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The Impact of Fintech on Banking Industry  
in Portugal

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## ABSTRACT

The subject of the study is the activities of commercial banks and the influence of financial technologies on their activities.

The methodology of the work consists of several stages:

- Review of existing literature
- Interviewing the experts
- Conceptual research
- Qualitative analysis

The development of new financial technologies is presented in two direction vectors: as independent start ups, thereby they constitute a competing link to traditional banks; and as a part of development of banking innovations, thereby, new financial technologies are being introduced into the modern banking system. The conducted research shows the behavior of banks presented in Portuguese market, which varies depending on the capital volume. Banks in Portuguese market who have sufficient budget seek to cooperate with fintech start ups, events for improvement own business model and use it for their own favor in future, making them more flexible and effective in the current economic situation. In another case, innovative and technological start ups in financial market can reach a global level and steal traditional banks' revenue by providing customers with more convenient and fast products and services.

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# 1.INTRODUCTION

The financial services were no exception – in new technological development era where the services are more and more taken over by technological supervision. Today it is the financial technology market that is considered one of the most active growing.

Big data, Blockchain, bitcoins,P2P term which become familiar not only for economists, but for most of the population. Due to the rapid development of technology it has been to actively changing the financial, credit systems of many countries. There is a transition from cash money funds to the online wallet, from bank loans to loans through the Internet from other users. All this force traditional players of the financial services to reshape their goods and services, and also to tailor themselves to be ready for changes.

The novelty of the work is the interaction and impact of new financial technologies on subjects of the banking system in Portugal. Object of work: financial services and its derivatives.

Work subject: new financial technologies and their impact on financial market of Portugal. The purpose of the study: determining the impact of financial technologies on various subjects of the financial market to identify prospects for development financial market in particular market. The scientific significance is the development of theoretical and methodological foundations for the management of financial technologies by various subjects of the financial services. The results of this work will contribute to further theoretical and practical market research FinTech in Portuguese and European market.

## 1.1 Motivation

The main motivation in writing this work is the understanding of the importance of the implementation of theoretical knowledge in the final thesis, which in essence reflects the knowledge and methods received during the study of the program. The topic of this thesis is a very interesting subject of discussion in the last few years. The appearance of the financial technology in the sphere of banking services in Portugal has not yet been thoroughly studied. The main reason for this is the appearance of a large number of technologies whose potential has not yet been studied. For me, as for a bachelor in finance, this topic is very interesting, witnessing how the bridge between technology and financial services is being built.

## 1.2 Objectives of the research

The potential of technologies involved in finance industry is huge and it is very important to know which out puts it can potentially bring to the banking sector particularly in Portugal. The main objectives of this research are:

- Understand business model of banks and fintech start ups and where they differ
- Identify the disruptive potential of financial technologies in Portuguese market and its influence on banking
- Analysis of expert's opinions from different segments of financial industry in a single qualitative analysis in order to understand the dynamics of fintech development in Portuguese market.

## 1.3 Structure of this Dissertation

- Chapter 1 contains the overview of the dissertation topic, motivation and objectives of the research.
- Chapter 2 contains analysis of scholarly publications that allows to look at the topic from past point of view.
- Chapter 3 includes research methodology describing the research question and approach off data collection and its later analysis.
- Chapter 4 describes the business model of banks and fintech start ups highlight the main differences.
- Chapter 5 analysis the interviews of experts from different segments of the financial industry.
- Chapter 6 Conclusions and future research.

## 2. REVIEW OF LITERATURE

Scientific literature itself is the most important tool which allow to maintain the existence and development of science – firstly, dissemination and storage of the scientific and technological knowledge, and secondly - a means of communication, scientific communication of scientists among themselves. It is necessary to consider the functions of certain types of publications, reflecting. For each scientific study, main scientific concepts, theories that are taken the basis of this work (Novikov & Novikov, 2009).

For conduction of the literature review, the researcher searched for articles published from 2004 to 2018 in Scopus based on the keywords ‘fintech impact AND financial services AND disruptive innovation OR business model’. A total of 68 documents were obtained from the search and organized in descending order of their number of citations in Microsoft Excel. The abstract from 68 of 68 papers was read to rank these papers depending on their significance to the topic of research. 37 out of 68 documents were chosen for afterwards analysis. Due not availability of all the chosen research paper 20 were red and analyzed. The read articles were further categorized, and concepts covered were summarized as shown below in Table 1.

Table 1.Literature review table

<b>Authors and Year</b>	<b>Keywords and Concepts Covered</b>	<b>Future Research</b>
(Henner Gimpel, 2017)	<i>Financial services, financial technology, business model, services taxonomy.</i> Authors analyzed main characteristics of 227 customer oriented Fintech start-ups using 15 criteria, which are included in 3 perspectives interaction, data and monetization. The investigation helps to understand archetypes	Exploration and examination of configurations and their relationships. Investigation on B2B FinTech start-ups, as only customer oriented start-ups were analyzed.



<b>Authors and Year</b>	<b>Keywords and Concepts Covered</b>	<b>Future Research</b>
	and characteristics of Fintech companies.	
(Siering, 2017)	<p><i>Digital Finance, FinTech, e-Finance Literature review, Future research opportunities.</i></p> <p>This paper represents the research on various spheres of financial services and the tremendous impact of financial technology on each of it. It also covers ideas about possible development of innovative business models.</p>	<p>Research potential of each business function. Concerning combinations between business functions, technologies, and technological concepts as well as institutions. Research potential concerning Digital Finance beyond the Cube.</p>
(Kenji, 2016)	<p><i>Financial Technology, Financial Institutions, AI, Machine Learning.</i></p> <p>This short article describes the development of machine learning, evolution of AI and its implementation in Financial Institutions for fraud detection, text analysis and etc.</p>	
(Davis, Maddock, & Foo, 2017)	<p><i>P2P lending, Fintech regulations, Indonesia fintech.</i></p> <p>The research covers such topics as fintech regulations approaches in Indonesia and globally in the world, identifying that risk and opportunity of fintech in emerging markets is considerably higher than developed countries.P2P lending platforms.</p>	
(Leyer & Pisani, 2016)	<p><i>Financial service, Innovation management, Performance management, Structural, equation modelling work organization.</i></p>	<p>Usage of more than single item in order to scale the innovative approach.</p>

<b>Authors and Year</b>	<b>Keywords and Concepts Covered</b>	<b>Future Research</b>
	<p>The paper describes the factors and methods used in companies which generate innovation and its adoption. With quantitative analysis being used ,and data gathered from non-public financial services companies.</p>	
<p>(Scotta, Reenen, &amp; Zachariadis c, 2017)</p>	<p><i>Technology adoption, Bank performance, Financial services, Network innovation, SWIFT.</i></p> <p>This paper combines insights from several different research approaches to identify the impact of information communication technologies(ICT). Particularly paper investigates the impact of SWIFT technology adopted in 1970 on European and American banks in long-term perspective. Furthermore, research distinguish the ICT influence depending on the size of the financial service provider.</p>	
<p>(Maria Peruta, 2017)</p>	<p><i>Banking sector, Information technology, Performance, Technological innovation.</i></p> <p>This paper describes the benefit that banks have achieved by adopting IT innovation to the industry if financial services. The researchers had identified that only innovative software and human resources are core the in positive results of bank. Particularly it was discovered that software for measuring credit risk and ERP have been making the most positive impact on banks' performances.</p>	<p>Why financial of ERP and credit risk software requires more equity than debt?</p>

<b>Authors and Year</b>	<b>Keywords and Concepts Covered</b>	<b>Future Research</b>
(Xie, Zou, & Liu, 2016)	<p><i>Financial disintermediation, Information asymmetry, Internet finance, Transaction cost.</i></p> <p>The research covers topics of internet finance in China. The country where financial technology industry has made very rapid growth. Integration of innovative payments options, implementation of negative and positive policies are the main topics discussed by the authors.</p> <p>It was noted by the authors that ‘internet finance’ used in their work has the same concept as FinTech.</p>	<p>What is the performance of internet finance in a complete economic cycle and under different market situations?</p> <p>What are the side effects of internet finance?</p>
(S., David, C.Yenb, & S., 2012)	<p><i>Information technology, Self-service technology (SST), Automated teller machine(ATM), Financial performance, Banking industry.</i></p> <p>The research paper examines the interrelation between adoption self-service technology(ATM) and profit generated by banks using this technology.</p>	
(Chen L., 2016)	<p><i>Fintech, financial scenarization, financial inclusion.</i></p> <p>This article has documented the rapid growth of Fintech in China. The analysis of its causes suggests that successful integration between finance and real-life needs is a reason for this fast growth. Technological progress enables finance to serve real-life needs better. The success of innovation thus rests not on the</p>	

<b>Authors and Year</b>	<b>Keywords and Concepts Covered</b>	<b>Future Research</b>
	<p>technology itself, but on how well finance serves business and real-life needs. China's experience fresh light on the development of financial innovations, and especially on inclusive finance.</p>	
(Brühl, 2017)	<p><i>Virtual currencies, Bitcoin, Blockchain, Distributed ledger, Financial services.</i></p> <p>The author of the research paper discusses how new virtual currencies are affecting the payment systems. Furthermore the author stresses that the main influence on financial markets and institution will be coming from the Blockchain technology rather than from digital currencies themselves.</p>	
(Giudice, Campanella, & Dezi., 2015)	<p><i>Bank of things, Classification and regression tree, Financial services, Internet of things, Profitability Return on equity.</i></p> <p>Authors of the cited paper estimated the profitability of financial services in future with stress on Internet of things adoption by them. They believe that IoT will allow traditional bank transfer into Bank of thing being able to provide their customer with main services distantly. While becoming data oriented will allow them to improve the customer experience.</p>	<p>An investigation into the relation between reliability of cloud providers, risk management and performance of BoT.</p>

<b>Authors and Year</b>	<b>Keywords and Concepts Covered</b>	<b>Future Research</b>
(Nejad, 2016)	<p><i>Literature review, Financial innovations, New financial services, New products.</i></p> <p>This paper represents quantitative analysis on innovation in financial industry. Strong theoretical background of the research summarized by impact of 6 main topics and their influence in banks' services reshaping.</p>	<p>Meta-analysis on the factors related to adoption of alternative ways of consumer banking.</p> <p>Conduct qualitative research on analyzed topic.</p>
(May, 2004)	<p><i>European Union, Financial services, Monetary policy.</i></p>	<p>How will mobile devices grow to support even greater financial services functionality by the year 2020? Or 2025? And how will payments and money be handled in support of economic exchange in the years to come?</p>
(JaeShin, 2018)	<p><i>Business models, Disruptive innovation, Financial startups, Fintech, Online banking Real options.</i></p> <p>This article develops architectural view of financial technologies and describes their ecosystem. The author breaks down the understanding of terming Fintech and describes main form of Fintech enterprises and challenges for Fintech businesses. Where he identifies risk management as main factor which Fintech companies should evaluate better.</p>	

<b>Authors and Year</b>	<b>Keywords and Concepts Covered</b>	<b>Future Research</b>
(Daichi, 2017)	<p><i>Bank API, Banking system, Big data, Business model, Financial operations, Internet Online.</i></p> <p>The article covers the historical changes that technologies brought to the industry of financial services. Author of the article stresses his attention mostly on big data and capabilities AI, suggesting that in very near future technologies will be able to substitute plenty of financial operation and contribute positively on banking B2B and B2C segments.</p>	
(Trelewicz, 2017)	<p><i>Data analytics, Financial sectors, FinTech, IT, Technology development.</i></p> <p>The article analyses the trends and patters of financial technology usage in various spheres. Information provided by the author shows the current usage of big data in various industries and intends on high tech future of the banking.</p>	
(J.Kauffman, 2016)	<p><i>Debit cards, Financial service, Internet banking, Research and application.</i></p> <p>This research paper aims to analyzes and predict future patters of usage of Internet banking, cash, credit, and debit cards.</p>	<p>How various issues can be interpreted through the lenses of appropriate behavioral, social and economic theories</p>
(Zalan & Toufaily, 2017)	<p><i>Banks, Disruptive innovation, Emerging markets, Financial services industry, Fintech.</i></p> <p>The research give important knowledge about the possible steps of traditional banking from the banks' board point of view.</p>	<p>Whether the digital economy and digital banking more specifically require flexible specialization as a third form of organizing business activity</p>

<b>Authors and Year</b>	<b>Keywords and Concepts Covered</b>	<b>Future Research</b>
(Das, Verburg, Verbraeck, & Lodewijk Bonebakker, 2017)	<p><i>Innovation projects, Financial services, Disruptive innovation, Radical innovation, Innovation barriers.</i></p> <p>The research paper represent in depth investigation on the barriers large financial service provide face in ideas, projects and processes in adoption of innovation.</p>	<p>Exploitation of innovations within a firm with a decentralized organizational structure. A lack of fundamental internal research and development activities hamper the ability of large financial services firms to exploit potentially disruptive and radical innovation.</p>

The modern rapidly changing financial world, practically every day, generates new start-ups, innovative laboratories, generates venture capital investments that are aimed at developing innovative technologies. The conducted literature review has identified that the main technological impact in traditional services are currently done by: big data, internet of things, blockchain technology, online payment systems, artificial intelligence and digital currencies. Further, some historical adoption of technology and its results were investigated.

### 2.1. The adoption of innovation

It has been found out that the very important part of generating innovative and adopting is creating of favorable organizational design, which would lead to partial personal autonomy. Personal autonomy of employees has been identified as important step of the beginning of innovation process in a company (Leyer & Pisani, 2016). Scholars from Delft University of Technology highlight 3 types of innovation in financial services: sustaining, incremental and radical. The disruptive power of financial technologies , makes it clear that the impact the fintech makes today are radical (Das, Verburg, Verbraeck, & Lodewijk Bonebakker, 2017).



Figure 1. Firms Innovative process (Das, Verburg, Verbraeck, & Lodewijk Bonebakker, 2017)

Authors highlight 5 (*Figure 1*) main innovation process steps in large financial services companies.

While main barriers were mostly characterized as internal:

- Lack of exploiting new ideas
- Inertia caused by (local) systems architecture
- Unsupportive organizational structure
- Overzealous risk management (i.e. too much focus on risk avoidance)
- Not-invented-here syndrome
- No fundamental internal R&D (Das, Verburg, Verbraeck, & Lodewijk Bonebakker, 2017)

## 2.2. Historical changes in financial services involving technologies.

One of the first technologies implemented in financial services, particularly in bank was the SWIFT technology. The worldwide banking network, which was firstly adopted in 1970. The quantitative research of which showed that even though the technology was fresh it was able to return the investment on it on average from 4 up to 10 years, depending on the branching of banking used (Scotta, Reenen, & Zachariadisc, 2017). The profitability of in investment to technologies was deeper analyzed by checking the investment of banks to ATM machines in China, where the rentability of ATM were doubted. The study identified that even though the investment in IT and Self -Service Technology did not made any impact on growth of the banks it had made positive impact on its financial performance, hence improving the efficiency of financial processes. The empirical study made on enterprise resource management and software for management of credit risk showed important evidence on how implement technologies are positively impacting the todays baking sphere. Particularly positive influence on the financial structure, competences, abilities, organization, and economic results of the banking system sphere were identified (Maria & Peruta, 2017).



### 2.3. Recent trends

Many banks today already see competition from start-up companies that create new financial products based on technologies. These companies have a big advantage - they are enough flexible and easily can be adjusted to consumers, unlike giants-banks. These innovations have become popular. People saw the difference between traditional banks, where they had to spend time on idle time in queues, and completely new financial technologies that offer alternative banking products, but time-saving consumers (Nejad, 2016).

Since 2010, there has been an explosive growth in "alternative" online P2P lending. Technological progress in fintech crediting and analytics of large data transforms the ways of attracting financing by both individuals and small and medium-sized businesses. The volume of such lending is not comparable with the bank, but the number of financial companies offering alternative ways of attracting loans is growing. New technological platforms using analytics of large data and additional sources of indirect data on the creditworthiness of the borrower are extremely interesting for small businesses, especially for companies with short or no credit history (Chishti, 2016) (Romanova, 2016).

### 2.4 The challenges are facing due to fintech

There are several challenges that commercial banking industry is facing nowadays. Banks are not making as much money as they used to do decades ago, while the consumers expectations increase as well as regulatory requirements. But all these challenges are not putting as much pressure on conventional banking as innovative, simple and fast software-as-a-service(SaaS) start-ups do. Fintech start-up investments have started growing rapidly (*Figure 2*) since 2013, and reached annual investments of \$8 bln. only in Europe (Schubert, 2017).

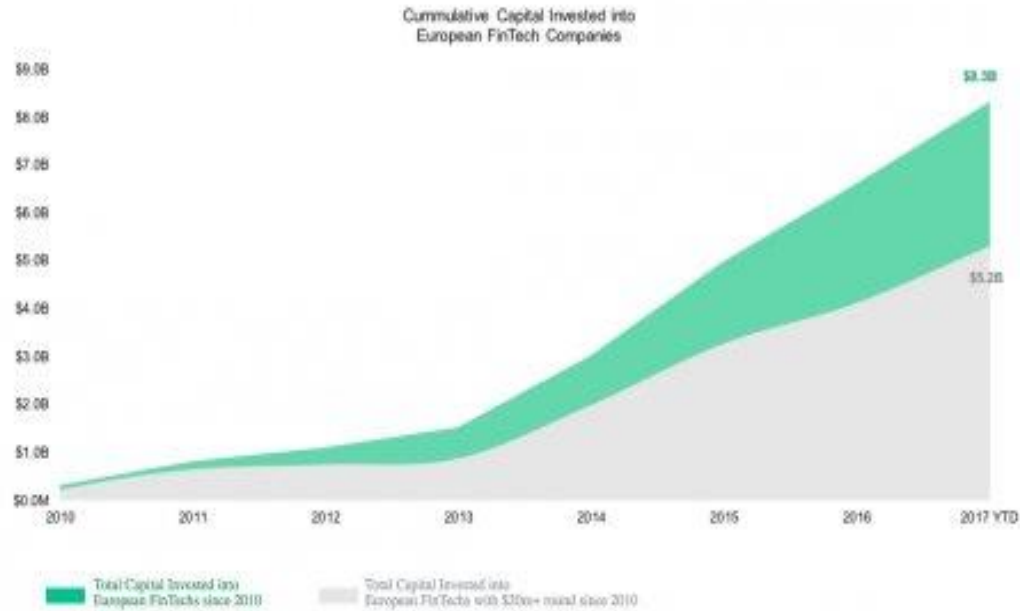


Figure 2. Investment in Fintechs

Banks in order to cut the costs have to decrease their physical presence, as the customers prefer to interact with banks online. Only in UK banks had to shut down 1,000 bank branches in the past 2 years, while in U.S this number equals to 1,700 from June 2016 to June 2017 (Ensign & Rexrode, 2018). Besides affecting banks, fintech revolution also negatively affects employees of those banks which have to cut personnel amount in order to sustain. Australian top 4 banks are planning to cut 20,000 work places only in 2018, and that is about 10% for some of them (TOLJ, 2018). One commercial senior banker stated: “Commercial customers will be most affected. This technology is more useful for retail, personal accounts. For example, when paying bills, it’s easier to use an application.” Fintechs “will not affect corporate banking services or private banking ones but it might affect some retail banking segments” (Zalan & Toufaily, 2017).

What does make fintech so attractive for customers in digital era?

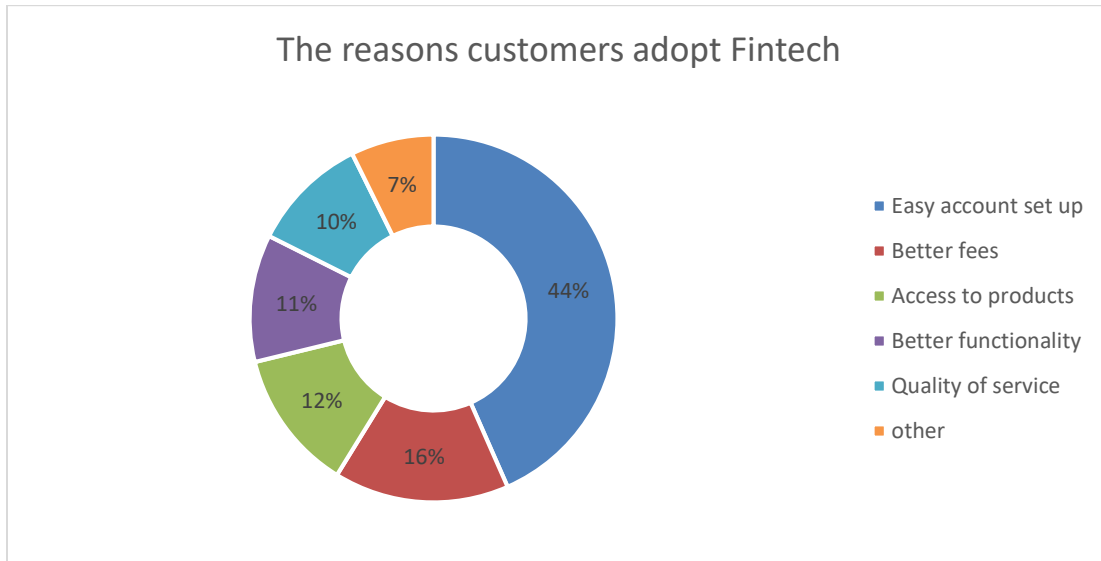


Figure 3. The reason Customers adopt fintech

Source(<http://www.visualcapitalist.com/how-fintech-digitially-disrupting-financial-world/>)

The chart above (*figure 3*) displays that the simplicity and better prices have been winning criteria for fintech companies. If ease of accessibility of fintech could be understood by using application, then what stands behind cheaper prices? Some critics say that recent start while reinventing their business model can afford providing cheap service due easy and free funding sources such as interested investors. Some of the startups rely on their customers: Number26 assumed that their free withdrawal service won't be used very much. Their assumptions were wrong, hence they had to shut down (Williams-Grut, 2016).

The strategies that are already being implemented:

There are 5 main strategies that CEOs of large financial services are following: maintaining status quo, deepening on own digitalization capabilities, setting up own fintech / straddling, investing in fintech (acquisitions), partnering / collaboration.

**Maintaining status quo** : “We are planning to keep working on our human talent. Technology is made by humans, so it is secondary. But, we also focus on issues such as security, fraud and hacking” (Branch manager at a commercial bank).

**Deepening on own digitalization capabilities**: “Three strategies are our focus for the next years: innovation, digitization and understanding the client's problem” (Head of global transaction

services, products & trade at a retail bank).

**Setting up own fintech / straddling:** "... the banks will be the FinTechs. I mean if Samba can have 460 developers... HSBC has 10,000 developers in India for software developed for HSBC all over the world. You think it's not easy for them to investigate FinTech technology?" (CEO of a blockchain fintech)

**Investing in fintech (acquisitions):** "Given the high penetration rate of mobile and low penetration [rate] of banking and credit cards in the MENA, we are investing in Fintechs to ease the transactions for the population" (Senior executive at a commercial bank)

**Partnering / collaboration:** "We need to collaborate with financial institutions...Banks will not disappear because of heavy regulations. The only solution is to work with them to maintain compliance with the regulatory environment" (CEO of a fintech).

Strategies may vary from enterprise to enterprise but there is also a reasonable view stating that successful fintech will never collaborate with traditional financial services as banks, giving examples of Tesla and Uber which never collaborated with automotive and taxi industry respectively (Zalan & Toufaily, 2017).

## 2.5. Conclusion

From the conducted literature review it could be told that more than others, the development of the fintech is stimulated by data analysis technologies, big data, mobile technologies, the development of open interaction interfaces (APIs), digital identification technologies and machine learning (Daichi, 2017). The main thing is that the end user should be satisfied. This proves the rating of the most sought after directions of the fintech, compiled on the basis of interviews with representatives of local hubs.. The period of rapid growth is experienced by all technological solutions in the field of financial services.

### 3. METHODOLOGY

This chapter represent the main research question addressed in this dissertation, and the main methods of research that are intended to be used in the dissertation. Methodology is the doctrine of organizing activity- such a definition uniquely determines the subject methodology - organization of activities (Novikov & Novikov, 2009).

#### 3.1 Research question

After the conducted literature research it was identified that some author's assumptions regarding change of traditional financial services' business model due to financial technology impact. However, there no any research from the perspective of Portuguese market  
Which strategical changes should representatives of Portuguese banking industry make and how will financial technologies influence their business model?

#### 3.2 Research design

Dissertations main research methodology will be based on qualitative. Qualitative research methods do not include huge amount of data extracted from responders which has to be analyzed. This method of analysis is mainly based on people's mind and philosophy. In the case of this study, this method is suitable, since financial services changes in the business model can be hardly predicted only empirically in terms of time of their implementation and impact. While opinion of experts could give holistic overview and insights of the trends of the industry development and events which significantly affect those trends. The qualitative approach reveals such aspects of the studied phenomenon as the purpose of its understanding from the point of view of participants in the context peculiarity as a result of the quantification of quantitative research data these aspects are lost

This thesis includes stages of methodology design (*Figure 4*):

- Review of existing literature
- Interviewing the experts
- Conceptual research
- Qualitative analysis



Figure 4. Research steps (Source: done by author)

Research methods allow you to explore the practice and its results. Based on them, concrete facts are collected, phenomena are identified and described. They include an irreplaceable method of observation, a qualitative comparison, an accurate measurement (Kuznetsova, 2014).

Table 2 .Research methods classification

<b>Methods of research</b>	<b>Methods of theoretical knowledge</b>	<b>General methods and methods of research</b>
Comparison	Hypothetical-deductive	Classification
Observation	Historic method	Generalization
Measurement	Systematic approach	Analogy
		Modeling
		Deduction

Source: done by author

This research will be using comparison and observation method of research, using primary and secondary data sources. Indirect observation. In contrast to direct indirect observation is the perception not of the object itself, but of the consequences it causes (Stepin&Golberg, 2018).

In term of methods of theoretical knowledge historical method has been implemented in chapter 2 (Literature review).Historical method involves tracing the history in its entirety and diversity, the

generalization of empirical material and the establishment on this basis of a common historical pattern. But the same pattern can be identified without referring directly to real history, but by studying the process at the higher stages of its development, which constitutes the main goal of the logical method. The objective basis of this method is that at the higher stages of the development of the object, in the process of its functioning, the basic features of the preceding stages of development (Stepin&Golberg, 2018).

### 3.3 Data collection methods

There are several types of information collection indicated in the below:

- Survey
- Interviews
- Focus groups
- Observation
- (Data) extraction
- Secondary data sources

The **survey** is a fixed set of questions that can be spread by web sources in the newsletter and the respondent's should strictly follow structured questions. This method was initially planned to be included to this research, however later this idea was withdrew.

The **interview** is a discussion that is usually held one-on-one between the interviewer and the person who is going to collect any specific information. It can be done personally or by means of communication. The interviews differ from the surveys by their structure and allow to reveal the topic more deeply. Interviews is the method which will be used for further qualitative analysis in this research.

**Observation** is also a method of data collection in which the researcher does not participate in the process of obtaining information. For example, when the researcher does not want to influence the answers **Secondary data** of responders by hinting questions.

is a set of data already existing information such as census. Researchers can choose different changes in their anal to secondary data. Combining the secondary data with the primary data is also a possible way of qualitative analysis (Harrel, 2009).

### 3.4.Conclusion

This chapter contained the description of research the question, discussed the existing research methods as well as methods that were or will be used in the dissertation. Moreover, methods of data collection were also discussed.



## 4.DESCRIBING THE BUSINESS MODELS AND UNDERSTANDING THE TRENDS OF PORTUGUESE MARKET

### 4.1. DESCRIBING THE BUSINESS MODELS

This part will discuss the business model of the banking industry business model and fintech startups highlight the most different components that could be the possible gamechangers for one or another. Considering such aspects of business as key activities, key resources, revenue streams, delivery channels, and customer relation.

#### 4.1.1.Bank's business model

This part will describe how was the banks' business model looks like in recent years. This approach will allow to see the main that happened in the banking industry between begging of the century and until nowadays. Information for bank's business was taken trough years of 1999-2015.

##### **Key activities**

Defined core activity of commercials bank is "an institution whose current operations consist in granting loans and receiving deposits from the public". Commercial banks activities are described as traditional fee generating activities which are main source of income after interest gained. While other sorts of income for baking industry are considered as non-traditional. (Tumpel-Gugerell, 2009).

**Fee generating activities(Traditional):** Deposited account services, Lending, Cash Management, Trust account services (Robert DeYoung, 2004).

**Fee generating activities(Non-Traditional):** Investment banking, Securities brokerage, Insurance activities, Merchant banking (Robert DeYoung, 2004).

##### **Key resources**

With regard to the banking industry, Johnson and Johnson (1985) proposed that the width and depth of the product and service line, low operating costs, and a good bank reputation can be considered as the three critical success factors in a competitive market in the banking industry. Canals (1993) recognized that the concepts of value chain and bank configuration could be

employed to develop a bank's competitive advantage. He identified four sources of a bank's competitive advantage, namely: 1 manpower; 2 financial management; 3 asset base; and 4 intangible assets (Chen T.-y. , 1999).

**Revenue streams**

Payments represented about 20% of global retail revenues and more than 50% of core banking fees charged to clients in Europe.

**Average gross income share by consumer product line in Europe – 15, weighted average, 2004**

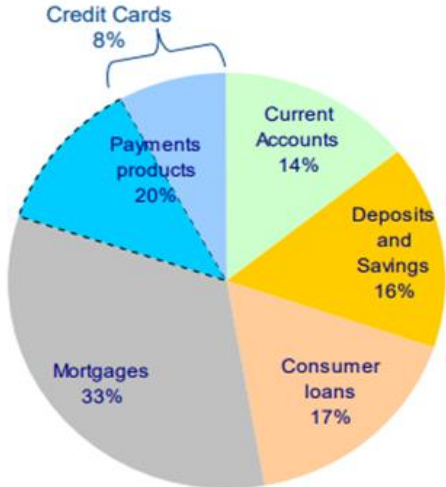


Figure 5 .Gross income Source: (Lavayssière, 2009)

40% of payment services were done by credit cards while 50% were interest income from mortgages and loan's interest payments (Figure 5).

## Channels

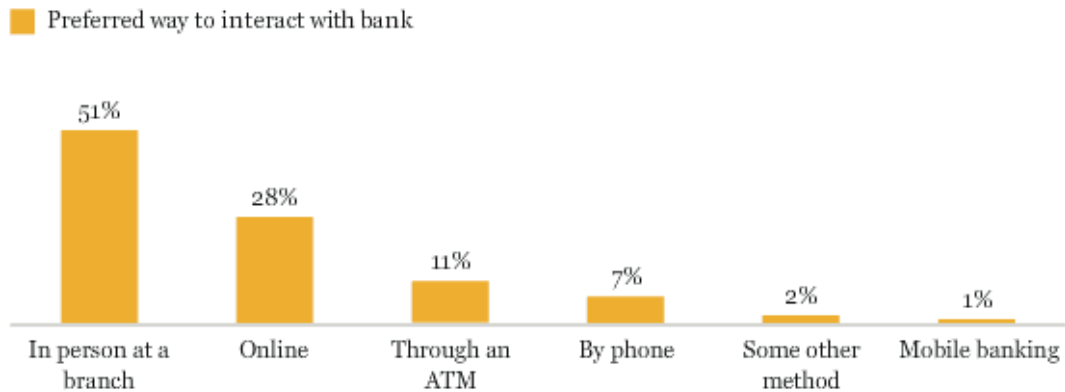


Figure 6. Preferred way to interact with bank

Gallup survey revealed that 51% of (Figure 6) banking customers preferred using the branch channel. That's the channel customers use most often, so that's where the bank should focus its customer engagement efforts. Further, branches are the most expensive of all customer interfaces, so banks need to maximize their return from that investment. But the most important reason you should care is because "knowing someone at the bank" is the first step toward creating deeper relationships and customer engagement (Gallup, 2016).

One of the most important discoveries that Gallup researchers have made is that if you want to create excellence, you should study excellence. In other words, you can learn a lot more about being the best from the best in any given category than you can learn from the worst (Berlon, 2009).

## Customer Relationship

With that in mind, Gallup took a close look at the 35% of customers who say they have a particular employee they like to work with at their bank. Specifically, we wanted to explore what was driving the relationship. We wanted to know what those individual bank employees were doing from a customer's perspective and how they were making the customers feel. Gallup did this by ranking bank employees based on whether their customers strongly agreed with several statements (Gallup, 2016).

## 4.1.2. Fintech start up business model

### **Dominant Technology Component**

The dominant technological component is precisely this small advantage of the fintech over the bank what makes it more attractive to customers. This is the most technological component that is very important, and this is the very component that small startups can detect earlier than banks do. The most common areas of technology where fintechs have the upper hands over the banks are: Blockchain, Decision Support Systems , Database, Marketplace, Machine Learning , AI.

### **Value Proposition**

Customization and personalization of services rightfully is one of the most important advantages of start ups over banks. With a new wave of innovations in the sphere of financial services the customers are becoming more demanding in term of interface, user experience and the process of obtaining services. Being data driven allows them better understand their clients, bring usability convenience and to have the upper hand over the banks (Bean, 2018).

The development of financial technologies in particular artificial intelligence speeds up the process of financial procedures and also increases the volume of the speed and quality of consumer services. Many large companies are already introducing machines learning to they key business activities. Automating the basic services of their company is particularly important in such areas as credit check, peer to peer lending (Finance, 2018).

### **Delivery Channel**

API, App, Physical, Website, Website + App.

Distribution channels is one of the criteria that is mostly differs traditional banking concept from startups. There is no longer need to have offices and employees to provide such services as opening a bank account or provide an insurance services and need in such personnel as brokers or agents with penetration of smartphones and growth of Internet users decreases. Companies which rely on big data eventually are able to deliver the service faster and corresponding to customer's expectations (Carroll, 2017).

## **Revenue Stream**

In term of revenue streams it less disruptive here. Fintech start ups are using proved methods of revenue streams which were previously used by SaaS and other software development companies. Main revenue stream are such as Kickback, Pay Per Use, Revenue Share ,Subscription, License (Eickhoff, 2017).

## **Key Activities**

At the moment there are few segments in the financial services where financial technology start-ups would not participate. They are present in such areas as loans ,brokerage services, currency exchange ,financial education, investment, loans and most important services to provide payment options. The sphere is payments and money transaction is the most lucrative segment of financial services which fintech's have been disrupting (Eickhoff, 2017).

## **Customer relation**

Every year more and more younger generation people get the purchasing power and become a part of the financial services market. This young generation chooses the fastest and most convenient payment options for using the services. Fintech startups are very carefully collecting data that their client provide them and usually have a clean database of its customers, which makes them able to provide the best customer interaction and customer relation in the market putting customer first (DeloitteGlobal, 2018).

### **4.1.3. Conclusion**

In the conclusion can be said that this is the sing dominant technology that is more developed Fintech start-ups than in the bank can play a huge role in attracting customers As it was stated earlier customers do not want to focus on getting services from single service provider. They are looking for smaller and more convenient service providers that could deliver the service faster cheaper better. Fintech start up mostly rely on fast internet and high smartphone penetration among the population as their delivery channels. Which at some markets could limit their ability of get market share fast.

## 4.2 UNDERSTANDING THE TRENDS OF PORTUGUESE MARKET

The bank system in Portugal has been facing rapid changes in past years. Decreased profitability, high operational cost, rise of digital markets those one of main reasons why Portuguese bank system demand changes in their business model and management of portfolios (Ricou, 2017).

Still in 2013 trust in banks among the population of Portugal was equal to 40% (Table 3). On the level of confidence in banks, Portugal has outpaced such as countries Ireland to Greece Cyprus and Spain. Such a high rating of trust banks of Portugal got because the publication's data was collected just before the collapse of Portugal's largest bank Espirito-Santo (Sonnenschein, 2014).

Table 3. Trust level in highly crisis affected countries.

*In [country], do you have confidence in each of the following, or not?  
How about financial institutions or banks?*

	<b>Yes, 2014</b>	<b>No, 2014</b>	<b>Yes, 2013</b>	<b>Yes, 2006</b>	<b>Difference in "yes" answers 2013-2014 (pct. pts.)</b>
Portugal	35%	60%	40%	64%	-5
Ireland	29%	68%	15%	64%	+14
Greece	19%	75%	17%	40%	+2
Cyprus	16%	77%	11%	68%	+5
Spain	9%	90%	11%	53%	-2

Don't know/Refused not shown.

GALLUP®

Source: (Sonnenschein, 2014)

Already a year later the country faced the banking crisis, and the collapse one of the largest banks in Portugal was even named the biggest financial failure of Europe of that year. This whole situation caused the protest of depositors across the country. Around 2,500 depositors found themselves in a situation where they lost the total amount of 550 million euros. As was noted late by Mr. João Pereira Leite (head of investment at Carregosa) all this situation damaged the reputation of traditional financial institutions (Wise, 2015).

This particular banking crisis can be called the beginning of the development of financial technology start-ups in Portugal. Government incentive start up programs and funds connected the venture capital investors with potential unicorns of fintech industry. In 2015 several successful fintech starts ups were born, such as a financial product comparison platform- ComparaJá, Loqr-security services, Magnifinance – a financial management platform and ect..

Progress in terms of Lisbon’s reputation as innovation hub did not make itself wait for. Already the 2017 Deloitte report stated that there was a high growth of the fintech ecosystem in the capital which was caused by a large number of start-up events and conferences held in relation to this industry also highlighting that Portugal has solid technological capabilities, strong educational-research centers and innovation culture, putting Lisbon ahead of such cities like Shenzhen and Prague in its innovation ranking (Deliotte, 2017).

What does it take to have or create an appropriate ecosystem for start in the market?

Figure. Fintech Ecosystem

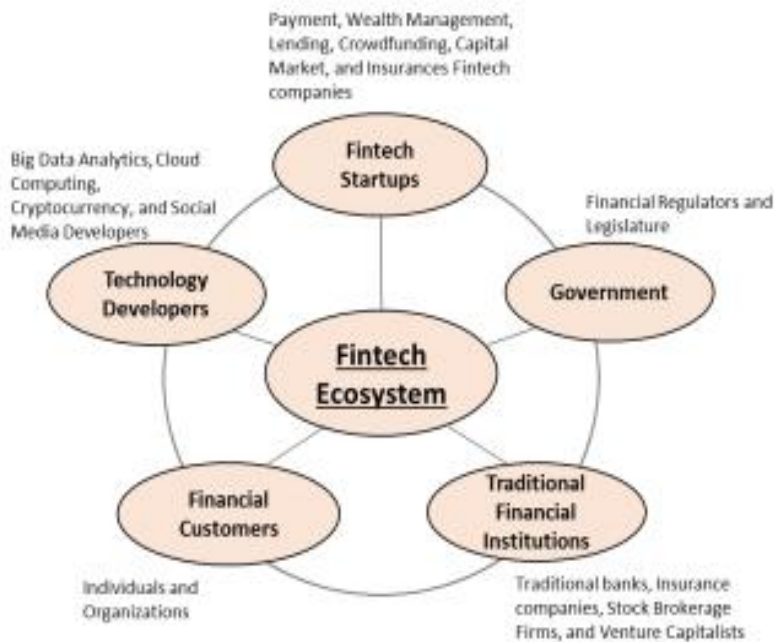


Figure 7 .Fintech ecosystem Source: (UniversityWesternIllinois, 2016)

There are 5 main elements which are forming the ecosystem according to Western Illinois

University (*Figure 1*). **Fintech startups** (e.g., payment, wealth management, lending, crowdfunding, capital market, and insurances fintech companies), **technology developers** (e.g., big data analytics, cloud computing, cryptocurrency, and social media developers), **government** (e.g., financial regulators and legislature), **financial customers** (individuals and organizations), **traditional financial institutions** (e.g., traditional banks, insurance companies, stock brokerage firms, and venture capitalists). The fact is that in our time consumers instead of relying on a single financial institution they prefer to use different fintech companies rather than banks (UniversityWesternIllinois, 2016).

According to Deloitte Portugal or at least Lisbon are having the capability in at least 4 of those components.

It is also worth noting that the emergence of financial technology is representing not only a threat to the traditional banking industry. Financial technology also provides a great opportunity for banks to reshape their own business to its own favor. Of course banks will need to improve and facilitate the organization of loans in particular in consumer and commercial loans (Ricou, 2017). At the moment the market of financial technologies in Portugal is not very large, it is estimated at 6.3 billion dollars and plans to grow to 9,9 billion dollars by 2022. In 2018 the largest segment of the market of Portuguese financial technologies was the payment market because it involved both local and foreign market representatives. In 2018, such fintechns as peer-to-peer lending, personal financial advisor and mobile banking got the largest distribution in Portugal (Pedro Ferreira Malaquias, 2018). Moreover, through the time financial startups have already created a new and more convenient processes for analyzing market and credit risk using available data. One of the distinguishing features of financial technology startup companies is that they focus on understanding and identifying specific customer requests are not pushing them other products (Ricou, 2017).



## 5.INTERVIEW ANALYSIS

### 5.1 Interviewees Background

#### **Rui Maria-Senior business analyst BNP Paribas (Interview 1)**

Rui Maria has been working in the field of business analyst for 8 year and now holds the position as senior business analyst at BNP Paribas. Having specialized in SAP Financials, he has designed, implemented and deployed SAP solutions to achieve business goals, whilst maintaining skills in SAP applications process design and configuration. Rui Maria is also responsible and help in integration of new financial technologies in emerging markets where their partners and subsidiaries located (ex. Vietnam).

#### **Marco Bailao-Real Estate Asset Manager at Caixa Económica Montepio (Interview 2)**

Marco Bailao is Marketing expert with broad experience in all aspects of Marketing (Research, Strategic and Operational), CRM, Business and Costumer Intelligence. Interested in new management ideas related to social media and early-stage startups. Moreover, Marco Bailao has experience in such fields as geomarketing, marketing analytics and auditing.

#### **Glen Lau- CEO at Fulton Capital (Interview 3)**

Glen Lau is responsible for the business development, general management and direction of Fulton Capital. He has over 20 years' experience in financial capital markets with broad experience in the Sales and Origination of Alternative investments which include Collateralised Debt Obligations (CDOs), Hedge Funds, and Structured Notes. Before starting Fulton Capital, he was Head of the Alternative Investments Division at Chinkara Capital. Mr.Lau holds a MSc. in Financial Engineering and BSc. in Mathematics and Economics from the National University of Singapore.

### 5.2 New Financial Technologies Influence in Industry

In interview 1 Speaking about financial technologies Mr. Maria points out that he relates to the market as a client and as well as a service supplier. He also considers financial technologies as something that is external and that is not the basis of the banking sphere. He even states that the main goal of banks is to monitor money, while openness to innovation in a particular case of any

bank allows it to attract new types of specialists, skill and other qualifications to reach the new market segments. “In BNP Pariba we are having change where digitalization is key. We want to fail fast in the process. ”-he added as from perspective of the supply side. Considering from the client perspective he mentions that access to services became much easier and indicated it by the example of taking money loans where at the moment there is no need to provide your credit ratings. This is absolutely true since one of the greatest advantages of fintech peer 2 peer lendings is that the speed of obtaining loans can take 2 days, while in banks a loan of sums can be reviewed for months (Truong, 2016).

In the interview 2 the author is getting the perspective from Portuguese bank employee. Mr. Bailao – real estate and marketing. The expert is stating that that it will be very difficult for banks to compete with fintech startups in area of payments at least in Portugal. He also makes a very interesting statement pointing out that banks in Portugal do not have as much money as financial and technological start-ups have - :” We are just investing to keep machine going”. Also Mr. Bailao points to the fact that young talented university graduates do not want to work in the banking sector as the career growth there is slow in his opinion than in startups and the wages are lower. He also pointed out that he had been experiencing little of influence from financial technologies.

In the interview 3 Mr. Lau indicates that fintech technologies were able to reduce the difference in spreads and commissions. He somehow from the side of a consumer indicates that they(fitechs) allow you to use services in the FX markets cheaper than the banks could offer. Dominic Broom who is the Head of Treasury Services at EMEA fully supports this opinion-:” The foreign exchange (FX) market in particular is being explored by non-bank providers, which are taking advantage of the cost-saving opportunities.” (Broom, 2015).

From this topic we can see that the responders who are looking from international perspective are more exposed to noticing the changes fintech is bringing to the industry.

### 5.2.2 Influence on headcount

On the reduction of staff in connection with the replacement of people by technology Mr.Maria said that in the bank Paribas there are similar trends and the fact that in the segment of B2Cthey want to become more efficient and reduce their costs on personnel. He also confirmed that in the Portuguese banking market there is a similar trend. He also expressed a very interesting point of view about the fact that with the penetration of financial technologies a bank needs to hire more

people who would be engaged in the development of new technologies, what creates the leverage in term headcount.

Mr. Bailao from interview 2 expressed his opinion of perspective on the part of the Portuguese banks where he said that Portuguese banks are closing their branches or have to reduce the number of people in branches.

The trend in cutting the head count is obvious for the both of banks, but the difference is the investment policy, where BNP Paribas is more active in new technology investments.

### 5.3 The advantages of banks and fintech startups over each other.

Mr. Maria from interview 1 refers to the fact that fintechs are much faster and they very easily to find the unique niche that the bank does not see and able quickly tap that niche and gain the market share. But also believes that the good entrepreneurship should fail before becoming successful referring to ability of fintech to fail with out big consequences unlike banks. Talking in particular about the Portuguese market. He noted that depositors were left mixed feelings about the tanks since as early as ten years ago the depositors trusted the bank completely but after they let them down he thinks that this can play into the hands of start-ups. However, he personally trusts the banks and highlights the trust and bigger capital as the main advantages of banks.

Interview number 3 Mr.Lau expresses the popular view that financial technology start-ups are fast and can detect all segments that bank do not see the, but he still it highlights the advantages of the bank. As in his opinion the whole thing boils down to regulating institutions in his opinion regulatory institutions will say eventually their good word and it will be in favor of banks. Further, Mr.Lau interview 3 continues to express his point of view on the trust of banks, he also notes that banks have a credit risk rating which is fintech don't. So you can conclude that as an investor he would rather invest his money in traditional investments ways rather than innovative. Mr. Marco Bailao from interview 2 does see significant advantage of Portuguese fintech start ups over Portuguese banks, stating that Portuguese banks are very open to innovation and are up to date.

### 5.4. Start ups to highlight

It was also very important to know the prospects of industry experts on what financial and technological startups in their opinion are the most successful or interesting in the market to identify most perspective segments. Mr. Maria from interview number 1 first identified a startup

company which provides himself facilitation of his payment process which is called Ifthenpay. Subsequently singled out a crowdfunding company founded in 2016 called Seedrs and also several startup places that facilitate the use of everyday finance(Magnifinance, ect.)

Mr. Lau, even though marks few companies in Europe, one of which also deals with FX cross-border transactions(Earthport) of currencies, but after a while he switches his attention to the Asian market and I advises to focus the attention precisely on the Asian financial technology market, because in his opinion it is the place where really big things happen. Is hard to disagree with Mr.Lau as 5 out 10 (*Table 4*) most innovative startups come from Asia(China) according to CNBC.

Table 4. Most innovative fintech companies

<b>Name</b>	<b>Activity</b>	<b>Country</b>	<b>Capitalization bln USD</b>
Ant Financial	Digital payments	China	
ZhongAn	Insurance	China	14
Qudian	Lender	China	
Oscar	nsurance	USA	
Avant	Accelerator program	USA	
Kreditech	Lender	Germany	0.6
Lufax	Lender	China	18.5
Atom Bank	Bank	UK	
JD Finance	E-commerce	China	7.1
Kabbage	Lender	US	

Source: (Browne, 2017)

## 5.5. Technology and strategy of acquiring it

Mr. Rui Maria from the first interview talking about the technologies which BNP Paribas counts on the future noted only two technologies. One is the blockchain-system which, as far as it was clear from all the words, is not widely used even between branches, not to mention interaction

with customers. The second technology that he highlighted is the API. The question that emerged in the monologue about the process on how BNP chooses to innovate his bank based on external or internal resources. Mr. Maria said that although Paribas relies on domestic financial and technological resources, they also encourage the development of fintech startups and actively sponsor various events promotion which promote them (e.g Viva Tech event).

In general from listening to his reports it was possible to notice how wide is the range of actions are being made from giants of the banking sphere as BNP. The range of actions clears up in aesthetics that strong capital allows them to develop in many ways. They try to partner with startups and also promote inwardly, promoting fintech event to attract skilled personnel. Shortly saying their portfolio of activities is very diverse.

From interview 2 the representative of Montepio the local Portuguese bank shared his opinion on the technology that is considered important. He also talked about blockchain like his colleague from the bank of BNP then he said that there were breaches in banks security. From the words of as Mr. Marco Bailao Montepio has not been making significant investments there are no any new technologies being implemented at the bank Montepio by that moment.

## 5.6. The perception of fintech by Portuguese market

While talking about the culture of adopting new technologies, Mr. Maria claims that even though there some exception occasionally Portugal by far is not a country in Europe with fastest adoption of technologies. He also marks that the development of start-ups as a whole, not only in the sphere of finance, in Portugal is lower than in the North European countries or in Israel, first of all it connects this with conservatism of Portuguese people. After raising a very similar to Mr. Marco Bailao it became more clear what did his colleague from BNP mean. “This new technologies are still associated with crypto (in peoples mind), and crypto is still seen as “that stuff” from young people who want to earn some money.”: said Marco.” For the higher levels of decision they are (financial technologies) too young, too strange...is just a technology not a business idea”-this was the response of Mr. Bailao about the perception of fintechs by people. Clients of the bank Montepio still prefer to visit the branches of banks rather than use technological alternatives, so were the words of Mister Bailao and if their clients prefer to go to the offices of banks, this means that this

is the right way of serving them. The reason of that the main customers are not young population.

## 5.7 Who is leading the race?

Regarding the race of technology, Mr. Maria interview 1 said about this that banks are most likely not able to protect themselves from the rapidly developing technologies of start-ups. But the banks have a very large customer base, the one startups don't have. However, he does not exclude a possibility that banks will lose their power, but agrees there still a plenty of time until that might happen.

Mr. Bailao and Montepio have completely different plan for the race. They are going to be careful, looking around in the market trying to sport the most dangerous startups and acquire it before it became too big. "As simple as that is there are becoming disruptive in the market we acquire them"- Mr. Bailao's sounded simple and handful. But what if the parent company of such a start up is even bigger than the bank itself?

"Amazon, Apple, Paypal, Wepay they are really taken off with a big wave, all the payments are through time. And with the size of their market cap they are now more secure than banks":-said Mr. Lau. It is obviously unlikely than any company with more 1 trillion market capitalization would feel small or feel fund shortage. These scenario was foreseen by Marco Bailao from interview 2. His raised concern was about large international financial players like bank Santander who can implement in Portugal financial technologies which have been developed and tested in another market.

## 5.8. Conclusion

One can understand from which that the view on the effectiveness of technology is so different. BNP Paribas one of the world's largest banks in the seventh place in the world in terms of capitalization. It is obvious that such a gigantic bank would be chasing all the new technologies , technological events and start ups which are taking place. All 3 respondents stated that the capital is the mad advantage of the banks, and while disruptive challenge of a start up did not reach scalability such wealthy banks can acquire them, at least in Portuguese market where adoption is not very fast meaning slower growth for start ups.

## 6.CONCLUSIONS AND REASERCH LIMITATIONS

### 6.1. Conclusion

In the abyss of modern news resources, it is very easy to percieve financial technologies for something that emerged only in the 21st century. However, such financial technologies like SWIFT and ERP have been being integrated to the sphere of banking from 70-es of past century. In the literature part of the thesis it discusses the historical development of the integration of financial technologies into the banking sphere and also the classification of financial technologies according to their application methods.

Using interview as the main data collection method was chosen to get a deeper understating of what is happening in Portuguese banking industry. It allowed to get the perspective of a representative of local bank Montepio, a representative of foreign bank operating in Portugal in face of Paribas and the CEO of equity management company which gave the perspective from investors side.

Portugal's star up ecosystem has only been being developed for the past few year, and as we could see the vast majority of the technological companies founded are no older than 3-4 years. However, the development of overall entrepreneurial eco-system has been noted by big 4 companies, which have putting Lisbon among the top perspective fintech hubs in the future. One of the main concerns here is the speed of adoption. Several responders have noticed that people in the market still prefer the conventional forms of banking, whereas banks in particular market have shown that they are by far not the most sustainable financial entity.

The development if fintechs and fintechs start ups has been already slightly showing its pressure. Both bank representatives had to agree that they have been cutting costs on the consumers and are trying to make it more digital. Here could be noted that the bank with international experience and huge capital base fells itself more comfortable endorsing and stimulating the fintech development in the markets where present. Right now banking industry is one of the most regulated ones from the side of the government, and has the set of rules it has to comply with strictly. While fintech start-ups are possibly able to by-pass them, what allows them to have lover cost base for basic financial transaction. Once the regulatory technology is developed it would simpler for governments to identify the gaps fintech are using.

## 6.2. Research limitations

There is more space for further research as the main limit of the research was the availability of qualified responders. Furthermore, adding a perspective of a fintech start-up founders would have great value added to this work, but unfortunately the Portuguese start-up representatives seem not very excited with the interview.

Making a quantitative research regarding this topic could bring even more insight about the market. The main challenge of quantitative research would be difficulties in finding highly qualified experts who would be willing to fill out the survey.



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## Annex

### INTERVIEW QUESTIONS

1. How latest fintech developments are influencing your industry(from your own experience)?
2. In our opinion, what are the main advantages of fintech start-ups over banks?
3. What are the advantages of banks over Fintechs?
4. Which fintech companies would you like to highlight in European(Portuguese) market?
5. What financial technologies does your company actively implement and count on in the future?
6. In what segment of the European(Portuguese) market do you think FinTech has seen the greatest adoption and growth at the moment, or even in the future?
7. Are there any fintech startups which are impacting your company in European(Portuguese) market?
8. Which are strategic changes will you company make in order to resist the economic impact of fintech?
9. Which strategies does your company prefer to use towards the disruption fintech cause? (partnering, acquiring, creating own fintech)

### INTERVIEWS

Rui Maria senior business analyst BNP Pariba

Aydamir:A

Rui Maria:RM

**A: How latest fintech developments are influencing your industry (from your own experience)?**

RM: From my point of view as I sit on the two vectors of the market: I sit on supply side and on demand side. So from the supply side- the banking is what fintechs are influencing the most is openness, so the openness to innovation. And this is having Banks engaging with those external

technology solutions, knowledge capital and also those kinds of resources they don't find inside a bank. By exposing their own intellectual property and the employees because their fintech in direct way the bank are getting exposed to intellectual property and expertise to those fintechs-to those companies which are disrupting the industry. Well I believe this openness is fostering new ideas and also attracting new skills, new people into the bank or the banks and also to tap new areas for growth because core banking, I mean banks are just taking care of money, but there are so many areas to grow. Those technologies are allowing to offer better banking services particularly here in Paribas we are having change towards digitalization. They are implementing technologies rapidly in order to fail fast in the process and the main goal of this to have a better banking service. So this my perspective from the supply side, what I feel on the demand side as I am also a client this is increasing client democracy, as now we are in user centric experience and most of the people- young people millennials are expecting that they are the center of that experience and so we are getting access the period of service that we did not have in the past. We to go to the bank and prove that we are risk safe to get loan, while now can crowdfund ourselves. This my customer perspective.

**A: Financial technologies are reducing the number of employees in the banks. Does it affect B2B part of the industry as well?**

RM: Well from what I was able to see throughout the latest presentation of CFO of our bank is that the main strategy is to count on people and reduce the cost of their service by optimizing the processes. As you can see in the Portuguese market banks are laying off the personnel, but that on the client size in terms of old fashioned banking, while what I able to see particularly in Paribas is the increase in head count in B2B sector of the industry.

Banks want to get on board savvy and knowledgeable people to help them reach their technological goals. So answering your question: yes-there are layoffs in B2C side, and no for B2B sector.

**A. In your opinion what are the main advantages of fintech start ups over banks?**

RM: What believe and see is that they are very fast to detect and tap the market niche where banks can not reach or don't find it attractive enough. On top of that there very nimble and agile to get the niche and get the first mover advantage. Moreover they are not as heavy cost structured as banks which makes them somewhat cost efficient and effective. So I believe that is it what makes

their advantage. The successful entrepreneurship should fail and better fail fast.

**A: In your opinion what are the advantages of traditional banking over fintech start ups?**

RM: I believe that the money is the main advantage. Banks have huge load of money which they can spend and also the trust. Even though, people still have mixed feeling about the banks, as they screwed up a couple a years ago when people relied on them, I would rather trust a bank rather than fintech

**A: Which fintech companies would you like to highlight in Portuguese market? Which are favorite for you?**

RM: What I know about the Portuguese market...well fintech is a buzz word, but here in PT we have one company which have been around for 20 year whose service to facilitate the payment process. Its called Ifthenpay , they are probably the most used company from those I was interacting with. Here in Portugal we are lucky enough to have the single system of ATM machines(SIBS) and we rely a lot on those ATMs. What ifthenpay does if creates the reference for payment, which an alternative for credit card and paypal payments. I personally don't like the credit card stuff, even though it is more safe than back in the days.

So here you have fintech which promotes payment easiness. And with nowadays fintech being a buzz word they pioneers in their way. I also I would like to highlight one more , now we have Portuguese crowdfunding fintech called Seedrs. Well it is crowdfunding company where people fund start-ups on an equity exchange. So you fund someone's idea and you participate in the equity of the company. A lot of small Portuguese companies are starting to get to it.

**A: So you would like to highlight only two of them?**

RM: Nowadays, there are also a lot of personal finance tools. I don't use any but I saw Magnifinance, I saw company which benchmark market investment strategy called Zorcatto.

**A: As Seeders.com are the platform for get some sort of equity of companies can we tell that they are competing with brokering companies?**

RM: Well...yeah...we can say, we can hypothesize . They could be competing with brokerage and with the banks as they lend money. I don't know their business model but I see them as competitors of the banks in terms of lending money but in smaller scale.

**A: Which financial technologies does your company implement and counts on in the future?**

RM: We have been shown that blockchain is the challenge for the whole banking industry, but they are trying to integrate the blockchain technology to their activities. So the blockchain is something that the banks don't face as disruptive technology, at least Paribas. There were recent news about first blockchain interaction within the specific branch of the company, so the blockchain is something that's being used and they count on it in the future. And the other technology is API (Application program interface), to get ppl developing value added solutions I've seen that they are promoting internally those Api so that ppl built their own apps usable throughout the bank and this could be as you are having apple store or google store, you try to foster internally those kind of app development so have like internal innovation. And I believe those are main technologies I can re-call right now. And of course mobile, it's something that the bank is relying on. They won't get out of their traditional way of doing business but they want have the multichannel strategy covering the most in the best way they can. So mobile is on one side of the spectrum because face to face interaction is mature enough, so mobile is the key for the banks right now.

**A: Can we say that in Portuguese market banks are relying on internal innovation rather than on partnering with fintech start-ups?**

RM: That is one of the ways to face disruptive challenge. From what I have seen from the perspective of BPN is that they are endorsing fintech events. There is an event right now(24.05.2018) and I believe that they are also involved in other endorsement to get fintech or startups in the technology sector so this is the way to get exposed to innovation so being a partner of such an event is a way to get exposed to it and probably attracting people and the resources into the bank activities. Also, by partnering with and collaborating with fintech that's also something we are and there's an example that was pass through communication which was Carpay. Carpay is an external fintech of the bank but the bank has endorsed it to have it like internal service to facilitate payments in the second-hand car market. So from perspective BNP Paribas a partner visit for facilitating

**A: Do you agree that there is less let's say so fintech penetration among Portuguese users in comparison with western Europe? What the reason behind slow fintech start-ups**

**development?**

RM: I agree with that there are not so many fintech's created, I don't know exactly what are the numbers. But if you compare for example with Israel who has more or less the same population you probably see much more fintech's coming out from there. In general people in Portugal are more conservative and don't adopt early the new technology. And probably that is the main reason why there not so many fintech companies born here.

**A: So we can say that Portuguese banking industry is not very affected by new financial technologies?**

RM: Banks here are being affected, both on customer side and B2B side. It pushes banks for new, faster and better services.

**A: In which segment of the market do the fintech's have greatest growth and adoption?**

RM: Probably the main segment which I believe is going to face some disruption is probably payment services. So that what see as big trend coming. Also probably in lending platform which make much easy to get money for some person. In my opinion that are the big trends.

**A: Who will be leading the this race of financial technology adoption, implementation and acquisition? Will it be the fintech's or the banks?**

RM: The banks have already their consumer base, so probably fintech will be facing some challenges in getting the client base. Although there some regulation here in Europe psd2 which obliges banks to grand access for fintechs to some information. Banks can not protect them selves by restricting access for fintechs. Well it will take some time until fitech companies will be on the same level as banks.

**A: Do you think banks could push some regulation come into force which would affect fintech companies?**

RM: From what I see myself is that banks have to be compliant with many with a lot of rules, but I don't know how are fintech are regulate. The question is are fintech being privileged by being less compliant?

Probably banks will be trying to lobby their rights I will try to have fintech more regulated. As it happened here in Portugal with uber. Big taxi corporation demanded uber have the same regulation



as they do.

Marco Bailao- Montepio Interview 2

A:Aydamir Guliyev

MB: Marco Bailao

**A: How latest fintech developments are influencing your industry (from your own experience)?**

MC: I have already thinking about that a little bit. In the payment I think will be a little bit difficultly to get to that market( for banks.). Where I think fintech can make a great difference and growth: quick investment-because Portuguese banks at the moment are not able to make big investments. Instead of hiring people, we ( banks) are firing people now, we are closing branches and at the same time I don't much of the desire of the possibility to invest in new technologies.We are investing but just to keep the machine going, we are not investing in technologies to make big steps to the future

**A: So if not into future for what are those investments?**

MC: As we don't have that mones we will have to leave it for the fintech's, I think they have a lot of money.Who are the people investing into fintech? Mostly young people who technology, investments, finance etc, who don't want to work for a bank.

And now crypto and blockchain is somethink that is tacking those fintech ideas to the next level.And ppl are catching up with blockchain like a thing that will save every one, and that is a little bit scary.

**A:But in the are where you are working now or recently was there any influence of fintech?**

MC:No, because on the other side PT banks still have a lot of inside developers we work with many partners when we want to develop sites , workflows, but we are not used to pass other people information about out clients. Right now we are not working with any company directly.

The only technology company we were working is software development for online banking.

**A: What about your internal technologies, how are they influencing?**

MC: a little bit, as I was telling you things like big data, deep learnig etc. but in terms of

administration-No.

**A: What do you think are the main advantages of fintech startups over banks?**

MC: Agility, technology and if we didn't have already the technology of SIBS I would say new ideas. But now we here in Portugal have all of this(due to SIBS). This system unites all the atm machines of different banks and facilitate the payment transactions. This what a fintech company could so for me , but we already have SIBS.

Also those fintech sometimes are having idea which are very disruptive with the way Portuguese people are living with banks. People are trying to keep away of the bank as they think banks charge too much for their services, and if there a company that charges less they would switch.

To give example BPN , they started to work the same way as SIBS in terms of payments.

**A:What do you think are the advantages of the banks over the fintech companies?**

MC: Size, Trust even though, particularly Portuguese banks have been initiative in involving technologies. I believe that Portuguese banks are on the equal level with fintech startups in terms of technology development . I think because Portuguese bank are open to new technologies , when a new start up starts to work in Portugal some one from the bank will contact them.

**A:Are there any companies you would like to highlight in the Portuguese market?**

MC:The thing are going so fast that a start up yesterday today can be an unicorn. In term of finance it is difficult to mention but in general out Portuguese ones I would like to mention Farfetch and Outsystems.

**A: Which financial technology would you highlight ?**

MC: Blockchain. The distributed ledger technology is now more accurate, and every one is talking about it. What will be changing? : security, we still have the problem with hardware and speed of transactions. As technology has not yet developed so fast as we want it to be. But initially blockchain started against banks. People did not want others to know about their transactions. So the banks decided to turn around the technology to their favor.

The strategy of Montepio is to work with other companies which are providing technological services rather than developing themselves. Very few banks in Portugal actually cooperate with the fintech start ups. The best way for fintech right now would be is taking step by step the portion of the market where bank don't invest.

The fintech is still associated with crypto and crypto is associated with young people which wanto make some money and don't believe that it is really. But people in banks know that it is reality and it is happening. With all those technologies being developed the administration will have to be thinking about reforming and redesign the business processes.

**A: You are now mostly adopting technologies from other companies, what are other banks doing? Which technologies do they adopt?**

MC: many PT banks are working in different way, branches and net(online banking). The older generation still prefer to visit branches, so we are not at that stage where we would like to be , because our customers show us the way they like to use services. If they would like to use digital version would switch there. And we tried in the past to change a bit the work inside the branches.

**A: Does your bank or Portuguese banks in general which changes are planed to do in order to resist the influence in the near future?**

MC: We do not resist them. We have be very careful, pay attention to the market to be the first bank to contact the company if any work with great idea. If there a fintech company which as been success at some area what should a bigger bank do? Acquire it, as simple as that. That is what happened to BNP when they started to use pos in the restaurants. What happened next is SIBS acquiring it.

Bigger banks in Portuguese market can use the technology which emerge in another markets where there are present. For example of there is a new idea emerged in Brazil and Santander has acquired that company it can easily implement the idea in the Portuguese market and really disrupt all the system in Portugal. All fintech can be developed in two ways as autonomy

**Glen Lau-CEO at Fulton Capital**

A: Aydamir Guliyev

GL: Glen Lau

**A: How latest fintech developments are influencing industry of finance/banking(from your own experience)?**

Latest fin tech development are definitely influencing banking and another you know threat coming from fintechs is eroding traditional banking, and minimizing the spreads. Already for example in Forex conversion market a From one country to another is really affecting the revenue, where nominally the banks would screw you. Now the fintech start-ups are taking over, and it has been going this way about past 5 years.

**A: In our opinion, what are the main advantages of fintech start-ups over banks?**

In my opinion the main advantage of startups over banks...well if they are start up they don't have the capital base of a bank. In my opinion you know they have the only advantage that they use the inefficiency of most of the bank , but they can not make may mistakes . They have to be quick, as the market and fintech competition in the industry is high. Banks can be slow , the stronger capital so they can basically take their time. They can buy a fintech start ups for their own use.

Fintechs on their side can spread to a broader market much quicker than a bank, but at the end of the day it is still embordered by regulating authorities of countries, which put barrier on loopholes fintechs are using and slow down the developments of fintechs. The poit I am trying to make is : yes in theory a fintech start up might spread quickly through internet, but the regulators are the ones who will slow them down and they can make them lose advantage.

**A: What are the advantages of banks over Fintechs?**

The advantage of a bank over a fintech start up is the capital, balance sheet . And also would you rather invest your money into fintech or put into bank where you can have your deposited insurance from federal government? Bank can make mistakes which a start up can not do, banks have credit rating which fintechs do not have. So basically is financial muscles that banks have over fintech's

**A: Which fintech companies would you like to highlight in Portuguese(European) market?**

There are so many fintech companies which are trying to grow up.But we are involved in with one called Earthport which basically does crossborder FX transactions. The other one is called Virtual Stock which actually procurement for many multinational companies in Europe, but there are using fintech only partnership procurement part of their business.So I don't know any particular Fintech

company I would like to highlight. But you hat forget about Europe the fintech companies that you should really really see are WePay, Google, Paypal,Alipay. And because of their huge market cap they are felling more secure than the banks. Wechat pay, Ali pay that is where the real fintech are existing.

**A: What financial technologies does your company actively implement(ed) and count on in the future?**

Any fintech company that can offer me the ability to receive payments and for me to send payments out to as many buyers in the world seamlessly with any government regulated companies. Any fintech company which would help me pay my bills , being virtual accountant ,remittent company. Thirdly any company which help to keep overall money market book.

**A: In what segment of the Portuguese(European) market do you think FinTech has seen the greatest adoption and growth at the moment, or even in the future?**

On number six. Lets talk about the global market the greatest adoption is cashier society We chat pay,Ali pay are the main mediums serving to 1.4 billion people adopted by everybody , that is the future.While China is control centric country they still allow this

**A: Are there any fintech startups which are impacting your company in Portuguese(European) market?**

There are no fintech start ups are affecting my company,because you know... I would actually love to adopt some fin techs, because I hate dealing with banks.They are old fashion they very slow in adopting financial technologies and trying to screw the clients all the time. When fintech startups are always trying to remove the middle man. But for I would like to have a fintech company in the market which could be suitable for me, then I would definitely drop the banks and switch to fintechs.

**A: Which are strategic changes will you company make in order to resist the economic impact of fintech?**

**A: Which strategies does your company prefer to use towards the disruption fintech cause? (partnering, acquiring, creating own fintech)**Sinalazul - Mediação Imobiliária, Lda

