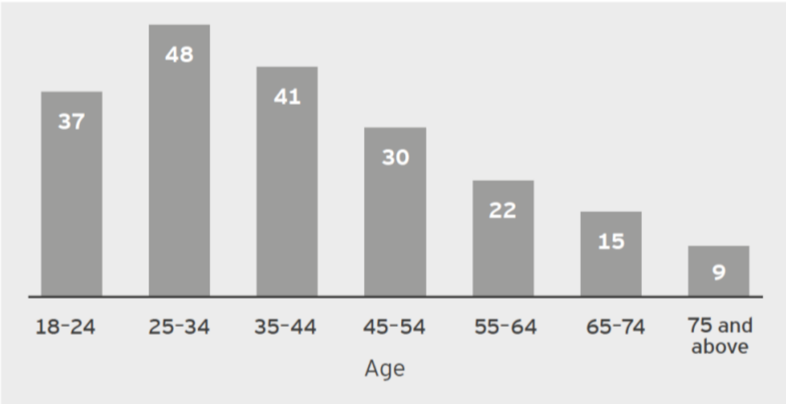


Figure 4: Average rate of Fin-Tech adoption across the age brackets. Source: EY Fin-Tech Adoption Index, 2017

2.3 INNOVATION IN THE BANKING INDUSTRY

Financial technology (Fin-Tech) is recognized as one of the most important innovations in the financial and banking industry and is evolving at a rapid speed, driven in part by the sharing economy, favorable regulation, and information technology (The FinTech Revolution, 2015). The emergence of Fin-Techs companies has drawn much speculation about their potential to disrupt incumbent financial institutions and take as much as 20% of their earnings by 2020 (Oshodin, Molla, Karanasios, & Ong, 2017). Clayton Christensen's Disruptive Innovation Theory (DIT) is one of the most influential theories in academic and management literature (Hungenberg et. al., 2006). He suggests a broad definition of the concept of innovation, which says "innovation refers to all changes of processes by which an organization transforms labor, capital, materials and information into products or services of greater value" (Christensen, 1997, p. xiii). Thus, in addition to creating new processes and products, innovation also includes new types of business models (Hungenberg et. al., 2006). Moreover, his theory defines two different types of innovation. The first one, sustaining innovation generates growth by offering a better performance in existing markets. In fact, these innovations are exploited successfully by the established players in an industry and do not lead to revolutionary changes (Hungenberg et. al., 2006). Differently, disruptive innovations are usually brought to the markets successfully by new entrants and have a lower performance in the traditionally most important performance criterion, such as functionality, speed, or size.

Usually, managers in incumbent firms are unwilling to support disruptive innovations. The first reason is they usually do not completely realize the needs of the firm's existing and most profitable customers. The second reason is that they offer a lower profit margin than sustaining innovations (Hungenberg et. al., 2006). Finally, it is not always easy to apply the categories of disruptive and sustaining innovation in practice and the reason is that the term disruption is relative (Christensen et al. 2004). It means that even if a specific innovation is disruptive to one actor in an industry, it might be sustaining to another one.

Figure 5: Disruptive Innovation Model. Source: Christensen et. al., 2015

In this diagram, the red line shows how product or services improve over time and the blue line shows customers willing to pay for performance. In fact, it contrasts product performance trajectories with customer demand trajectories. Incumbents companies introduce products or services (upper red line: incumbent's sustaining trajectory) to satisfy the high end of the market which is also the most profitable. By doing so, they miss the needs of the low end of the market which is also the least profitable segment. New entrants (red line: entrant's disruptive trajectory) improve the performance of their offerings and move upmarket, where the profitability is higher for them, too and by doing this, the challenge the dominance of the incumbents (Clayton et. al., 2015).

However, it is still unclear if Fin-Tech can be considered as disruptive or sustaining innovators. Despite this concern, it is necessary to understand if Fin-Tech companies can be considered as part of the banking industry. Innovative solutions and services associated with Fin-Techs start-up firms, incumbent financial institutions such as banks, and technology firms such as telecommunications and mobile technology companies are creating a new ecosystem of financial services (Puschmann, 2017; Zavolokina, Dolata & Schwabe, 2016).

Moreover, it is needed to define if Fin-Tech companies represent an opportunity or threat to the banking industry. Some authors argue that Fin-Techs are posing a threat or challenge to traditional institutions such as banks (Bunea, Kogan & Stolin 2016).

3 RESEARCH QUESTION AND ASSUMPTIONS

As it was presented in the previous chapters, the introduction of the most recent digital developments in the banking industry have seen the flourishing of new members (Mackenzie, 2015). Fin-Techs attract customers with products and services that are more user-friendly, efficient, transparent, and automated than those currently available. Nowadays, traditional banks have not yet exhausted the possibilities for improvements along these lines (EBF 2015; Mackenzie 2015). Moreover, it is still unclear if Fin-Tech can be considered as disruptive or sustaining innovators, even if those companies are recognized as one of the most important innovations in the financial and banking industry (Mackenzie, 2015).
Consequently, some members of the financial services industry see the flourishing of Fin-Tech companies as a threat to the traditional banking industry whereas others believe that Fin-Tech has become a challenge that can be turned into an opportunity (Romanova & Kudinske, 2016). By saying so, the research question developed that will be used as the guideline throughout the paper is the following:

"How does the perception of Fin-Techs in the Banking Industry influence their strategy?"

This perception will be analyzed from a short and long term perspective as well from Fin-Techs point of view and banking industry experts.

3.1 ASSUMPTIONS:

Based on the above-mentioned research question, the next section outlines the assumptions of this study. It was considered appropriate to divide the assumptions into three main groups: Financial Technologies, Banking Industry and Disruptive Innovation Theory (DIT) as also the theoretical framework and interview design are following the same structure.

The assumption regarding the Disruptive Innovation Theory (DIT) is the following:

A1: It is not clear to members operating in the Financial and Banking Industry whether Fin-Tech companies represent a disruptive or a sustaining innovation.

Sentiments regarding the disruptive nature of Fin-Techs are contrasting. A recent Financial Times survey indicates that the financial services disruptive sector is concerned about the potential of several digital-based technologies as applied to financial services, such as blockchain, big data and robot-advisers (Chiu, 2016). However, like Christensen, the father of the Disruptive Innovation Theory (DIT) points out, it is not always easy to apply the categories of disruptive and sustaining innovation in practice: "Even people who deeply understood the theory of disruptive innovation struggled to use them in a repeatable and methodical fashion" (Christensen et al. 2004). This is because "disruption is a relative term" (Christensen and Raynor 2003) and even though a particular innovation is disruptive to one player in an industry it might be sustained to another. For example, the Internet was believed to be a disruptive innovation while in reality, it turned out to be of sustaining nature. In fact, the Internet had a sustaining impact as it strengthened the position of the established market leaders (Hungenberg et. al., 2006).

Further assumptions can be categorized as part of the Banking Industry section:

A2: Fin-Techs and Traditional Banks don't know how to collaborate with each other, most suitable strategic alliance or partnership between them are not yet defined.

As a matter of fact, banks face sluggish innovation processes and Fin-Techs take advantage of the digital era to employ customer-centric solutions (Ansari & Krop, 2012). Although banks have realized that cooperation with Fin-Techs is a key approach to foster innovation, they struggle to address the associated challenges. It is crucial to close this research gap to better understand how technology-driven organizations and traditional banks can cooperate with each other (Drasch et. al., 2018)

The second assumption in the Banking Industry section is the following:

A3: The relationship between Traditional Banks and Fin-Tech companies is not well defined as it is still unclear if Fin-Techs represent a challenge or an opportunity for traditional banks.

The rapid rise of Fin-Tech has changed the business landscape in banking asking for more innovative solutions, for this reason, some members of the financial services industry see the rise of Fin-Tech companies as a threat to the traditional banking industry. Others, consider that Fin-Tech has become a challenge that can be turned into an opportunity as it provides more flexibility, better functionality in some areas, and aggregation of services (Romanova & Kudinske, 2016).

The last group regards specific info about Financial Technologies and contains two assumptions:

A4: There is no general agreement on a definition of Fin-Techs that can help to understand the perception Fin-Techs have on themselves as well as Traditional Banks have of Fin-Techs.

At the moment there is no universal understanding and definition of Fin-Techs in the research (Zavolokina et. al., 2016). In fact, it is not possible to construct a restrictive definition of Fin-Techs that applies to all of the entities traditionally associated with the term. While most companies in the Fin-Techs industry have certain features in common, there are always enough exceptions to render them inadequate for producing a general definition (Dorfleitner et. al., 2017).

A5: The belonging of Fin-Tech companies to the Banking Industry is not yet defined, from both perspectives: Traditional Banks and Fin-Tech companies.

Some are considering Fin-Techs as an integral part of the Banking Industry whereas others see them as the generators of a new ecosystem. The first ones, simply imply that Fin-Techs have become an integral part of the banking industry” (Romanova & Kudinske, 2016). Whereas the second ones, perceive innovative solutions and services associated with Fin-Tech start-up firms, incumbent financial institutions such as banks, and technology firms such as telecommunications and mobile technology companies are generating a new eco-system of financial services (Puschmann 2017; Zavolokina et. al., 2016). Traditional banks which are considered the dominant institutions have opportunities in the Fin-Tech ecosystem, still have challenges in aligning their culture and systems with that of others in the ecosystem Thus, investigating the Fin-Tech initiatives of incumbent institutions provides important insights into the nature and shape of the future financial eco-systems (Oshodin, Molla, Karanasios, & Ong 2017).

4 METHODOLOGY

This chapter aims to explain the appropriate methodology for achieving the research objectives. The overall purpose of this study is to examine as well as extend the body of knowledge and understanding regarding the perception of Fin-Techs in the Banking Industry. Consequently, this section covers the research design, data collection which includes the interview design, as well as the choice of respondents and data analysis, will be broadly described.

4.1 RESEARCH DESIGN

The consequences of digital innovations in the banking industry require a deeper understanding. During the last few years, the flourishing of new members, Fin-Techs, have impacted the operating of traditional players. The aim of this research is to understand how the perception of Fin-Techs can influence their strategy in the market and both perceptions will be analyzed: Fin-Techs and banking industry experts. As this topic represent a new field for researchers and few studies have been done previously, the choice of a qualitative research was made. For this reason, semi-structured interviews will be held as those types of interview allow a higher flexibility in the conduction of the interview. In fact, it will be possible to add questions to the interview while it is being conducted, which consent to delve deeper into subjects of particular interests.

The interview will follow the same format used to construct the research question, the literature review and the assumptions: Disruptive Innovation Theory (DIT), Financial Technologies and Banking Industry. The first part, Disruptive Innovation Theory, has the aim to comprehend if Fin-Techs have a disruptive nature by reshaping the banking industry, or if they are sustaining innovators that simply improve the existing services offered by traditional banks. The part regarding Banking Industry will explore possible competitive or cooperative dynamics between Banks and Fin-Techs whereas in the last part, called Financial Technologies, we will examine the perception Fin-Techs have on themselves in the banking industry as well as the perception banks have of Fin-Techs. Fin-Techs and banking industry professionals will be interviewed but in different phases of the research.

The first step will be to interview experts operating in the financial and banking industry to investigate their perception of Fin-Techs. It was considered useful for the research to explore professionals' opinion as an external point of view can help to better define the meaning of the term Fin-Tech as well as the relationship Fin-Techs have or are going to have with traditional banks in the future. Furthermore, their opinion regarding the disruptive effect Fin-Tech have on traditional players in the financial industry will be taken into consideration. This stage will help to gain a first insight into financial technologies and better structure and conduct interviews with Fin-Tech as the background of knowledge will be broader defined.

The second step will be to interview Fin-Techs specialists and understand how Fin-Techs perceive themselves in the market and how this perception affects their collaborations with Traditional Banks. A definition of the term Fin-Tech will be asked as well as an opinion regarding the disruptive innovation of Fin-Techs. Moreover, the research will consider short term and long term perspective during all the three sections of the interview and in both stages. Finally, both interview stages will be combined in order to answer the research question and test the assumptions developed during the previous chapter.

4.2 DATA COLLECTION

This section aims to describe the interview design and the reasons why it was chosen a semi-structured interview. Moreover, the choice of respondents is broadly described and a list of Fin-Tech companies contacted is presented.

4.2.1 INTERVIEW DESIGN

To answer the research question proposed in this study, interviews seem to be a suitable technique, because they allow asking open-ended questions and exploring individual experiences or opinions regarding the researched phenomenon. For this reason, the primary method employed is that of interviews. In particular, semi-structured interviews are going to be used. This method allows for more personal contact with respondents, which makes it easier to build a relationship between interviewer and interviewed (Saunders, Lewis, & Thornhill, 2016).

Furthermore, a semi-structured design allows the interviewer to add questions to the interview while it is being conducted (Saunders et al., 2016). In the case that a respondent is not going to understand a question, the interview format makes it possible to explain the question further (Saunders et al., 2016). It can happen that during an interview, the respondents drift away from the subject (Saunders et al., 2016), but the interview guide will allow getting the respondents back on track.

The first step of this interview design is to interview experts working in traditional banks with the main purpose to construct the interviews subjective understanding and perception of Fin-Tech in both long and short run. To reach this goal, it will be needed to conduct between two to three interviews. When constructing the questions used for the interviews, which are shown in Appendix --, the literature provided the basis for the questions. This was done in order to gain responses that were relevant to the research question. For this purpose, the interview is divided into three main parts: Introduction, Main Body and Conclusions. The Main Body is sub-divided is micro-areas: Banking Industry, Disruptive Innovation Theory (DIT) and Financial Technologies. The approximative length will be between 20 and 35 minutes. Moreover, a pilot interview will be conducted to test its feasibility, knowledgeability, clearness and length. For this reason, the interview can be subject to further modifications.

The second step of this research is to interview specialists working for Fin-Techs. The main aim is to understand how Fin-Techs perceive themselves in the market and how this perception affects their collaborations with traditional banks. To reach this goal, we will conduct between five to six interviews. The structure of the interview is similar to the one above and includes three main parts: Introduction, Main Body and Conclusions. The Main Body is sub-divided is micro-areas: Banking Industry, Competitors and Financial Technologies, but questions in each area changes slightly as you can see in Appendix --. It will last between 20 and 35 minutes. Also, in this case, a pilot interview will be conducted and for this reason, the following interview can be subject to further modifications.

All the interviews will be recorded after the permission of the respondents and after the signature of the Informed Consent, which will be sent via e-mail before the interview will take place. The Informed Consent provides information about the purpose of the study, what their participation will involve and how their data will be used. In Appendix -- you can find a sample of the Informed Consent used during this study.

Recording and interview have several advantages as disadvantages. Among the advantages, it can be stated that recording allows the interviewer to concentrate on questioning and listening, allows questions formulated in an interview to be accurately recorded for use in later interviews and to possess an accurate and unbiased record (Saunders et. al., 2009). On the other hand, it has the disadvantage of intimidating or inhibit the respondents (Saunders et al., 2016).

In addition to the recordings, the interviews will be transcribed to easily go through them when analyzing the interviews (Saunders et al., 2016).

4.2.2 CHOICE OF RESPONDENTS

In order to contact Fin-Techs and traditional banks' experts a list of possible respondents was created. The selection of Fin-Techs was done by taking into considerations the report "Fin-Tech 100", which compiles a list of the year's best Fin-Tech innovators from around the world (KPMG, 2017). Moreover, further Fin-Tech companies were taken into consideration considering their geographical location and facility to reach and interview.

Another crucial element in the choice of respondents was their position inside the company. By having a role in the company that concerns areas of interest of this research such as the company's CEOs, market analysts or strategic managers. The respondents were considered to have sufficient knowledge and experience within the relevant aspects of the study. Furthermore, the choices have been limited by the availability and accessibility of the respondents. The chart below illustrates the list of all Fin-Techs contacted through e-mail or social media such as Facebook, Instagram or LinkedIn and phone-calls in an alphabetical order. Moreover, in Appendix -- you can find attached the e-mail sample used to contact every Fin-Tech present in the list.

LIST OF FIN-TECHS						
51Xinyongka	Bud	FinTech Group	JD Finance	Nubank	Sensibill	Traxpay
Advanon	Capital Float	Fintech Raking	Kabbage	Numbrs	SeriasFintec	TrueWealth
AdviceRobo	Cherri Tech, Inc.	Fintech Week	Kendoo	Nutmeg	Shawbrook	Trusona Inc.
Advinda	Circle	FinVax	Kensho	OnDeck	Sherpa	Twint
Adyen	Clark	Flutterwave Inc	Klarna	OneBip	Signatys	UniTn
Aevi	ClarkGermanGmnH	Forum	Kreditech	Online Versicherng	Silent8	Vaamo
Affirm	Clover Heath	FoxStone	KredX	Oscar	Smartika	Valiant
AfterPay Touch	Coinbase	Fred	Kueski	OurCrowd	SmartLink	VATBox
AimBrain	ContoVista	FundBase	League	PayFit	SoCash	VertaaEnsin
Airwallex	CoverGenius	Funding Circle	Lendify	Pey	SoFi	Viva Republica
Alan	CoverWallet	Fusion	Lending Club	Plynk	solarisBank	Walliance
Aldemore	Creamfinance	Future Finace	Lendingkart	Pockit	SpeckandTech	Wave
AmnisTreasury	CreditGate24	Ginomn	Lendix	Prospa	Splendit	We can fund
AntFinancial	CrowdHouse	Go Beyond	Leveris	Pushpay	Spotcap	Wealthfront

LIST OF FIN-TECHS						
Atom Bank	Curentis	GrassRoots Bima	Lufax	Qnips	Square	WealthInitiative
AutoGravity	Cuvva	Growish	Lydia	Qontis	Squeezol	WealthSimple
Avant	Decent	GRYDL	Lykee	Qonto	Stash	WeClapp
Awamo	Dianrong	GuiaBolso	Macrovue	Qudian	Stripe	WeLab
B-Sharpe	Drooms	Hyper Anna	Meet Up	R3	Swift	Xapo
Bambu	DxMarkets	IbanFirst	MoneyMe	Raisin	Swiss Finte	Xero
Banqer	Edgelab	ibani	MoneyPark	Revolut	SwissLending	Yaware
Bd4Travel	Efiport	Indigita	Moneytree	Riby	SystemCredit	Yuonify
Be	Eppela	Info	Monito	Robinhood	Tech4Fin	Zeveapp
BeCrowdy	Europe Money	InvestGlass	Monzo	Rong360	TechFlier	ZhongAn
Berriesapp	Ezy Count	Investiere	Mt Pelerin	Satispay	The Fintech Times	ZipMoney
Biowatchid	Fino	Investivity	N26	SatsPay	ThetaRay	Zopa
Block Chain Helix	Fintastico	iwoca	Neo Growth	Savedroid	Tic:Toc	
Borrowell	Fintech Consult	iyzico	Neuroprofiler	Seal One	Token	
Borsa del Credito	Fintech District	iZettle	Neyber	SecureKey	Transfer Wise	

Table 4: List of Fin-Techs. Own source

4.2.3 SAMPLE

The chosen respondents are shown in the chart below. All the respondents have been given a code name in order to mask their identity. In fact, confidentiality helps to build trustworthiness with the respondents (Saunders et al., 2016). It is common knowledge that with a guarantee of anonymity, the respondents' willingness to discuss sensitive topics increase.

INTERVIEWEE	POSITION	FORM	STRUCTURE	LENGTH	DATE
R1			Semi-Structured		
R2			Semi-Structured		
R3			Semi-Structured		
R4			Semi-Structured		
R5			Semi-Structured		
R6			Semi-Structured		

Table 5: Sample interviewees. Own source

4.3 DATA ANALYSIS

5 RESULTS

This chapter presents the collected data gathered throughout the qualitative methodology. It aims at answering and either accepting or rejecting the assumptions presented in the research. The results are divided into the three main categories used in the introduction to define the research question: Disruptive Innovation, Financial Technologies and Banking Industry.

6 CONCLUSION

DECLARATION IN LIEU OF OATH

I hereby declare in lieu of the oath that I have composed the master´s thesis entitled *Investigating the Perception of Fin-Techs*: *Disruptive Innovation in the Banking Industry?* entirely on my own and without any inadmissible help from outside. I have not used any outside sources without declaration in the text. Any concepts or quotations applicable to these sources are clearly attributed to them.

This master´s thesis has not been submitted in the same or substantially similar version, not even in part, to any other authority for grading.

Kassel, 22 October 2018

Florina Camelia Lazar

OVERVIEW OF CHAPTERS

Preface

Abstract: brief summary of the research project.

List of Abbreviations

List of Figures

List of Tables

1. Introduction: presentation of the main idea and background as well as the research question. The contributions that the study will bring to the existing literature and structure of the thesis are presented as well. The aim of this chapter is to describe reasons and a general overview of the study.
2. Theoretical Framework: definition of key terms and explanation of the most important concepts used to structure the research. A chart of the literature review is presented as well with the purpose to illustrate fundamental academic papers that helped to create the foundations of the research question.
3. Research Question and Assumptions: an explanation of the research question and description of the assumptions taken into consideration to further develop the thesis will be provided.
4. Methodology: description of the reasons and processes undertaken to answer the research question and test the assumptions. Explanation of how the data was collected and why a qualitative method was chosen.
5. Results: analysis of results retrieved from semi-structured interviews and with the help of a specific software.
6. Conclusions: final conclusions, suggestions for further research as well as limitations implied in this study.

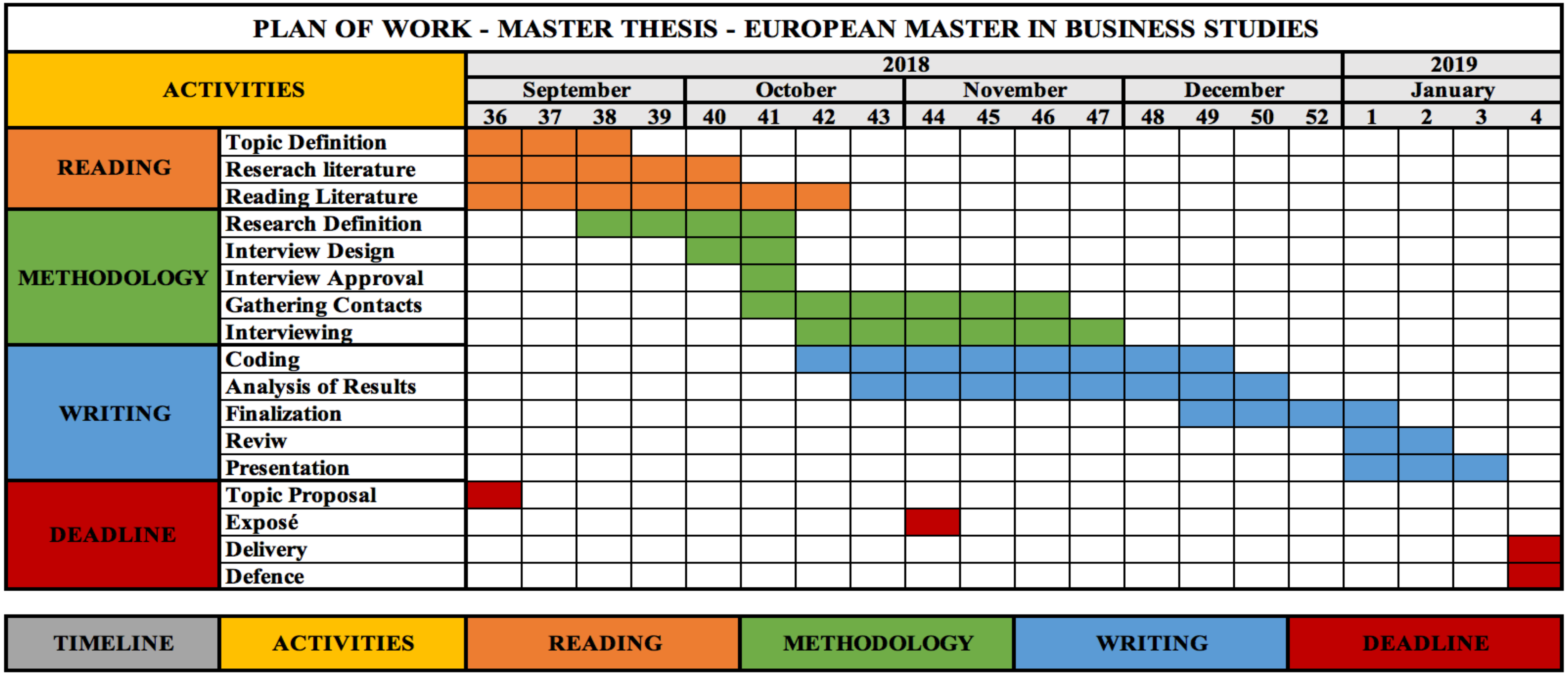
Declaration in Lieu of Oath

Plan of Work

References

PLAN OF WORK

The following Plan of Work describes in detail what is planned to do until the completion of the project. It serves the purpose of marking sure this research will respect all important deadlines. Moreover, it will help to properly list the stages of the project and organize the work in an efficient and effective way. For this reason, it is subdivided in four main parts: reading, methodology, writing and deadlines. Each part has sub-activities to enhance a better comprehension of the working strategy.



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