STRATEGIC ADAPTATION & COLLABORATION: EUROPEAN GLOBAL BANKS APPROACH TO FINTECH

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ABSTRACT

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Abstract

Banks are today challenged by new entrants to their industry mainly regarded as Financial Technology (Fintech) Companies. Fintech companies are rather innovative and offer great customer experience while being very much customer oriented. This apparent threat demands banks to deal with both new technologies and evermore demanding customers. The environmental shock caused by Fintech companies in the European and global landscape is very much felt across the industry and shifts the way business has been traditionally carried for the last years since they create new business models and take away costumers from existing banking services.

All this upheaval raised the question on "How are European global banks reacting to the emergence of Fintech companies?" To answer this, it was necessary to look into concrete actions towards innovation that banks are taking, which methodologies for innovation and collaboration are being adopted and who are they engaging with in such activities.

This thesis was built upon literature around strategic management and entrepreneurship and later taking an overview on the innovation landscape of 18 European Global Banks from the years 2012 to 2018 regarding their approaches to strategic adaptation, innovation mindset and collaboration. Public documentation provided online by banks was the main sources for exploration to finding relevant information. The collected data provided an overview on the different initiatives that European banks have considered relevant in their journey of strategic adaptation and transformation.

The findings show that banks are going through an organizational transformation and are intending to increase their collaboration and innovation capabilities. Some of the carried collaboration initiatives included engaging in a partnership with Fintech companies, other banks, innovation experts and players outside the industry. Regarding entrepreneurship initiatives, banks hosted accelerators, incubation programs, and hackathons, started innovation oriented venture funds and organized knowledge sharing events for internal and external stakeholders. Focusing on strategic adaptation, an innovation mind-set and collaborative entrepreneurship provide today an opportunity for banks to reinvent themselves in the areas that need attention.

Keywords
Collaboration, Global Banks, FinTech, Adaptation, Innovation

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CONTENTS

1 INTRODUCTION

The Financial Industry as a whole is facing complexity since the entry-level barriers for newcomers have been lowered. Complexity merely means great interconnectivity. This interconnectivity meaning that when components interact they change one another in surprising and irreversible ways. (Uhl-Bien & Arena, 2017). Banks are today challenged by new entrants to their industry mainly regarded as Financial Technology (Fintech) Companies. Fintech companies are rather innovative and offer great customer experience while being very much customer oriented companies that provide financial services by leveraging existing or new technologies. Fintech firms are disrupting the traditional business models in the financial markets and bringing both new opportunities and risks for existing players (Lončarski, 2016). This apparent threat demands banks to deal with both new technologies and evermore demanding customers. The interconnectivity amongst Fintech companies and traditional firms is what brings the most attractiveness to look into this industrial change and redefinition. The Fintech Industry is one of the most promising industries and changing industries in the recent years, reason why looking into this matter is relevant.

All this upheaval raised the question on "How are European global banks reacting to the emergence of Fintech companies?" To answer this, it was necessary to look into concrete actions towards innovation that banks are taking, which methodologies for innovation and collaboration are being adopted and who are they engaging with in such activities. This work looks into the approaches and initiatives of European global banks in response to the emergence of Fintech companies and solutions. It builds on literature around strategic management and entrepreneurship by giving a posture on how collaboration and corporate innovation are approached by 18 global systemically important banks. The purpose of this study is go gain a comprehensive understanding on how companies within a slow and reluctant to change industry such as the Financial Services are responding to the emergence of Fintech companies and an environmental shock.

For this thesis, the theoretical framework comprises postures from both strategic management and entrepreneurship, more specifically strategic adaptation and collaborative entrepreneurship. It was imperative to understand the forces playing a role in industries going through environmental change, understand why adaptation is necessary and possible solutions. Certain topics such as corporate entrepreneurship, business models, innovation methodologies, and corporate collaboration and innovation were looked into as well. These topics

merge together as the framework for this thesis since they tap on the different angles of what banks are currently doing or are required to do, such as a focus on the 21st century and digital organizations for example. Literature on innovation initiatives and environmental change were used to create an understanding of the industry change process, current consequences and possible outcomes.

The method applied for the research was the Grounded Theory method in which data collection and analysis took place simultaneously. The Grounded Theory approach was chosen because it provides demanding but flexible guidelines that start with openly exploring and analyzing inductive data and takes researchers to developing a theory grounded in data, meaning a theory emerging from data. (Thornberg & Charmaz, 2013). A time range between 2012 and 2018 was decided to collect events regarding the initiatives and collaborative activities held by banks. The selected banks were 18 European banks which belong to the network of Global Systemically Important Banks (G-SIBs). The data gathered in electronic representation includes annual reports, press releases and both reportages and social media posts in order to build a full picture of relevant events.

2 THEORETICAL FRAMEWORK

The following theoretical framework and its different topics gathered relevant information for the proper consideration of what type of data to include in the sample and collection explored in further chapters. This topics blend together first looking into the Financial technologies and the industry as a whole and later combining different theories of strategic management and entrepreneurship. A more detailed view was taken in topics such as organizational adaptation and strategic entrepreneurship.

2.1 Financial Technologies and Financial Industry

2.1.1 What is really Fintech?

Regardless of the extensive efforts of both academia and practice to put a label on the term Fintech, no one single definition exists for it (Schueffel, 2016). Fintech as a sector is defined by using mobile-centered information technology to enrich the efficiency of financial systems. This sector is the result of industrial changes within the financial industry and the convergence of IT and financial services (Kim, Park, & Choi, 2016). However, Fintech as an industry includes the companies that aim to improve the efficiency of financial services while leveraging technology. (Cižinská, Krabec, & Venegas, 2016). As a new financial service often described as innovative, Fintech owes its rapid expansion and development to the advances in information and communications technology converging with the financial services (Jun & Yeo, 2016). Fintechs are disrupting the traditional business models in the financial markets and bringing both new opportunities and risks for existing players (Lončarski, 2016).

According to The Book of Fintech (2015) Financial Technology or Fintech Industry is one of the most promising industries for the upcoming years. The Fintech revolution is driven by several start-ups with innovative new businesses, products, services and revenue models which challenge and change the finance structure globally. These Fintech firms offer several disruptive opportunities for both individual and corporate customers. New entrants and Fintech companies have challenged the traditional approach of services provided by banks by using an agile service model which offers an enhanced and positive costumer experience. Their banking services are accessible to their users at any time, everywhere (Woo, 2017). Others have defined Fintech as innovations in the financial sector involving business models facilitated by technology that can enable a loss of

intermediation, transform how present firms create and deliver products and services, tackle privacy, regulatory and law-enforcement problematics, provide new opportunities for entrepreneurship, and seed projects for inclusive growth, to name a few (Dhar & Stein, 2017).

The Fintech ecosystem (Lee & Shin, 2018) is primarily composed by five elements which are Fintech startups, technology developers, governments, financial customers and the traditional financial institutions (banks and insurance firms for example). These elements contribute significantly to the innovation, competition and collaboration facilitation within the financial industry. Companies within the Fintech sector have been recognized by their great orientation to customers. However, this customer orientation has more than one interpretation. As Slater & Narver (1998) distinguished between two types of costumer orientation which are usually mistaken. The firs approach of costumer orientation is a customer-led philosophy mainly focused in meeting customer expressed needs usually with a reactive and short term focus. The consumer orientation approach of a market oriented philosophy aims to go further than the satisfaction of expressed needs, it's goal is to understand and satisfy customer latent needs and has a long term and proactive focus. Based on the theory and substantial evidence, Slater & Narver (1998) strongly advice to take market oriented philosophy regardless of the environmental conditions a company is facing.

2.1.2 Current Situation for Global Banks

Global banks and FinTechs for the last years have been sharing a common ground such as clients and some of the operations each conducts. The landscape however has been historically tough since entry-level barriers imposed by banks and other financial companies have been high towards new entrants. For this reason, most segments within the financial industry were in a position reluctant to structural change and thus protected their well-established business models (Dhar & Stein, 2017). The Financial Industry as a whole is facing complexity since the entry-level barriers for newcomers have been lowered. Despite the name, the concept of complexity itself is really quite simple, it is about great interconnectivity. This interconnectivity meaning that when components interact they change one another in surprising and irreversible ways (Uhl-Bien & Arena, 2017). The interconnectivity amongst Fintech companies and traditional firms is what brings the most attractiveness to look into this industrial change and domain redefinition.

Traditionally, domain redefinition was associated with the corporate entrepreneurship phenomenon when an organization proactively created a new service or product market that others have not noticed (Covin & Miles, 1999). In the case of the banking industry, it is now the Fintech companies that are taking charge on the domain redefinition and banks could be considered as observers since they face several challenges posed by the new competitors. Nevertheless, the impact of FinTechs on the Banking organizations is still limited since they are tied to their own challenges such as the leverage of technology, approach to cyber security, marketing efforts, capital, a legal framework, compliance and regulations (Grueter, 2016). The financial industry is under so much regulation that it is impossible that small players, regardless of how agile they might be, to fully penetrate the market without years of experience.

Another interesting figure to look into is the headcount at companies. Not only they have been reducing the number of employees but also recruiting evermore specialized talents. The financial industry today faces a time in which downsizing and traditional cost cutting are not relevant to ride the wave of industrial change. It has been long time since different industries find themselves in such relaxed positions as Hamel & Prahalad (1994) stated in their article "Competing for the Future". They affirmed that managers must have a vision and clear set path on where they want to be in the upcoming years at industries going through change. Hamel & Prahalad (1994) assure that industry foresight is founded on the insights of trends in regulations, lifestyles, technology and regulations. The ability to understand potential implications of these trends demands imagination and creativity from individuals and firms. Any vision that is not grounded on a firm foundation is expected to be mere fiction. However, the financial sector and global banks are today in a place where not even them or the industry experts know where the future is, at least not the long or medium term.

Fresh technological innovations clashing with the results of the recent financial crisis in 2008 generated disturbing forces in the financial markets. During the recent years a massive amount of Fintech startups have begun to offer products and services related to finance to individuals and corporate clients. They have achieved this by focusing on the usage of technological innovations with the objective of reducing operating costs and skipping the need for physical presence, something which very much characterizes banks. Fintech firms are shifting the bank's comfort zone since banks have now new concerning competitors. Back in the day being a big player better but not necessarily anymore. Being a big bank in an epoch of new entrants might turn out as a shortcoming, not because of the danger of new entrants but rather by the manner in which Fintech companies

operate (Temelkov, 2018).

Nevertheless, even if it has been discussed that Fintech firms pose big threats for banks, there are even larger chances for banks. Fintech companies turning out to be a threat or an opportunity relies completely on the banks attitude and inclination for cooperation. For example, studies carried by Temelkov (2018) and Manatt (2016) emphasize that banks have seen the potential to grow their customer base and profits by not battling with Fintech companies and already have taken initial steps to experience the paybacks of using technological innovations. However, even if these two studies have been supporting a positive connection between banks and FinTechs, Temelkov still argues that only the proactive banks will remain, while reactors will come short, potentially losing their much appreciated revenues, customer base and share of market.

As a side note, in some countries such as China we can see that the interaction between global banks and FinTechs has taking a slightly different shift. In this country, Fintech companies have really squeezed the benefits of presence (or lack) of regulations. Banks chose different approaches for their innovation strategy while local government policy is quite active bringing as a result the space for new services to occur. A research conducted by Woo (2017) on the innovation approach and process adopted by commercial banks operating in China shed light on the fact that government or industry regulations can enable or prevent the existence of innovations. Some examples were included by Woo are large firms that were not traditionally in the financial services industry but managed to penetrate it through third-party online payment platforms such as the star player Alibaba which started in China but now is in several other nations.

The biggest challenges for banks regarding their relationship with the governments and the expectations of customers are divided into two main categories according to Wackerbeck & Marek (2016). The regulatory change category includes the growing regulatory requirements increasing the cost of business for banks. For banks to achieve regulatory compliance, it is necessary to invest additional resources. The second, the market conditions category, includes the new market conditions putting further pressure. Here some of the major changes include the customer behavior, the rise of new competitors, the threat shadow banks, and the impact of new technologies and functionalities. As an example of the second category complexity, Manatt (2016) conducted a study in the United Stated with several senior executives to understand their views on collaboration between Fintech companies and banks. An expansion in mobile banking functions and the decrease of capital expenditure were mentioned as the most relevant advantages of collaboration. Following these, executives mentioned an

enhanced brand reputation, lower costs of doing business, better access to customers in new geographies and an increased access to customers in younger age groups.

These two categories presented before are very broad on the bank level and on top of this one must consider other changing forces along the way including the role of business models and innovation, technology, collaboration and the different barriers that could hinder development. Regarding barriers towards innovation Sandberg and Aarikka-Stenroos (2014) developed a literature review on the critical barriers to radical innovation in SMEs and large corporations identifying a set of barriers in particular for bigger firms. They presented that the traditional internal barriers include a narrow mindset, an absence of discovery oriented competences and an obstructive organizational structure. The traditional external barriers mentioned include an underdeveloped network, the environment dynamics, technological instability and costumer resistance to change. However, they failed to make enough understanding on why large financial services firm fail to organize for innovation. Particularly since they need to do so after the financial crisis of 2008. Later barriers identified for innovation include financial and skill barriers, lack of information on the market and on the proper use of technology (Das, Verburg, Verbraeck & Bonebakker, 2018). From the analysis of a large multinational bank in Europe (Das et al. 2018), ways to overcome the innovation projects barriers at banks and financial firms were identified. The presence of an innovation strategy, proactive support from top management and a separate governance structure directed for innovation potentially stimulate projects of exploration. However, regardless of the presence of positive factors, the further exploration and exploitation of innovations could still be hindered by the presence of traditional internal and external barriers to innovation (Sandberg *et al.* 2014). Other key barriers to innovation which are specific for the financial industry large firms include a high focus on risk avoidance, the lack of fundamental R&D, and the non-invented-here or externally made syndrome (Das *et al*. 2018).

In further literature regarding the impact of business models and new technologies it is mentioned that in response to the environmental uncertainty, banks have had to re-assess their existing business models in order to stay profitable while adapting their existing methods to comply with coming regulations. (Das *et al*. 2018) Also, banks have noticed that the rise of new technologies such as cloud computing, near-field communication and Blockchain present potential changes for their industry but also the opportunity to offer new products, services, and generate new business models. This opportunity of a new assortments

is both presented to established firms and the new entrant Fintech companies. Others simply argue that banks should also aim to develop sustainable business models (Yip and Bocken, 2018).

Several large firms, not only in the financial industry, have ventured in innovation pathways and started to play a role in the star-up ecosystems (Spender, Corvello, Grimaldi, & Pierluigi, 2017). For this reason, several banks have been involved in the last year in internal and external innovation programs including accelerators, incubators, and idea sourcing competitions in order to come up with fresh insights for the development of new products, services, and business models that leverage the use of recent technologies. This has been done by sometimes collaborating with external companies to run innovation initiatives. On another example, companies not included in the financial services sector have provided financial innovations driven by creativity by using big data analytics on consumer spending behavior, reason while some banks have even begun to collaborate with IT companies to deliver new services to their existing costumer and clients from their collaborators (Woo, 2017).

With everything taken into account, banks are today facing challenges from regulations, market uncertainty and new competitors taking market share from them in existing financial services. Some of the current practices adopted by global banks has been to switch their mindset into a more entrepreneurial and collaborative approach to challenge the barriers of innovation and adaptation.

2.2 Strategic Management & Entrepreneurship

Strategic management can be seen as the formulation, implementation, and evaluation of managerial actions that enhance the value of a firm allowing organization renewal to take place (Nag, Hambrick & Chen, 2007). It deals with the problematic of creating and sustaining competitive advantage while analyzing both internal and external environments (Bracker, 1980; Teece, 2007). The field of strategic management and its application have been related to the different fields such as to economics, psychology, and marketing (Hambrick, 2004). However, more recently the fields of technology, innovation, and entrepreneurship have been also related to strategic management (Leiblein, 2007).

Strategic management is directly related to organizational renewal or organizational adaptation. More than 40 years ago, Miles & Snow (1978) already

commenced to define that organizations' adaptation is dictated by the needs of the market and the technologies at reach for designing, producing, and delivering both products and services. In practice, this adaptation process involves the innovation of business models or organizational design (Osterwalder, Pigneur & Clark, 2010; Miles, R., Snow, Fjelstad, Ø., Miles, G., & Lettl, 2010). For large firms and corporates, the corporate strategy works as an energizer and medium through which competitive advantage is achieved. These renewal strategies are characterized by deliberate actions and major tactics used to take firms across times of uncertainty and need of corporate refreshment (Covin & Miles, 1999).

Taking in account the above mentioned, large firms and corporations are strongly suggested to continuously reinvent themselves and create new product, services, and business models in order to achieve sustainable competitiveness and long term growth. The reinvention process can be achieved through the creation of new business models would change the existing rules and take over conventional products and services resulting in major metamorphosis in the corporate strategy of corporates (Kodama, 2017). Decision makers in companies have taken several approaches such as the improvement of quality, controlling costs, lower inventories and adopting best practices. However, these will no longer be enough for the long term competitive success, neither will the traditional scale economies. Success requires the development of new products and services with the implementation of new organizational forms that would allow space for new business models to emerge. An intense entrepreneurial oriented management with a focus on innovation will direct the evolutionary and entrepreneurial fit of the companies into the future (Teece, 2007).

Previously mentioning that a focus on innovation is imperative, one can look back to an interpretation of innovation being a major driving force in economic growth and social development (Solow, 1957) which is defined as an iterative process with a particular focus on improvement or introduction of features leading to a successful commerce of an invention (OECD, 1991) Innovation can be seen as a process (OECD, 1991), but it can also be a concrete product, service (Garcia & Calantone, 2002) or business model (Teece, 2010) and even as a strategy (Vanhaverbeke & Peeters, 2005). Innovation has been remarked as a significant source of competitive advantage besides its contributions to society and industrial growth (Leiblein, 2007). In the recent years, top managers affirm that innovation is the key way for firms to accelerate their speed of change. Some have familiarized themselves with the concept of continuous innovation, very much needed for companies to remain relevant and effectively challenge the global markets in the 21st century (Kuratko, Hornsby & Covin, 2014).

Nevertheless, innovation(s) can take several forms and after a thorough literature review Garcia and Calantone (2002) described different types of innovations as products or services. They encompass innovations defined as radical, incremental, really new, and imitative.

The first type of innovation is the Radical Innovations. (ibid, p.120) These ones embody a new technology and provide a new market infrastructure. They create discontinuity in an industry or market level, thus a discontinuity in a firm and customer level is obtained. They are characterized by not addressing an existing demand but create their own. Radical innovations often give space for new industries, competitors, marketing methods, and logistics and distribution channels.

The second type of innovations are known as Incremental Innovations. (ibid, p. 123) They are often defined as concrete products or services with new features or improvements to the existing technology and market. An incremental innovation often comprises the adaptation, improvement, and enhancing of existing products, services and channels.

The third type of innovation would be the Really New Innovations. (ibid, p.123) They often rely on technology never used before in a specific industry changing it and being totally new to a specific market. They are slightly more unusual since not every day you can introduce something completely new.

Fourth and last, there is Imitative Innovations. (ibid, p.124) Innovative imitators can relevantly change the market direction. They often play a role of remaking or creatively destroying the market (Schumpeter, 1942) by being early imitators. If they happen to already own a large market share and have enough resources, what is most likely to occur is that the creators of imitative innovations will have the most impact in changing a markets course and can most competitively challenge the changing dynamics of a market (Garcia & Calantone, 2002). Due to their iterative nature, imitative innovations are frequently new to a firm but not necessarily to the market. For this reason, they have a low rate of market and technology innovativeness but if adapted correctly they might be the design champions yielding most results or recognition.

2.2.1 Strategic Adaptation & Complexity

Strategic adaptation rises from the presence of environmental shock. An environmental sock can be defined as a disrupting and unsuspected alteration in the external environment of a firm (Meyer, Brooks, & Goes, 1990) and they can be mild or severe. The environmental shocks affect particular organizations or even complete industrial segments by the barriers shifting in them (Sheppard & Chawdhury, 2005; Chakrabarti, 2015). Studies suggest that companies going through an environmental shock can successfully adapt and improve their

performance and growth targeting specific opportunities. However, the riddle lies in the fact that an economic shock grows the environmental uncertainty and also the risk associated with organizational reconfiguration (Chakrabarti, 2015).

During environmental shocks, changes are so sudden and extensive that often adjust the direction of entire industries, crushing the adaptive capacity of resilient companies. Environmental shocks often cause changes of two types, continuous changes and discontinuous changes (Meyer *et al.* 1990). Continuous or first- order change happens within a stable system that theoretically remains unchanged. Companies facing continuous change often steer around trying to maintain equilibrium through the uncertainty. The second-order or discontinuous change often involves the transformation of fundamental parts of the system, leaving existing companies in a limbo. Regardless of their study being focused in discontinuous change, Meyer *et al. (*1990) suggest that the incremental approach taken by Raymond Miles and Charles Snow in Organizational Adaptation is suitable for analyzing to a firm level companies and industries facing continuous change. The continuous change and certain sudden or strong events often trigger adaptive changes inside firms.

Firms that often invest in new technologies or applications often face the challenge of an uncertain future. Previously, market champions have tackled the uncertainty of change by establishing strong and centralized R&D labs. The uncertainty of change comes from both the new technologies and their potential applications and the fact that a company only perceives a side of a potential market but does not know how to develop technologies to create business around them (Vanhaverbeke, Van de Vrande & Chesbrough, 2008). A recommendation from this authors stated that companies should abstain themselves from committing so early to a new venture of collaboration considering that it poses risk and often involves irreversible investments. For this reason, companies are encouraged to gain sufficient information to decrease uncertainty to a convenient level.

The process of combination and creation of new resources combos under an environment of uncertainty is crucial to keep an organization afloat and generate profits (Bjørnskov & Foss, 2013). Interrelationships between the incentive to invest in innovative activities and both the current and expected market structure exist in complex industries. Work in this industries promotes decision makers to rationally determine opportunities based on tradeoffs. However, certain environmental circumstances for firms or individuals may provide the opportunity for discovery or creation. In competitive and changing environments, there is often a pace of technological change and a highly fragmented consumer

demand which will provide the space to look at unmet customer needs and neglected technological possibilities waiting for someone to seize them (Leiblein, 2007).

Organizational Adaptation

One of the most widely known frameworks on organizational adaptation was proposed by Raymond Miles, Charles Snow, Alan Meyer and Henry Coleman in 1978. This framework has been referred in academic literature as the "Miles & Snow Strategic Archetypes" (James & Hatten, 1994), "Miles and Snow Framework" (Gupta, 2011), and "Miles & Snow Typology" (Haj, & Christodoulou, 2017) to name a few. Originally, this framework addresses to some extent company performance and while it was demonstrated that performance on the banking industry is difficult to measure in a turbulent environment (James & Hatten, 1994) it is hard to find that any strategy typology, including Porter's strategy typology (Porter, 1980) which is quite renowned, can explain all the nomenclatures of business strategy. However, amongst environmental adaptation typologies, the Miles and Snow Framework remains relevant to the field of organizational adaptation (Sumer and Bayraktar, 2012).

Most organizations evaluate their purposes by questioning, verifying, and redefining the way in which they interact with their environment. While effective organizations create and maintain a viable market for their goods and services, ineffective ones fail to do so. Besides the orientation of purposes, organizations evaluate their means to achieve a purpose by restructuring the company and the function of roles and their relationships as well as their managerial processes. The process of adjusting to environmental change and uncertainty is highly complex and presents numerous decisions and behaviors from all the organization levels (Miles, Snow, Meyer & Coleman, 1978).

Miles and Snow (1978) presented a framework aiming to analyze organizations as an integrated and dynamic whole by taking in account the interrelationships between an organization strategy, process, and structure. The framework consists of the adaptive cycle, also known as adaptive process, as well as the definition of a Strategic Typology (ibid, p.548). Organizational behavior is partly dictated by the environmental conditions but it is the choices of top managers that make the critical determinants on an organization adaptation. The three identified broad problems organizations face and should solve simultaneously are entrepreneurial, administrative or regarding engineering.

The entrepreneurial problem (ibid, p. 549) represents concretely defining one or several goods or services and the target market or target segments. For ongoing organizations this problem is even more complex because they must attempt to modify or create solutions constrained by their current operations. The solution the entrepreneurial problem relies on the management's acceptance and allocation of resources to a given domain, new solution or improvement to existing ones. This function is mainly a top-management responsibility but a solution might arise from lower positions if an entrepreneurial focus or proper organizational structure is existing.

The engineering problem (ibid, p. 549) involves the creation of a system that operationalizes the creation of solutions to the entrepreneurial problem. The solution often includes management selection of suitable technologies for production and distribution as well as the creation of new information, communication structures and control to ensure adequate use of technologies. Solving this problem might represent changing the organizational configuration and structure.

The administrative problem (ibid, p. 550) represents the rationalization and stabilizing of activities what successfully solve entrepreneurial and engineering problems. The solution to this problem represents the formulation and implementation of processes that will permit the evolution and innovation of an organization. The lagging variable of this solution refers to the rationalization of previous strategic choices and their tweaking towards the future and the leading variable implies that administrative systems must facilitate the adoption of innovative activities to proceed.

The proposed typology by Miles & Snow (ibid, p. 550) presents the strategies that organizations choose to solve their problems or the types of existing organizations. This framework includes the relationship between strategy, technology, structures, and processes so that organizations are seen as a whole. No typology will encompass every form of organizational behavior but amongst years of research this framework has been widely accepted by the scientific community

The Defender organizations aim to maintain their stable position. (ibid, p.552) They seal themselves off and approach only a particular sector to provide their solutions. They usually strive to keep others away from their "lawn" by implementing e.g. competitive pricing or high quality products. Their narrow focus often prevents them to see developments and trends outside their domain

while they predominantly trying to maintain a small niche that might represent difficulty for competitors to access. The Prospector organizations are in constant search for market opportunities and experiment with emerging trend in the environment (ibid, p. 554). They are often regarded as the creators of change to which others should respond. Their lack of efficiency is given to the fact that they are strongly concerned about product and market innovation but they justify this by a fast learning and continuous iteration. The Analyzer organizations pivot between the Prospector and the Defender typologies (ibid, p.556). They operate routinely across the organization but in their more turbulent sections or departments, managers will often look for new ideas from the competitors and adopt the ones they perceive as valuable or promising. The challenge this strategy brings is the ability companies should possess to both maintain their existing processes while pursuing new opportunities. The Reactor organizations include managers that perceive change but are unable to effectively respond to it. The Reactors rarely make adjustments until forced to by the pressures of environment. This translates to them often lacking a consistent strategy-structure relationship and unsuccessful adaptation as planned, if it is that they ever do plan (ibid, p. 557).

Miles and Snow (ibid, p. 561) aimed to portray the major elements of organizational adaptation, describe behavior patterns of organizations going through the process of adjusting to their environments, and provide some grounds to furtherly discuss organizational behavior. The adaptive cycle and the strategic typology are presented and paired with theoretical theories from back in the day in traditional management, human resources and human relations. They conclude that effective organizational adaptation relies on the capacity of managers to envision and implement new organizational forms as well as taking responsibility of the management of change, directing and controlling people within organizations. Managers are believed to meet successfully the environmental conditions by grasping how organizations are integrated and comprise a smaller part of a dynamic whole or industry.

The future of organizations

Organizations do not look the same way they used to 50 or 15 years from today. At the same time, in the future organizations will look partially or entirely different than they do today. Traditional organizational designs will not be able to effectively respond to the changes and challenges in the 21st century (Miles, Snow, Fjelstad, Miles, & Lettl, 2010). In order to transition accordingly to the demands of the coming years the new organizational designs demand collaborative

capabilities and values, facilitating infrastructures and resource commons, open resources for public access. Collaboration is motivating by nature and can be seen as an enjoyable and productive process for both individuals and firms (ibid, p. 101).

The theory predicts that emerging designs will enable firms in rapidly developing sectors to seize the growing scientific and technical knowledge and create a broad range of innovations in products and services. (ibid, p. 93) Individual firms will attempt to compete in innovation by themselves as a response to a complex reality and turbulent environment. However, this complexity will be far too demanding but will also increment their opportunity seeking capacity to participate in knowledge communities. This participation and collaboration with others will drive innovations across the globe and different industries (ibid, p. 96-97).

Along their study; Miles, Snow, Fjelstad, Miles, and Lettl came across with four types of traditional organizational designs. Each design has evolved from the other, learning which things does it take to include to make a specific design deliver results. The specialized and vertically integrated U-Form organizations have the purpose of achieving economies of scale through specialization through the higher-level units coordinating and controlling the lower-level units. (ibid, p. 94) Companies adopted this working format was adopted from governments because bureaucracy appears to provide an efficient method to structure work and have a tight grip on the organization's development.

The Multi-Divisional or M-Form organization (ibid, p. 95) initially included divisions or former independent firms focused on meeting the needs and preferences of their respective industry segments while sharing technological and market information through corporate staff departments. Managers here are challenged to delegate and particular difficulty is found if there are used to the managerial values and beliefs from U-form organizations. Delegation and joint goal setting across hierarchical levels are intrinsic to the success of M-Form organization.

Matrix Organizations (ibid, p.96) were created by firms in industries based on the rapid utilization of new technologies. Allows flexible integration and application of technologies from a variety of sources to the development of new products and markets. It is a hybrid structure with hierarchies established around customers and functions. These hierarchies are enhanced by various horizontal processes of coordination and control as well as the assembling of skills

and resources across, up and down the organization. The core of this organizational structure includes free information exchange and a modus operandi based in collaboration across teams and firms. The Matrix Organization adoption is often adopted by the small and young firms who quickly take new directions.

Finally, the Multi-Firm Network designed emerged from downsizing and subcontracting moves from companies in the 1970s and 1980s. Here companies restricted activities to those who had more skills in the value chain to obtain a bigger competitive advantage while outsourcing to specialist their non-key activities (ibid, p.96). However, in this type of organizations managers were unable to recognize the possibilities and benefits of cooperation and innovation across firms since they thought others would benefit from their existing knowledge.

This theory of organization design states that organizational forms and business models evolve to the extent managers and firms experiment with new approaches to broaden their knowledge and expand their market reach. (ibid, p.97) The new, emerging organizational designs can only be built on business models that successfully identify ways of capturing value and creating economic wealth by putting together widely distributed knowledge confined in communities of individuals or firms on a peculiar subject or technology. The new organizational forms demand knowledge resources to be structured and managed in a way that products and services from other markets can benefit from their proper arrangement. This new design will retain the component of existing firm's structures and processes while adding fresh capabilities to overcome innovation barriers while gathering knowledge. Knowledge utilization and innovation will be the highlights and what direct management attention. Companies are soon to transition, if they have not already, into a new type of firms with a modern and relevant organizational design paired to the demands of today.

It is mentioned that collaboration is a key component to remain relevant in the 21st century. It was observed that on any given innovation project collaboration can take place in four different ways: I. bilateral collaboration (collaboration with customers) II. Direct collaboration (two or more firms working together) III. Pooled collaboration (information, ideas and experiences are shared in a way that is accessible to others IV. External collaboration by engaging in activities with firms out of the community (ibid, p. 98). Global resources are now perceived as commons. The use of community values and collaborative capabilities are crucial to successful large-scale multi-party collaboration.

Digital Organizations

Progressively, organizations have been evaluating their opportunities to improve and offer products and services while interacting with consumers and other stakeholders in digital ways. Big data, social media and mobile computing are driving the future workplace while having a relevant impact in both economic and social maters. Also, we can see an augmented collaboration and competition from companies, disruption of industries and stress put on organizations to develop relevant capabilities and innovate their cultures (Snow, Fjelstad, & Langer, 2017).

Several startup companies leverage digital technologies to come up with new products, services and business models that challenge the present way of conducting business. They have also successfully taken away customers from companies that are reluctant to adapt and change (ibid, p. 1). Digital technologies have come to support working activities and decision making while connecting members in a company and managing the relationships with externals such as customers and suppliers. The digital age demands digital organizations populated with teams and individuals who are tech savvy and can collaborate both inside and outside an organization to bring new solutions and make improvements in processes (ibid, p. 2).

Snow, Fjelstad & Langer (2017) proposed a framework for design of effective and relevant digital organizations relying on three pillars known as self-organizing actors, commons for resource sharing and multi-actor collaboration enabling protocols, processes, and infrastructures. The self-organizing actors are expected to work with integrity and developing a reputation in which trust is built up and saves costs on controlling. Actors being individuals, teams or firms must develop certain work skills in order to be part of an effective digital organization. Sense making, cross-cultural competency, computational thinking, media literacy, trans-disciplinarity, design mindset and virtual collaboration are the key work skills actors should possess (ibid, p. 9). Consequently, such a collaborative oriented organization requires commons, meaning resources collectively owned by certain actors. The key type of commons for the digital age are the knowledge commons, a warehouse of knowledge that members of an organization can use and contribute to (ibid, p.10). Ultimately, the processes, protocols, and infrastructures should connect actors and provide the ways, rules, and space to innovate and work in harmony (ibid. p,11).

Digital organizations are growing in numbers and complexity.

Organizations adapted to the new era should be collaborative, agile and possess minimal hierarchy. The digital organizations need technologically aware leaders who can dictate the digital agenda and prioritize the relevant topics for their organizations. Since digitization has an accelerating pace, companies need to be synchronized to the speed of digital clocks and work collaboratively (ibid, p.11).

2.2.2 Strategic Entrepreneurship

Charles Snow (2007) made a comment on the first publication of the Strategic Entrepreneurship Journal (SEJ) mentioning the following:

> *"Innovation and entrepreneurship are closely linked organizational processes. As the global economy becomes ever-more complex and fast-moving, the ability to innovate increasingly becomes the core ingredient of firm competitiveness and success. Indeed, some observers believe that innovation should be a priority of every firm […]"*
>
> *– Charles Snow, 2007*

The fields of strategic management and entrepreneurship are becoming ever-more interconnected in a world were companies need to manage continuous change (Meyer *et al.* 1990) and keep flexible in order to survive (Heidemann, 2007). For this reason, companies are suggested to adopt both a strategic advantage-seeking behavior and an entrepreneurial opportunity-seeking behavior, more simply seen as strategic entrepreneurship.

Before jumping to strategic entrepreneurship it is better to understand the second component of this concept. A very early definition of entrepreneurship comes from the Schumpeterian notion regarding the establishment of new organizational forms, products, markets and processes (Schumpeter, 1942). On the other hand, Teece (2007) defines entrepreneurship as a sensing and understanding of opportunities, getting things going and finding new and better ways to put things together. Teece's definition is similar to the one in which entrepreneurship is the terms and actions taken to identify, evaluate, and exploit opportunities (Shane & Venkataraman, 2000), as well as how and who does this understanding and sensing (Alvarez & Barney, 2004).

Combining the interpretations of different authors, strategic entrepreneurship can be seen as the crossing between a competitive advantage seeking orientation and the capacity of existing ventures to furtherly bring new entry to products, markets, and technological innovations (Ireland, Hitt, & Sirmon, 2003; Kuratko & Audretsch, 2009). Strategic entrepreneurship is also an important

concept suggesting that new ventures and established firms need to be simultaneously entrepreneurial and strategic oriented (Hitt, Ireland, Camp & Sexton, 2001) since both strategic and entrepreneurial actions relate to the long-term performance of a company. An entrepreneurial and strategic orientation has great influence on a firm's failure or success (Agarwal & Helfat, 2009).

Strategic entrepreneurship stresses the importance of companies managing entrepreneurial resources and activities in a strategic way to obtain competitive advantage (Ireland, Hitt & Sirmon, 2003). The perpetuated retention of competitive advantage is a vital factor of a company's performance within the strategic management domain (Ireland, 2007). The idea behind strategic entrepreneurship has grown by intersecting the dynamics between strategic management and entrepreneurship. This intersection is not recent since Miles and Snow (1978) already considered the entrepreneurial problem as a major problematic faced by all firms (Heidemann, 2007). Strategic entrepreneurship demands organizations to stretch far without losing grip from their existing operations but moving forward into future practices and spaces.

Business Models

Companies implicitly or explicitly use a particular business model that describes the mechanism and design of value creation, delivery and capture. A superior business model will successfully provide value to the costumer and collect, for the developer or owner of the business model, a significant portion of its revenue. Business models are a required component of market economies where we have competition, customer choice, relationships between consumers and producers, transactions and operation costs (Teece, 2010). Firms need to adjust, change and innovate their business models in order to capture value from innovations related to advancement in technology and new opportunities (Hacklin, Björkdahl & Wallin, 2018).

The building blocks (Osterwalder & Pigneur, 2010) of a business model include: the key partners, key activities, the value propositions, key resources, customer segments, customer relationships, channels of delivery, revenue streams and the cost structure. The way in which a business model is structured creates a strong connection between a firm's potential and current achievement of economic value and profitability (Chesbrough & Rosenbloom, 2002) The main sense of a business model spins around costs and revenues, a value proposition for customers and users, and how value is captured. A business model is to a greater extent a means for innovation and also a subject for it while using

technology. While creating and capturing value, business models can be also considered as enablers (Zott, Amit, & Massa, 2011).

From a distance, all business model could seem easy to imitate. Business model replication can come from both established firms or new entrants. However, this is not so easy in real life. (Teece, 2010) One of the first barriers is that establishing a business model often requires assets, procedures, and systems that are hard to obtain or replicate, especially if a firm is new or small. The second obstacle can usually be called the level of opacity, meaning what makes it hard for outsiders to grasp in enough detail how to implement a business model and which elements are key for customer adoption and acceptation. The third obstacle proposed is that even when it is obvious how to replicate a pioneer's business model, parties in the industries might consider risky doing so since it would involve cannibalizing existing sales and profits or disturbing significant business relations.

In some cases, the creation of new business models could lead to the rise of a new industries, such as the case of the payment card industries with both debit and credit cards. However, the technological innovation often needs to be paired to the business model innovation if a company wants to capture any value. (Teece, 2010) Disappointments are imminent, but the rates of success can be improved if business architects learn quickly enough and are able to adjust, or pivot, within a certain scope that would still yield a reasonable profit and learnings.

In more recent studies, a look into the innovation of business models has been explored. Markides (2016) argues that in order for a new business model to qualify as an innovation, it must enlarge an existing economic portion either by luring new customers into the market or by encouraging an increase in consumption from the existing customers. Business model innovation involves much more than the discovery of a radical or new strategy for a firm but lies on the enlargement of the market. It is important to address that business model innovators simply redesign and redefine what an existing product or service is and how it is offered to the costumer. It is wrong to think that they discover completely new products or services. Business model innovation can bring competitive advantage to a firm and is perceived as a perpetuator of a firm's growth and exposure in and aggressive and changing environment (Johannessen, 2009). This innovation, when sustainable, is a lever for continuous change and sustainability across and within firms (Yip & Bocken, 2018),

Some business model innovators are start-ups and fresh players. Their new business models might improve up to a certain point so that the old

attributes offered by established competitors are surpassed and the new attributes start delivering a satisfactory performance. There is a point when even traditional and conservative customers start to find the new ways interesting and might consider switching. After some early adopters and consumers have switched, the evolution of the business model innovation often carried by start-up or more fresh players catches the attention of established players as well. The more customers adopt the new business model, regardless of them being existing or new customers, the more attention a new business will receive from existing players and the media. So far what has been seen in the business world is that established players can no longer ignore these business model innovators and will perceive a threat or desire for competition (Markides, 2016).

Often, business model innovators are driven by something named the market pull (Brem & Voigt, 2009). The market pull can be defined as mass of costumers whose needs are not being currently met which creates a new demand. The new demand requires problem solving skills and a concrete product or service that innovators might deliver. The impulse that drives individuals and groups to state their demands is often what companies use to focus their resources, targets and activities so the demand and needs are taken care of. However, the dilemma for existing companies is that they would like to adopt this new ways of competing but will find them to enter in conflict with their existing ways of doing business It is easy to understand why existing firms are initially not incentivized to become business model innovators or react to them. The new business models often attract a different customer segment than the one established companies address and also, they require different and often conflicting value chains compared to the existing ones. It is for this reason that established players have a harder time to adapt to the new changes and might consider these outside innovations as disruptive (Markides, 2016).

Wackerbeck & Marek (2016) proposed a set of three possible business models that banks could adopt in the near future to overcome the challenges presented by the rise of the Fintech competitors/collaborators. First we find the platform banks. This model would be distinguished by open infrastructures and the integration of products from both competitors and Fintech firms into a bank's own assortment. The fundamental capabilities of platform banks would incorporate proper customer relationship management, the anticipation of client demands, and the maintenance of open product set-ups. The second suggested business model type are digital banks. The model of digital banks is described by far-reaching digitization of customer service together with both downstream processes and the back-office processes. Stimulated by the product development

style of early technology companies, digital banks would be in a situation to swiftly and competently answer to changes in demands from both customers and regulation entities. The third model is the automotive industry inspired Original Equipment Manufacturer Banks, better referred as OEM banks. This model, in which a quality and attention is the same as the original producers, requires lean banks distinguished by a low degree of vertical integration. The old-style value chain would be disbanded, cost reduction is achieved and a maximized efficiency would be obtained by leveraging the integration of external merchants and providers.

2.2.3 Corporate Entrepreneurship

> *"The competitive landscape is changing rapidly. Significant discontinuities such as globalization, deregulation, blurring industry boundaries through new business models, technological convergence and disintermediation pose new managerial challenges forcing managers to create new competencies"*
>
> *-Coimbatore Prahalad, 1998*

Corporate entrepreneurship is a relevant type of corporate innovation. It is a process that often simplifies a firm's efforts to constantly innovate and handle effectively environmental changes and rival companies (Kuratko, Hornsby & Covin, 2014). Corporate entrepreneurship has been known as a viable means for promoting and sustaining the competitiveness of organizations. It is also considered as a vehicle for competencies building (Vanhaverbeke & Peeters, 2005). It is also used to improve the positioning and pace of transformation in companies, markets and industries. This versatility comes from the value creating and capturing opportunities for innovation that are seized by organizations (Miles & Covin, 1999).

New business development can be cherished for a company to effectively confront the challenges that rise from emerging technologies. However, large and diversified firms have not had the best of times trying to manage change and turn innovations to their own advantage. Innovations are initially seen as profit engines that can sustain long-term growth but it is more complicated than that. Companies existing capabilities have a predilection towards path dependency and small levels of experimentation (Vanhaverbeke & Peeters, 2005).

Corporate venturing is a term often related to corporate entrepreneurship. The study of Covin and Miles (2007) and its evidence suggest that corporates are

now using a quite variety of approaches that reflect corporate venturing use as a strategic tool for entrepreneurship. Based on their analysis they formed nine propositions on how firms that strategically use corporate venturing reap better results than their counterparts. The propositions are that firms using strategically corporate venturing when compared to their non-strategic counterparts are more likely to:

(1) set formal corporate venture objectives
(2) recognize the role of corporate venturing in the realization of strategy
(3) place greater weight on "strategic fit or logic" than on financial analyses when evaluating corporate venturing initiatives
(4) consciously asses the strategic relevance of initiatives
(5) use corporate venturing as a learning tool
(6) facilitate "strategic conversations" within their organizations
(7) make external investments parallel to internal R&D investments
(8) gain greater value from their existing competencies
(9) recognize and exploit potential initiatives to create new competitive games or new markets spaces

Covin and Miles (2007) argue that corporate venturing can be used to build knowledge competencies that can expand a company's reach into new opportunities once outside of the scope of the organization. Internal corporate venturing happens when a new business emerges within a parent company. External corporate venturing regards investments that smooth the establishment or growth of businesses outside an organization's domain. Joint corporate ventures, also known as join ventures, are usually external and involve a company co-investing with another company to establish a new business. Regardless of their type, all corporate venturing approaches are relevant so that corporations can respond to the innovation demanded in their industry.

The successful integration of corporate venturing, corporate entrepreneurship and organizational strategy are key to form strategies based in innovation that will revitalize organizations through ambidexterity (Covin & Miles, 2007, Gibson & Birkinshaw, 2014). Within corporate entrepreneurship the term of ambidexterity rises. Ambidexterity is known as an organizations ability to participate in exploratory activities that lead to radical innovation while conduction exploitative activities that lead to incremental innovation. While exploitation is a stability focused approach and exploration is a change-oriented approach (Eriksson, 2013). Exploitation, as portrayed by Andriopoulos & Lewis (2009), is much more focused in efficiency and execution while exploration is more iterative,

experimenting, flexible and oriented to discovery.

Mattes (2013) remarks that the main reasons why companies would involve into ambidexterity is a financial benefit, improved corporate performance and a way to better match an organization's efforts towards innovation. Some companies do happen to find a dynamic balance between path creation and dependence, exploitation and exploration. Corporate venturing commonly functions as driver for competence development, a relevant condition to successfully manage innovation under continuous change. Company rejuvenation is achieved by these competence building combined with corporate strategy (Vanhaverbeke & Peeters, 2005) The relationship between corporate strategy and venturing is quite dynamic since one influences the other by activation and redefinition.

Even if innovation has become a buzzword in academia, corporations and even governments, it is probably the answer to top executives wondering what is needed in their company to be relevant in today's and tomorrow's changing economy (Kuratko, Covin & Hornsby, 2014). Companies are urged to take a look both inwards and outwards for innovation (Chesbrough & Kardon, 2006) through an intelligent use of their learning capabilities (Lin, McDonough, Lin & Lin, 2013). Learning capability refers to the combination of activities that encourage inter-organizational learning among workers and partnerships with other parties while keeping an open culture within the host organization promoting and maintaining a knowledge sharing approach to innovation. Practices that facilitate learning and knowledge transfer as well as understanding how organizations collaborate with others are both relevant to innovation and organizational culture understanding (Lin, McDonough, Lin & Lin, 2013). Innovation can be seen as actually the strategy, it is no longer only a tool for strategy implementation (Vanhaverbeke & Peeters, 2005).

Open Innovation

Innovation has taken a new approach in the corporate world. The concept of Open Innovation (Chesbrough, 2003) emerged and has been adopted by several players across industries going through change where companies want to obtain and create value. Closed Innovation regards the innovation strategies supposing that firms should stay aside from others when approaching innovation. All development, controlling or financing should be executed without being related to any other external. On the other hand, Open Innovation encourages

companies to use external ideas and routes to market as well as taking a deep dive into the internal ideas of the company for value creation (Chesbrough & Kardon, 2006).

Firms have invested in substantial R&D departments to host innovation and pursue sustainable growth for a long time. However, in reality we see that a more open model is rising. In Chesbrough & Kardon model (2016), companies acknowledge that good ideas can come from the outside and that not all good ideas generated inside the company can be properly executed. Organizations have the possibility to cultivate and approach Open Innovation from different angles such as mergers and acquisitions, spin-offs, licensing, venture capital, co-creation, corporate collaboration and having an inclusive attitude towards employees, suppliers, and consumers' ideas (Chesbrough, Vanhaverbeke & West, 2006) or a combination of the above mentioned.

Bogers and West (2013) conducted a research on how and why firms look for external sources of innovations for further commercialization. They examined a four phases model ranging from obtaining innovations, integration and commercialization combined with a continuous interaction between collaborators and the host firm. Collaborators and sources for innovation can be suppliers, customers, rivals, and complementors. Nevertheless, a great challenge for firms adopting external sources of innovation relies on how effectively do they recognize the most valuable ones (Poetz & Shreier, 2012). This interaction and process of leveraging external sources of innovation takes in account possible knowledge spillovers (Agarwal, Audretsch, & Sparkar, 2010). Spillovers are the external benefits that occur from knowledge previously held by a determined party and how this knowledge is furtherly exploited by other agents.

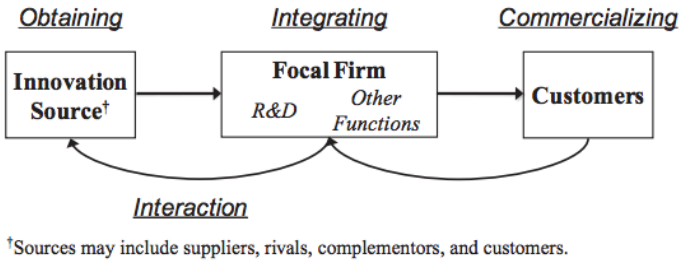

Figure 1. Model for Leveraging External Sources of Innovation (Bogers & West, 2013)

If open innovation is to happen, several steps and capacities must be present since it does not materialize from one day to another. Zobel (2017) identified

three components of the absorptive capacity of firms regarding processes of open innovation to take advantage of new knowledge. First, recognition refers to the capacity to discover, recognize, and value external knowledge. Recognition demands external scanning meaning a monitoring of emerging partners, markets and technologies paired with the strategic assessment of assessing external innovation sources and their possible fit with a company's current business. Second, assimilation refers to the capacity to analyse, evaluate and disperse external knowledge. Assimilation englobes the coordination of mechanisms for successfully relating the internal business to external knowledge resources, the interaction of activities and tools that promote the acceptance and implementation of external knowledge and the knowledge management. Knowledge management refers to how external knowledge resources are articulated and assimilated within the members of the organization. Finally, the exploitation is the capacity of companies to envision applications of the assimilated knowledge resources and how they recombine them with the existing knowledge an organization already has. This involves the active seek and monitoring for possible problems as well as the recombination activities that match and bundle both internal and external innovation

Design Thinking

Design thinking is known as an approach to innovation founded on the way of thinking and working from designers with a user-centered mindset (Brown, 2008). It is often portrayed as a creative and emotional alternative to the analytical logic inherent to several large organizations. It can also be seen both as a creative and analytical mode of thinking and problem solving (Carlgren, Rauth, & Elmquist, 2016).

Design thinking is composed by five major themes (Carlgren, Rauth & Elmquist, 2016). User Focus relates to deeply understanding the user, its needs, its environment, and other aspect a company might be unaware of. Users might be involved in a prototyping sessions for co-creation or interviews. Problem Framing refers not to a problem understanding, but to take a general overview of it, wide some assumptions about it and reframe it so it can be tackled from a different angle. The visual representation theme refers to the action of tangible ideas which are seen in a short story that is digested and understood by most people due to its simplicity. This is a good way to create consensus, test ideas and share insights. Experimentation and iteration as a theme is the core of innovation. Learning from past mistakes and different insights allows design thinking to

yield results for projects and companies. Finally, the fifth theme comprises diversity which involves collaboration of diverse members in teams and the incorporation of outside perspectives.

Diversity is a central theme for design thinking and innovation since different perspectives and views inspire solutions. Often networking with other organizations as design firms, universities, rival companies and loyal customers is encouraged. Through diversity companies engaging in corporate entrepreneurship can expand their horizons and gain new knowledge (Carlgren, Rauth & Elmquist, 2016), Customer involvement, mentioned in the previous themes, and cocreation practices result in novel and relevant knowledge. Cocreation with customers who are related to the firm often lead to highly relevant insights and new angles that might not have been previously considered (Mahr, Lievens & Blazevic, 2014).

No panacea is found in Design Thinking. Since it has been used as an approach used for radical innovation it is expected that Design Thinking will find typical innovation challenges. Some of the challenges include misfit with existing processes and structures, different communication styles, clash with the culture of the organization and ideas or results being hard to implement(Carlgren, Elmquist & Rauth, 2016).

The banking sector as well as other industries have put attention to Design Thinking. In 2008, Deutsche Bank adopted a design thinking approach in their Technology and Operations division. It was seen as a way of highlighting the company innovation orientation in hopes to come up with new solutions and attract both graduates and new talent. This steps were taken by the bank in close collaboration with an education institution, the University of St. Gallen and several internal or external sponsors. The results of this adoption in 2008, which has been replicated ever since for at least two projects per annum, include prototypes, minimum viable products (MVPs), stronger and expanded networks, and positive brand perception (Carlgren, Elmquist & Rauth, 2016).

2.2.4 Collaborative Entrepreneurship

Firms are wondering how to collaborate with each other to extend their market reach through innovation (Snow, 2007). Collaboration is essential to absorb and develop competences held by others in order to improve an organizations innovative potential and knowledge. In fact, both cooperation and collaboration are critical for new ways of entrepreneurship and innovation. (Franco &

Haase, 2013). Strategic entrepreneurship understood as the firm-level merge of advantage and opportunity seeking actions and collaborative innovation defined as the creation of cross-firm and industry innovations through the sharing of expertise, knowledge, ideas, and opportunities (Burgelman & Hitt, 2007). Collaborative innovation enables both large and small firms to address accordingly the challenges related to strategic entrepreneurship and can be sought through opportunities seeking activities and advantage seeking activities both within a firm and between several of them (Ketchen, Ireland & Snow, 2007). After having looked into corporate and strategic entrepreneurship a new concept named collaborative entrepreneurship deserves to be looked into. Collaborative entrepreneurship combines both strategic entrepreneurship and collaborative innovation.

The basis of collaborative entrepreneurship relies on the generation of economic value from fresh and jointly created ideas coming from knowledge and information that is shared between several actors (Franco & Haase, 2013). Collective entrepreneurship calls for the collaboration of employees and teams inside an organization for information sharing (Ribeiro-Soriano & Urbano, 2009). Also, companies might be seen as entrepreneurial if they intend to take and open and proactive approach by forming cooperative relationships for innovation with other parties such as rivals or companies in other industries (Antoncic, 2007). By this, we understand that collaborative innovation can allow firms to reduce the gap existing between the level of innovation they need and the one they currently have (Ketchen, Ireland & Snow, 2007).

Large companies are often good at establishing competitive advantages but lack the effectiveness to pursue and explore continuously opportunities and struggle to produce a continuous amount of innovations. On the other hand, smaller firms might be active at being opportunity seekers but their limited knowledge, resources and power might hinder them from moving any further. For this reason, smaller firms might wish to form collaborative relationships with larger players. The benefits for bigger companies would be the possibility to more easily identify and develop innovations (Ketchen, Ireland & Snow, 2007).

Collaborative innovation enables large firms to exploit their resources and explore innovation opportunities. Learning to think small they can pursue bigger ambitions without the hassle of completely modifying their operations. This collaborative mindset might be hard to maintain over long periods of time but if all parties commit seriously, results are obtained (Ketchen, Ireland & Snow, 2007). Chiambaretto & Fernandez (2016) Argued that the market uncertainty plays a direct role on ignition of collaborative and coopetitive alliances for innovation. These innovations have the power to change market structures, behaviors from

customers and they are increasingly the outcome of interfirm collaboration (Perks, Gruber, & Edvardsson, 2012).

Furthermore, according to Chiambaretto & Fernandez (2016) several studies have been considering dimensions of the evolution and arrangement of alliances portfolios, a type of collaboration. These dimensions included the nationality of the collaboration parties, the tie strength, its exploitative or explorative nature, the partner type and the interactions between them. They argue that some partners could be considered as pure partners or competitors in the same way that the partner interaction weather it is horizontal, vertical or mixed should be considered. Companies simultaneously pursue different objectives, therefore consideration of different types of interactions is crucial.

The types of interactions that can occur between partners can be divided in three segments. Horizontal interactions revolve around scale alliances in which partners put similar resources to gain. Vertical interactions regard collaboration in which partners bring together complementary sets of resources and provoke new combinations of services, products and markets. The last type of interaction is named the mixed interactions. They combine both qualities of the vertical and horizontal while combining complimentary resources and gaining increased efficiency (Chiambaretto & Dumez, 2016).

Looking at a materialized example of collaborative entrepreneurship one can think of the existence of incubators and accelerators (Pauwels, Clarysse, Wright & Van Hove, 2016). The incubation model comprises a way in which an incubator party provides aid and advice to startups to improve their chances of survival and hurry their development. Bigger companies create and value capture from the start-up companies involved (Amit & Zott, 2001). The accelerator model is slightly different in the way that it provides mentoring and networking but not necessarily physical resources. Bigger players here offer often pre-seed investments, provide their network of business angels and offer a limited support up to 6 months usually (Pauwels et al, 2016). Accelerators and incubators models differ slightly on specific features but they both intend to yield the best results of collaborative innovation (Isabelle, 2013).

2.3 Literature and Theorical Summary

In the previous chapter it was presented the current situations of banks and their rising competitors. It was also individually introduced what terms such as strategic management, innovation, and entrepreneurship mean for the purpose of this study. In addition, some relatively new and trendy subjects in the landscape of business studies appeared such as business models, open innovation, and corporate collaboration and entrepreneurship.

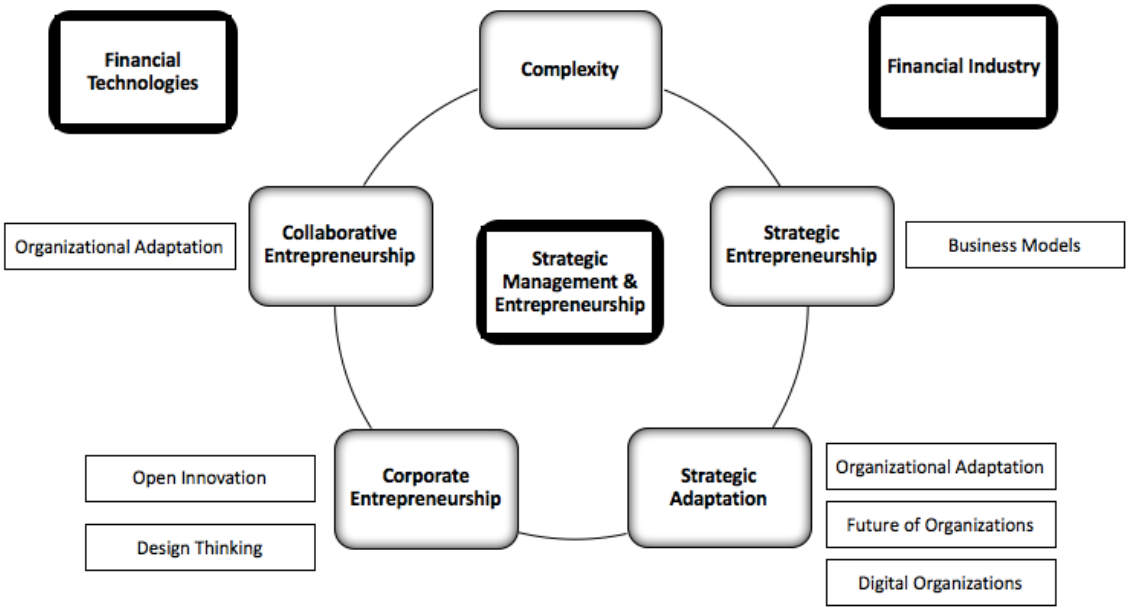

Figure 2. Visual representation of the theoretical framework

In Figure 2 it is possible to appreciate how all topics follow together in order to create a summary of the theoretical framework. The three main pillars are comprised of the more traditional and academic theories developed around strategic management and entrepreneurship soon followed by much more tangible and subjects such as what is understood as Financial technologies and the current situation of the financial industry and banks. The combination of these three pillars and the respective streams feeding strategic management permitted the further analysis and discussion in this work.

Fintech is a sector using mobile-centered information technology to enrich the efficiency of financial systems (Kim, Park, & Choi, 2016). Banks in the recent years have been required to take measures of strategic adaptation in the presence of the environmental shock produced by the birth of Fintech companies and

through this study it was found that even other companies have a major impact in the shifting of the industrial barriers for the financial sector (Meyer, Brooks, & Goes, 1990; Chakrabarti, 2015) The continuous changes caused by Fintech companies have brought challenges for traditional banks. This threatening changes come directly from new technologies and their potential applications combined with banks not knowing how to develop technologies to create businesses around them as effectively as Fintech players. mentioned by Vanhaverbeke, Van de Vrande and Chesbrough (2008).

Strategic management is seen as the formulation, implementation, and evaluation of managerial actions that enhance the value of a firm allowing organization renewal to take place. (Nag, Hambrick & Chen, 2007). This organizational renewal is very much aligned with what banks are challenged to face since they must deas with the problematic of creating and sustaining competitive advantage while analyzing both internal and external environments (Bracker, 1980; Teece, 2007). Strategic management was chosen as a main pillar for the theoretical framework because is directly related to organizational renewal and adaptation. (Miles & Snow, 1978)

Inside the pillar of strategic management and entrepreneurship we find 5 streams which feed the perception of it which include strategic adaptation, complexity, strategic entrepreneurship, corporate entrepreneurship, and collaborative entrepreneurship. These streams complement each other by presenting the different but relevant corners of strategic management and entrepreneurship.

Strategic adaptation rises from the presence of environmental shock. An environmental sock can be defined as a disrupting and unsuspected alteration in the external environment of a firm (Meyer, Brooks, & Goes, 1990) and they can be mild or severe. The environmental shocks affect particular organizations or even complete industrial segments by the barriers shifting in them (Sheppard & Chawdhury, 2005; Chakrabarti, 2015). In competitive and changing environments, there is often a pace of technological change and a highly fragmented consumer demand which will provide the space to look at unmet customer needs and neglected technological possibilities waiting for someone to seize them. (Leiblein, 2007). Strategic adaptation regards the organizational adaptation process, future proposals of organizational design and what should be the arrangement at digital organizations.

Miles and Snow (1978) presented a framework aiming to analyze organizations as an integrated and dynamic whole by taking in account the

interrelationships between an organization strategy, process, and structure. The framework consists of the adaptive cycle, also known as adaptive process, as well as the definition of a Strategic Typology (ibid, p.548). It is mentioned later by Snow and Miles with other authors that traditional organizational designs will not be able to effectively respond to the changes and challenges in the 21st century. (Miles, Snow, Fjelstad, Miles, & Lettl, 2010). The new organizational designs demand collaborative capabilities and values, facilitating infrastructures and resource commons, open resources for public access. Collaboration being motivating by nature and the process of it enjoyable and productive for different parties. (ibid, p. 101) Lastly, it was stated that digital organizations are growing in numbers and complexity and these organizations should be collaborative, agile and possess minimal hierarchy. These skills must be held at organizations since digitization has an accelerating pace, companies need to be synchronized to the speed of digital clocks and work collaboratively (Snow, Fjelstad, & Langer, 2017).

Strategic entrepreneurship as a stream is important by suggesting that new ventures and established firms need to be simultaneously entrepreneurial and strategic (Hitt, Ireland, Camp & Sexton, 2001) and that it is a way to obtain competitive advantage. (Ireland, Hitt & Sirmon, 2003). Within strategic entrepreneurship we see what business models which describes the mechanism and design of value creation, delivery and capture (Teece, 2010) which need to be adjusted or changed accordingly with the changes in technology and new market opportunities. (Hacklin, Björkdahl & Wallin, 2018). It was also perceived that large firms are strongly suggested to continuously reinvent themselves and create new product, services, and business models in order to achieve sustainable competitiveness and long term growth. This new business models would change the existing rules and take over conventional products and services resulting in major metamorphosis in the corporate strategy of corporates. (Kodama, 2017). In this case it is both Fintech companies and traditional banks which are looking into the redesign and creation of relevant business models. In order to develop themselves most organizations are required to innovate themselves or their processes which is precisely what companies need in order to remain relevant and effectively challenge the global markets in the 21st century. (Kuratko, Hornsby & Covin, 2014).

Corporate entrepreneurship is a different stream defined as a process that often simplifies a firm's efforts to constantly innovate and handle effectively environmental changes and rival companies (Kuratko, Hornsby & Covin, 2014). In their aim to achieve corporate entrepreneurship companies are urged to take a look both inwards and outwards for innovation. (Chesbrough & Kardon, 2006)

through an intelligent use of their learning capabilities (Lin, McDonough, Lin & Lin, 2013). Learning capability refers to the combination of activities that encourage inter-organizational learning among workers and partnerships with other parties. Two relevant concepts were identified within corporate entrepreneurship and thes are open innovation and design thinking as methodologies. Open Innovation encourages companies to use external ideas and routes to market as well as taking a deep dive into the internal ideas of the company for value creation. (Chesbrough & Kardon, 2006). Design thinking is known as an approach to innovation founded on the way of thinking and working from designers with a user-centered mindset. (Brown, 2008) It is often portrayed as a creative and emotional alternative to the analytical logic inherent to several large organizations. It can also be seen both as a creative and analytical mode of thinking and problem solving (Carlgren, Rauth, & Elmquist, 2016).

Finally, the stream of collaborative entrepreneurship was introduced. It is relevant because Collaboration is essential to absorb and develop competences held by others in order to improve an organizations innovative potential and knowledge. In fact, both cooperation and collaboration are critical for new ways of entrepreneurship and innovation. (Franco & Haase, 2013). It was also mentioned that collaborative entrepreneurship can allow firms to reduce the existing gap between the level of innovation that they need and they one they currently hold (Ketchen, Ireland & Snow, 2007).

3 DATA AND RESEARCH METHOD

This section carefully explains the systematic approach used for data collection and analysis. It introduces how the design and execution of the study were carried as well as the techniques used to explain the induction of concepts, themes, and dimensions. The main method applied for the research was the Grounded Theory method. Grounded theory is a research approach in which data collection and analysis take place simultaneously. Each part informs the other, in order to construct theories of the studied phenomenon. Grounded Theory provides demanding but flexible guidelines that start with openly exploring and analyzing inductive data and takes researchers to developing a theory grounded in data, meaning a theory emerges from the data. (Thornberg & Charmaz, 2013). The purpose of this study is go gain a comprehensive understanding on how companies within a slow and reluctant to change industry such as the Financial Services are responding to the emergence of Fintech companies and an environmental shock.

3.1 Data and Sample

A time range between 2012 to 2018 was decided to collect events in order to gather a significant amount of information after. This events regard the initiatives and collaborative activities undertaken by banks related to Fintech companies and solutions, being more customer focused and different innovation related activities for example. The financial Stability Board (FSB) Developed a method to identify a set of Global Systemically Important Banks (G-SIBs) in 2009. This set of G-SIBs originated as a controlling answer to the clear vulnerability of the banking sector after the financial crisis in the years 2007 and 2008. The G-SIBs list includes banks around the world but for this study only the European banks were taken into account. The banks included in this study are mentioned in Table 1 as well as the number of articles having content related to initiatives from each bank.

Modest data was gathered through electronic representations belonging to each banks collaborative activities and initiatives. These representations belong to the following categories:

(I) Bank published material including: annual reports, press releases and corporate news.

(II) Internal and Outsiders contextual material including: reportages, interviews, publications in finance blogs and social media.

#	Name of the Organization	Bank Head Quarters (HQ)	# of Relevant Articles
1	BNP Paribas	France	32
2	Groupe Crédit Agricole	France	24
3	Groupe BPCE	France	20
4	Société Générale	France	29
5	Commerzbank	Germany	29
6	Deutsche Bank	Germany	25
7	Unicredit Group	Italy	11
8	ING Bank	Netherlands	34
9	Bilbao Vizcaya Argentaria (BBVA)	Spain	22
10	Santander	Spain	23
11	Nordea	Sweden/Finland	28
12	Credit Suisse	Switzerland	27
13	UBS	Switzerland	12
14	Royal Bank of Scotland (RBS)	United Kingdom	13
15	Barclays	United Kingdom	40
16	HSBC	United Kingdom	23
17	Lloyds Banking Group	United Kingdom	12
18	Standard Chartered	United Kingdom	18
	Total Sum of Articles		**423**

Table 1. European G-SIBs and documents published between 2012 – 2018

The main data collection method was through documents being mainly press releases. Other methods such as qualitative interviews, informal conversations and questionnaires (Thornberg & Charmaz, 2013) were considered but would not provide enough information since a wide range of companies was selected for this study. The data collection combined with analysis and reflection aggregated new data to fully understand new terminologies or actions taken by each bank individually or in collaboration with others. This process is known as theoretical sampling, which has often remarked Grounded Theory as an analytic approach. Theoretical sampling refers to the process of data collection for

generating a theory, keeping the researchers focused and avoiding they become overwhelmed while checking and refining their constructed categories, themes and codes (ibid p.5)

The collection of articles began by browsing through press releases from the different banks and complementing some of the information found in them by articles published by financial sector media companies such as Finextra.com. The external articles would provide sometimes deeper details on specific news or follow up articles that would enhance the interpretation of events. Some of the keywords used in order to filter out the relevant articles where innovation, collaboration, investment fund, Fintech, new, launch, strategic, and partnership. Besides this conventional and traditional banking or new banking related words a set of words regarding technology development were used as search criteria such as digital, mobile, e-commerce, cybersecurity, robo and blockchain were included. Finally, a set of entrepreneurship related words were also used such as SME, startup, customer validation, accelerator, hackathon. The process of collection was quite extensive since most of the articles' headings were self-explanatory or included some of this key words but in some cases it was required to read the article in order to decide if the information was relevant or not. Most articles included between 300 to 500 words, however some included less text but a video or a more extensive press release or lander page explaining several components of the same initiative.

Some excluded documents during the data collection were taken away when they would report barely small updates on a bigger initiative by certain banks. For example, if a bank had held 9 hackathons only the first article and the last one would be relevant to gather information regarding the dates and frequency of new initiatives or developments aligned to a certain project. Complementary supporting material included videos and lander pages of different banks projects, pilots, and initiatives in which better insights and understanding were gathered. However, the majority of relevant collected data lied within the press releases.

3.2 Method of Analysis

Following the steps of Corley & Gioia (2004), data was gathered and simultaneously analysed. The analysis commenced by identifying the initial concepts in the data and later building categories from them. This process is known

as coding. (Thornberg & Charmaz, 2013) Coding regards putting a label and name in segments of data, which at the same time categorized and summarized each incident or event in this study. By effectively coding, interaction with the data was achieved by posing several questions along the data collection. Initial codes defined what was out there and created the base to look into each event to notice if new actions were identified or if different actors just took similar steps. This was done in a simple and direct way but with meticulous attention to keep the codes being as descriptive as possible with the least words. (ibid, 6)

Coding was not a linear process but a back-and-forth progression of steps. Codes had to be identified after each observation and at the same time observations would be coded independent from one another. There was more initial coding at the beginning and later codes were merged, or tweaked so that a more robust data structure would be produced (ibid, p. 6) Initial coding and recurrent comparative actions lead to sort and cluster the first created codes. By doing this, revised codes were taken away and some new constructions were elaborated by looking out for duplicates, codes that required better explanation or the aggregation of codes to events that demanded a better description. (ibid, p.7)

The data structure allowed data configuration into a visual aid that provides an explicit representation of how terms once found as raw data then change to give themes from which we can conduct an analysis. Prior and during the building of the data structured different literature was included. Knowing all the literature in great detail too early would have led to a confirmation bias (Gioia, Corley & Hamilton, 2012) even if there was no hypothesis for this study. For this reason, while collecting data and creating the data structure new concepts were included to the study or given a more in depth attention in the theoretical framework section. While dealing with the data different researchers had different perceptions of what certain words or codes mean, for this reason terms such as innovation, technology, entrepreneurship and customer orientation did not have a single definition both in the theoretical framework nor in the bank activities. Different interpretations were settled to better define rules on how different events would be coded. (ibid, p.22)

Nevertheless, the data structure provided only a static picture of the phenomenon and it was matched with the research questions so that the results would be more concrete. In order to give it more dynamism and build an appropriate grounded model, it was required to demonstrate the interconnectivity in the data structure through the discussion by commenting on individual actions and often mentioning how single events could have a place to answer different research questions.

While most of the data was found in English, certain banks published in Spanish and French so translation was required to interpret some activities but this did not present major challenges.

3.3 Ensuring Quality of the Research Method

A major issue in Grounded Theory research is when to stop collecting and analyzing data. When theoretical saturation has been reached then no more theoretical insights are generated. For this, along the research it was required to reflect on the possible gaps between categories, missing data, coherency of data, and the understanding of vague definitions. (Thornberg & Charmaz, 2013) Based on the Glaser's four criteria for Grounded Theory studies, the quality of this research was evaluated. These criteria include the applicability and usefulness of the findings, the interpretation of concepts and themes, the context in which concepts are found allowing the reader to understand them, and offering a creative contribution by showing the relationships between different results. (ibid, p.20)

4 RESEARCH FINDINGS

The research findings chapter involves several subchapters related to the research questions. The main research question was: "How are European global banks responding to the emergence of Fintech companies?". In order to answer this question, many others were considered individually and in this chapter they are evaluated in the as follows:

1. "What concrete actions towards innovation are banks taking?",
2. "Which methodologies for innovation and collaboration are being used?"
3. "Who are they innovating and collaborating with?"

4.1 Concrete actions towards innovation

In this section it is firstly introduced the approaches from banks in response to the rise of Fintech companies. In the field of open innovation, banks have developed projects such as hackathons, accelerators, competitions and challenges. Later the changes inside the different organizations are presented and finally the approaches and advancements that have been reached through dialogue promotion and use of the banks network of partners and stakeholders.

New Services and Bank Initiatives

Most of the banks in this study took a particular approach to digital solutions and innovations. Bringing both mobile applications and internet banking, all banks now have both a physical and digital channel through which they can attend their clients. Some worth to mention digital banks were acquired by European Global banks or are partly financed by them Atom Bank is established in the UK and supported by Santander. Fidor bank, a German digital bank was acquired by the French Groupe BPCE in 2016 and in 2018 Nordea acquired Gjensidige Bank. Another major digital initiative has been the release of developer portals. These developer portals mainly address the possibility that software developers and Fintech companies have the opportunity to test different approaches and solutions they could bring to their bank customers by using the APIs and bundling solutions that were not originally designed by the banks.

Approaches to Open Innovation with externals

Some of the banks have inclined to organize accelerators tailored for Fintech companies, app developers and entrepreneurs. This has been by far the most used approach by banks in the recent years when engaging with externals.

BBVA has been organizing accelerators since 2009 as a part of their unit BBVA Open Talent. This accelerator has been focused on cloud solutions, digital business models and payment methods. However, one of the first banks to host an accelerator with a Fintech orientation was the Royal Bank of Scotland (RBS) in 2012. They have aimed to provide coaching to individuals, an adequate environment for entrepreneurship while giving access to their facilities across the United Kingdom and also giving access to the bank broad network of investors and experts. Within its accelerator concept, RBS proposes two separate tracks for interested parties. One with an agile and more intense orientation seen as a "Pre-accelerator" lasting 8 weeks and the more traditional version of an Accelerator lasting 6 months of services and support for start-ups.

Lloyds Banking Group (LBG) in 2014 took a different approach by not having its own accelerator but sponsoring an accelerator initiative with the Dutch bank Rabobank. Their joint accelerator had a shorter time of support for start-ups being 3 months instead of half a year and mentioned a particular support for its participants regarding legal advice and public relations. During the same year Barclays participated in a partnership with an existing accelerator to give life to its different projects while introducing a 13-week accelerator and engaging in collaboration with further participants at the end of the programme.

During 2015, ING and Nordea jumped into the pool of leveraging the potential of accelerators to explore different business models and ways to add value to their customers. While both banks ran programmes focused to start-ups or teams with only ideas in mind UBS directed a partnered accelerator with an innovation consulting company directed to start-ups and SMEs with a turnover of less than 20m$ per year and ran the first global accelerator since evaluations took place in London, New York, Hong Kong and Zürich, all financial hubs in their respective regions.

2016 was the year that saw the most accelerators. BNP Paribas had an accelerator oriented to Fintech innovation running for 4 months. In the meantime, Credit Suisse and UBS, the major Swiss banks, engaged in a partnership with

Ernst & Young, a consulting company, to explore what the Swiss environment had to offer. HSBC partnered with the previously established accelerator of Barclays. This same year, Deutsche Bank partnered with the Silicon Valley/Frankfurt based company Plug and Play to tap into developments within financial technology and accelerate the banks digital transformation while focusing primarily in digital business models. Belgium, instead of the Netherlands, was the place for ING bank to launch its accelerator and innovation hub named Fintech Village.

The year 2017 a slight twist and international tweak was seen at accelerators developed by major banks. BNP Paribas enhancing relationships with Silicon Valley companies through its accelerator now focused both in Fintech Innovation and Insurtech, Deutsche Bank organizing a Blockchain oriented accelerator, HSBC launching a joint accelerator with several other companies in the Middle East, in Dubai specifically.

On the most up to date year of this study regarding accelerators, during 2018 RBS replicated after 5 successful years some new accelerators based outside of London in Manchester, Bristol and Edinburgh. During this year both HSBC and Société Générale launched accelerators in India to have a closer approach to the Indian start-up scene while Crédit Agricole launched an accelerator outside of France in Dublin, Ireland through its previously created innovation lab network named Le Village, spanning up to this year around 25 locations across the globe

The second most executed punctual activity from global banks has been the organization of hackathons. A hackathon is a competition in which programmers, designers, or business oriented individuals engage in ideation and problem solving proposals within a specific industry or problem usually in a limited amount of days.

Société Générale was one of the first banks to start looking for new solutions through collaboration with students, entrepreneurs and technology lovers back in 2014. Since then they have arranged also internal hackathons to explore ideas coming from the employees of the bank and have in the course of 4 years ran 16 different hackathons around the globe. Société Générale is by far the European bank executing the most hackathons, both in its home country France but also in Africa and the Asia-Pacific region. Other variances no others have tapped into are the myriad possibilities of innovation within the informal economies and solutions directed to the unbanked, people currently not having a bank account

or not being able to access a traditional bank account with the existing regulatory or physical constraints. Other French giants such as Crédit Agricole, Groupe BPCE and BNP Paribas have executed hackathons oriented to financial technology applications. ING has run their own version of a social oriented hackathon using the potential of Fintech solutions and Deutsche Bank has taken a look at what hackathons can do within the Blockchain applications.

Barclays, Lloyds, and RBS have as well had their own versions of hackathons for digital solutions primarily focusing in the United Kingdom. However, Barclays took a worth to mention step by hosting a cross continent hackathon uniting forces from people in India and the United Kingdom in 2016 in order to propose solutions that would enter into the financial landscape after the introduction of the Directive on Payment Services Directive (PSD2) which came in effect at the beginning of 2018. The Head of Group Innovation at Barclays mentioned the following when explaining what hackathons represent for Barclays:

> "Hackathons allow Barclays to dynamically collaborate with some of the brightest minds in the global FinTech start-up communities around the world. It's about our staff co-creating solutions with external teams; coming together for 36 hours to work on specific customer and business solutions - an intense burst of idea storming and experimental hacks to build innovative prototypes and minimum viable products or features for customers. Rapid collaboration through hacks helps fuel and accelerate innovation to benefit customers and clients across the globe."
>
> – Michael Harte (Barclays Group Head of Innovation, 2016)

Online challenges have been a less popular approach in the recent years but Groupe BPCE has organized such event twice, once as a main organizer and later being a member of the Global Fintech Challenge in 2017 announcing it would collaborate with the victors with advice on how to scale their solutions and integrate them with the current operations of the bank.

While Hackathons and Accelerators have a more narrowed down focus, banks have released a variation of them in which a broader spectrum of solutions can be evaluated and the bank only gets to see the final pitches. This challenges often include an application phase to submit ideas, and end in a demo day in which pitches are smoothed to be fully delivered to the industry experts. UBS was the first bank organizing a challenge within the frames of Cybersecurity, Customer Experience, Fintech Product development and Efficiency back in 2015. The same year Santander organized a challenge oriented to Blockchain applications. The biggest competition to 2018 has been organized by BBVA both in 2017

and 2018. The BBVA Open Talent Competition had a focus on ideation with three tracks named Finance for People, Finance for Business, and Finance for Future. Here they took participants from over 77 countries with ideas that were later fast tracked to a proof of concept stage in order to be properly presented to the board of judges. An interesting component from the second edition of this competition was that several actors of the Fintech start-up ecosystem were invited to evaluate ideas and give feedback on the spot to understand the possibility to execute certain projects.

As previously mentioned, competitions had a bit broader scope but one competition did not look to identify innovative ideas and promising start-ups. In 2017 Barclays launched the face-to-face Cyber Security Challenge UK. In this competition the goal of the bank was to identify the hidden talent of different individuals to see if they what it takes to be the new hackers to defend a cybernetic castle. Here participants were given the task to defend a fictional bank from a cyber-attack while industry experts evaluated their attack strategies, espionages skills and vulnerability assessment capacity. The goal of this competition was to spot valuable talent that would be worth to on-board through a recruitment process.

The last segment of concrete events organized by banks are the incubators. Incubators offer the access to facilities unlike Accelerators and often involve seed funding for the participants. Commerzbank was the first player to has a Fintech oriented incubator in continental Europe in 2014 and besides them only French players opted to have Incubators. Groupe BPCE and BNP Paribas efforts were also oriented to Fintech opportunities evaluation. The main difference is that they executed the incubators alone and in a partnership respectively.

One bank however has taken the initiative to combines an accelerator, multiple programmes for open innovation, workshops, hackathons and networking on a regular basis. Barclays has opened Europe's largest co-working space dedicated to FinTech. Baptised as Rise, it brings to the world a very selected community of FinTech start-ups as well as their corporate clients and some industry experts. They aim co-create with several start-ups partners new platforms, products and services. The biggest asset of this initiatives is that the bank is allowed to facilitate the engagement of Barclays with the FinTech community, and create valuable relationships while developing new models and financial solutions.

Approaches to Open Innovation inside the Organization

Some banks have realized that even if there is change and innovation happening outside their organizations, this does not necessarily mean that they can assimilate this change and directly inject it into their existing solutions and processes. For this reason, several banks have taken initiatives coming from within regarding learning, knowledge sharing, training, and understanding of innovation and future trends that challenge their firms. This first part regards the activities organized and the second one presents the venues banks have devoted as part of their innovation attempts to fight change.

Most, if all not global European banks, have created some sort of separate unit in their organizational structure. Some of this units help assimilate external knowledge on new solutions and technologies. One of the first movers for this was BBVA establishing its Open Talent initiative in 2009 in order to promote entrepreneurship in technology companies and innovative projects while exposing its employees to learn from externals. In 2016 both Nordea and Lloyds launched units focused on digital opportunities and analytics. BNP Paribas on 2017 later launched a unit named We Are Innovation (WAI) in order to support entrepreneurship and start-ups in which employees have the responsibility of advising and offering daily expertise to managers and creators of new businesses. Another example of a separate unit is from Barclays introducing in 2018 Barclays UK Ventures (BUKV) in which two objectives are decided. BUKV aims to accelerate the growth of new business lines within the bank while working independently from other traditional units and develop new customer propositions around areas such as disruptive technologies.

Units can be hard to manage since they are a new block being inserted inside or next to the organizational structure of firms. For this reason, some other banks have orchestrated independent events in order to find the innovation potential hidden in their employees. One example of this is Société Générale organizing a reunion between employees and FinTech start-ups in France to expose some people to the new from externals in 2014 and later in 2017 Société Générale arranged an event named "Internal Start-up Call". During the Internal Start-up Call, intrapreneurs from inside the bank were invited to a challenge in which enough resources would be delivered so that interested employees would invent a new disruptive activity that offers potential for the group. The orientation of this event was to cover subjects such as a digital workplace, payments, banking platforms and data. Concepts were submitted for later evaluation from the Management Committee and members from the winning ideas would see their proposals being accelerated with internal support of the bank. Another event has been running in ING since 2014 named Innovation Bootcamp. Similar to the Start-

up Call from Société Générale, ING wanted its employees around the world to come up with new ideas which would empower customers. More than one thousand ideas were submitted and only 30 were taken into a coaching and advising phase. As a small twist, in 2016 the board for judging the projects was a board of children from middle school which would ask questions that really put the idea developers at test since ideas should be easy to communicate. If a kid understands, everyone else most likely will too.

However, while the last activities were oriented to develop products and solutions for customers, other players have gone a bit on the side to the traditional way of working. Crédit Agricole in 2017 held a competition and call of ideas in which employees would participate to develop something for their fellow colleagues. An example of the winning projects was a portal within the company CRM software that allows employees to visualize relevant information about their clients and tips on how to attend them better. Other activities have been slightly more defensive such as BBVA creating a Global Patent Office to protect its intellectual property in the fields of biometrics and artificial intelligence.

Regarding the venues banks have devoted or created in their attempts to innovate to fight back change the main ones are new or renewed branches to attend clients, innovation labs, hubs, campuses, offices and other facilities.

Since customer experience is a key element people in a fast paced world are now demanding some banks have taken the initiative to innovate their approach to traditional branches. Italian bank Unicredit in 2014 opened a "Branch of the future" in Sofia Business Park, in Bulgaria. Special attention was put in the Customer Journey and how they experience a branch from being outside, making consultations and departure. Proper illumination and a large transparent façade grabs customer's attention. The orientation inside the branch is also easy and clients have access to a self-service option in which they are directed to the exact place where they will get their questions answered. Waiting is made a more amiable experience with sofas and access to vending machines and Wi-Fi. Video consultations are possible with clerks as well as meeting points for customers to have meetings. Finally, the checkout is made with an immediate feedback on what the experience was like. Later, in 2016 Commerzbank launched a "city branch" in Frankfurt with more wide and open spaces that inspire trust and a year later ING developed the concept of a branch that feels like home in which people have an apparently friendlier experience.

Existing branches renovation and opening are not the only approach taken since RBS created its own version of a Branch on Wheels which consists of a van that can visit clients in remote locations that have mobility limitations and Barclays staff with tablets can now set up a Barclays branch anywhere in the UK that has internet connection with full capacity of managing orders and requests as any traditional branch. Lloyds in the United Kingdom has launched micro branches, meaning that clerks now provide services using tablets in a reduced version of existing branches. Nevertheless, even if Lloyds took an approach to reducing the size of its branches in different locations in year 2018 the group built a mega branch in Central London where the manager remarks the following:

> "Banking is often quick and transactional but we know that some financial decisions need more thought and that's why branches remain vitally important. Support and guidance from our colleagues is still key for the big or unexpected moments in our customers' lives […]"– Russel Galley

The last branch tweak from Barclays is devoting a certain space of some branches as a Digital Education Academy. They are using the under-utilized spaces in their branches to help boost the UK's digital and maker skills. They have services open to customers and non-customers such as access to 3D printers, space available for community events and team building, and provide trainings in subjects such as cyber fraud and coding.

Offices have been also renewed or created to meet the fast pace and agile way of working at banks. Many banks have adopted an open office orientation and some have taken greater approaches. Deutsche Bank, HSBC, and ING all in 2017 opened new offices not for their headquarters or in their home countries, showing how committed they are to enable an adequate workplace for collaborators. Other offices with some changes are the facilities oriented to hosting startups, such as Le Plateau by Société Générale having 1000m^2 for startups to work, and innovation from employees and externals, such as the Deutsche Bank Digital Factory and the different. On the other hand, some office spaces have been dedicated to give support and advice for entrepreneurs and SMEs; an initiative by Groupe BPCE. With this approach, Groupe BPCE aims to be closer to the regional ecosystems for entrepreneurship and innovation.

Campus and Innovation hubs are another approach from banks towards entrepreneurship enabling and hosting innovation with externals. Campus regard the integration of an agglomeration of different parties. ING defined theirs as "an urban hub where businesses, academics and innovators from all sectors

can work together in an open and dynamic environment that stimulates creativity and boosts innovation." The ING campus aims to bring together every element of the innovation cycle together in one place therefore creating an ecosystem. The campus includes the bank's headquarters and a place where multiple partners can collaborate on new ideas and incubate them. The Royal Bank of Scotland has created a smaller version in the center of London following its recent years engaging with entrepreneurs and startups on advice and financing. Innovation hubs are smaller scale since their sole purpose is to host entrepreneurship for startups and corporate clients. There is no single definition of a Hub for Innovation but at least in what has been done by Crédit Agricole and BNP Paribas these initiatives have been tailored for general entrepreneurship and ideation or strictly in to being a Fintech oriented space for coming up with ways to add new value.

There is a last approach from banks to Open Innovation inside their organizations that combines the arrangement of activities and venues banks devote in their innovation attempts. This approach is Innovation Labs. They are often a way in which banks can evaluate solutions and certain technologies in-house for the better integration of scalable solutions into their existing or new services. Innovation labs provide an opportunity to have a detached structure that works independently to the organization so that it works faster, with less bureaucracy and can easily collaborate with different departments of the banks. Innovation Labs can be seen as similar to the previously mentioned Independent Units, the difference is that Innovation labs often have a specific location and several can exist simultaneously without interrupting each other's work. Independent units are more broad addressing subjects for the whole bank.

Deutsche Bank since 2015 holds Innovation labs in Silicon Valley, London and Berlin. Each lab being independent from the other and they partnered with different technology companies for each. Known as Deutsche Bank Labs, they help the organization to introduce new technologies from these three centers to enrich their processes, services and products. A later plus is deepening relationships with technology start-ups. RBS on the other hand, holds only one Innovation lab baes Open Experience center in Edinburgh to pursue innovative new technologies for the organization and its customers.

Standard Chartered in 2016 established an Innovation Lab in Singapore named eXcellerator. They have worked closely with different units within the bank to explore possibilities to create sustainable business solutions through the use of data science and emerging technologies. Since FinTech have created

greater opportunities for banks to improve their risk mitigation, deployment of technology, customer experience and cost reduction the eXcellerator aids in the implementation of digital solutions for new generations.

Société Générale has been by far the strongest player squeezing the potential of Innovation Labs. They mention that Open Innovation is at the core of their transformation strategy and that encouraging collaboration on ideas in order to create new projects for customers is their goal. They currently hold Innovation Labs in Germany, Senegal, Czech Republic, Tunisia, India, the Netherlands and France. Through a network of labs, they can reinforce contact and investments made in the digital ecosystem and improve the qualifications of FinTechs and other start-ups to meet the requirements of their existing business solutions.

Besides of more general Innovation Labs, some other banks have taken more niche segments for their learnings. UBS has opted for an Advisory Lab for their Wealth Management unit. This involves the expansion of digital capabilities and explore the further use of rob advisors. Nordea believes that artificial intelligence is the group of technologies that are going to market very fast after development. For this reason, they have launched a Data Science Lab that takes a look into artificial intelligence methods and machine learning to tailor new solutions. The third bank takin an individual Innovation lab is Lloyds Banking Group. The Insurtech lab launched in May of 2018 provides participants a mentorship program and guidance as well as the possibility to integrate technologies of new models into the banks products.

Approaches to Knowledge Sharing through Dialogue and Networks

Commerzbank in 2014 was the pioneer of dialogues and knowledge sharing prior to launch Main Incubator. Some of the key activities held by Main Incubator have been 10 events per year, several pitching sessions and prominent speakers as well as the network of participants. They have been hosting meetings for players in the tech ecosystems of Frankfurt gathering bankers, investors, startups, IT professionals and media representatives during an apéro. Speakers in latest trends, startups bitching and the chance for participants to talk about possible cooperation and financing options are some of the main aspects of the dialogues hosted by Commerzbank. While limited to the Frankfurt premises, the network they have been building is expanded to the entire German-speaking region.

Conferences either organized, sponsored or with the banks as participant are also a common thing. Santander held a major conference with around 10,000

SMEs in the Spanish region to explore further opportunities for development and financing while presenting their entrepreneurs oriented products. Crédit Agricole has had a sweet spot for young entrepreneurs giving them the chance to pitch through videos several business ideas to top executives. While some of this conferences have revolved around entrepreneurship enabling, others have been Fintech oriented like the ones held by ING in which a cluster of FinTech start-ups was created with the aim to find ways through greater collaboration between participants to overcome the obstacles that constraint entrepreneurship and innovation in the financial industry of the Netherlands. Deutsche Bank is not left behind, while not organizing any events by themselves, they have been participating in the Startupnight event in Berlin, one of the biggest entrepreneurship events in Germany.

Expositions of different natures have been developed not only in Europe. Deutsch Bank for example gathered in 2016 the tech elite from the United States in Las Vegas. This two-day conference gathers a great amount of technology investors to discuss technological developments, business operation updates and hip product trends between the private and public sector. Credit Suisse held the Asia Entrepreneurs forum in Jakarta back in 2017 bringing together leaders of business communities of Indonesia and Southeast Asia as well as capital market experts to network and discuss the impact of digital disruption in the region. Being a native Swiss bank, it is still considered the bank for entrepreneurship in the region due to its close relationship with local entrepreneurs, reason why they held this conference.

A major exhibition is named Wave Expo by BNP Paribas. It spanned, 2 years in 8 countries and 14 cities placing the banks role in the new economy. This exhibition was a collaborative project designed by L'Atelier of BNP, the Group's scout and experimentation unit focused on new practices and technologies. The exhibition includes short films and both Fintech and social oriented companies that have a major impact around the world. The major themes for this exhibition were how five forces are blending together in a new world, this forces being co-creation, the sharing economy, the circular economy, the inclusive economy, and the movement of makers and creators.

A rise in the existence of communities is evident. Several actors have been making sure of their existence and regulations on how different individuals might interact with each other but nothing is really strict. European Banks have been both engaging in existing communities or establishing them with several players. ING for example since 2015 has been running a community with all the

Fintech startups they have engaged with so that they can share information with them but enable them to also collaborate between them if so they want. The Groupe BPCE since 2017 took an approach to create a community of startups founded in Open Data. This community and initiative involves the simplification of the already existing 500 relationships of the bank with star-up companies and how they can collaborate with different units of the bank and interact with one another. With this approach, developers and start-ups get to see a new side of the banks which enables entrepreneurship in more fast-paced manner.

Furthermore, some communities have been created by Nordea and Barclays either in their home countries or abroad. Nordea teamed up with the Stockholm Fintech hub, an external incubator, and others in the other Nordic capitals. Through this, they have an easier access to connect with Fintech players, startups, and regulators. This community includes banks employees as well as technology partners IBM and Microsoft which could all bring value to the members in hopes to understand more complex business processes and technologies. Barclays on the other hand did not collaborate with anyone but built the communities by itself. The Rise initiative has built a community of worlds thinkers and doers including industry leaders and rising startups in order to work together and share information to create the future of financial services. Currently present in 7 countries, these communities help others create and grow while providing a supporting network focused primarily on FinTech.

Last examples of knowledge sharing success have been achieved by the summits, dialogue with SMEs and employee oriented initiatives. Deutsche Bank Wealth Management unit for example launched an innovation summit in Silicon Valley for entrepreneurs and investors to provide them the possibility to discuss new opportunities and network. Crédit Agricole once held speed dating meetings with smaller businesses so that they could present their solutions to the bank for future collaboration but also to better understand the services of the bank. This was a simple yet revealing opportunity for the bank to be more focused in their customers and understand which new solutions they might currently need. Some of the employee oriented initiatives include the Techweek at Société Générale and the Innovation Week at Nordea. Tech week has been organized by several years oriented to the employees learning on technology and current solutions in the market was well as the understanding of the bank strategy. This annual event includes workshops, stands, conferences from external partners so that employees are up to date and on the same page. This is held only at the French headquarters and innovation offices. Innovation Week at Nordea is a smaller scale event including speakers from external companies and internal

innovation experts giving workshops and keynotes speeches. The main topics have been regarding Cash Management, this being financial technology solutions for corporate clients.

Approaches to Knowledge Gaining through Financing and Acquisitions

In some cases, banks can only have access to the new knowledge through particular acquisitions or the investment and financing of certain projects and companies that are venturing in unexplored areas for the banks but would give results in the near or medium future. For this reason, banks tap into existing knowledge owned by others or the possibility to gain knowledge from players that are currently experimenting. In the following section the European Global banks he most prominent investments, seed funding and venture funds will be explained.

Several banks have established corporate venture capital units and funds. These entities tend to focus on potential players with a focus on financial services. They often investigate young companies with prior success which specialize on technologies, services, or products from which banks would like to learn more about or have access to the customer base this companies have generated. In order to get closer to the wave of disruptive innovation in the Fintech space, several banks promise business expertise and advice for companies to scale up their businesses while having gaining a shares at the companies. During 2014 Commerzbank and Santander launched CommerzVentures and Santander InnoVentures (10m$ fund) both with a similar focus. Unicredit released their own version in 2016 named UniCredit*evo* and ING launched ING Ventures with 300m$ budget. 2017 was the year for Nordea to launch its own version. ING Ventures is however mostly focused on the Fintech companies but it also intends to take a look into employees' ideas and companies that have gained traction already outside the financial services. The latest player to create their own version is Standard Chartered with SC Ventures. The only particular twist about their approach is that they will be divided in three departments. The catalysts include internal consultants that help the group transition and covers the eXellerator innovation lab, the investments branch will overlook the existing investments of the bank into technology companies up to the point of SC Ventures creation and will sponsor and scout through the Ventures branch the new disruptive technology ventures that could potentially increase the banks strengths in Fintech Solutions.

Without dedicating a unit for thorough exploration and screening of companies to invest in, other banks have just opened funds. Barclays created in 2015 their £100m fund directed to fast growing technology companies. Crédit Agricole's fund covers €100m oriented for Fintech and Foodtech, particularly Blockchain and payment methods. BNP Paribas launched a wholly independent fund, lmec.xpand, focusing on nanotechnology applications in healthcare, smart cities, logistics, mobility and energy. The Groupe BPCE fund from 2017 is determined to actively look for the technological leaders of tomorrow that will venture in artificial intelligence, machine learning, big data, Blockchain and cybersecurity since they can transform the financial industry on the long run. ING as previously mentioned has a corporate venture capital fund and unit but around €25m from it is directed to the internal initiatives from the group addressed as an Internal Innovation fund. Nevertheless, there are some still banks reluctant to create their own funds or units for scouting. However, Société Générale is a bank that even if not having their own fund or venturing unit actively invests in external funds that monitor the development of FinTech and other technologies. What Société Générale does is to outsource the responsibility of investments and scouting to a more expert institution in this field.

4.2 Methodologies for Innovation and Collaboration

In order to respond to the lack of innovation, banks have had to adopt methodologies that were not traditionally within the financial services industry. Some of this methodologies and terminology arises from the world of design and start-ups environment. Three of the main methodologies adopted partly or completely by banks and their different initiatives are the ones of Lean Startup, Design Thinking and Agile Scrum.

The Lean startup methodology primarily addressed by Eric Ries in his Lean Startup Book gives a scientific method on the creation and management of startups and get a product or service to market more efficiently. This method regards when should projects be pivoted in order to be successful and it is often used in for new product development. Banks, similar to some startups might take months and sometimes years developing a product without showing it to the end customers and getting a proper validation of it, a need or interest in the product is assumed instead of tested. The lean methodology is not about spending less resources such as time and money, but to use them in a smart way in which nothing is wasted more than it should and you can always change or tweak your

project if necessary without having to struggle with starting all over from scratch. Uncertainty is eliminated by failing fast and failing cheap, the faster companies know a project or product will not have a desired or positive outcome, the easier it is for them to run in a different direction.

Once organizations have a concrete idea of what they are building and which problematic they are addressing, the faster they can move into the next phases of product development. Further iterations allow products and services to be improved in the planning and design phase. Another relevant aspect of the Lean Startup Methodology is how feedback is processed and how much should the product creators get before building a minimum valuable product (MVP) after having an MVP startups and banks are able to measure results and start learning quick where to head next. The Lean Startup methodology requires constantly asking why to different parts of the products and problems that would be solved for the end users as well as the test of hypothesis in order to pivot. Finally, validated learning sits at the core of this methodology. This means that ideas, assumptions, and any knowledge gathered along the way should be analyzed and processed properly and taken seriously in order to shrink the time of product development.

Design thinking is the second presented methodology. It is often seen as a creative problem solving process and it was addressed by IDEO, an award-winning design firm helping corporate clients innovate and grow. This process is human-centered and gets its power from how designers integrate the possibilities of technology, the needs of people and requirements for a successful business. Design thinking is built so that people who are not trained as designers are able to use tools for creativity in order to confront several challenges. This methodology does transform the way in which slow organizations develop solutions and even their strategy.

The third methodology is the Agile methodology. It has been traditionally use for software development and is grounded on the principles of continuous improvement, adaptive planning, and early delivery of results. One if the problems it mainly addresses is people's ability to adapt to change diminishing not being great or diminishing through time. While the ultimate goal of this methodology is to create efficient value streams and a better interaction between the development and operation teams in a project it also is based on four principles for testers and product developers. Individuals and interactions are a top of mind, the focus on a working product rather than great documentation, actively responding to change and collaboration with customers are the principles.

While these methodologies are used for hosting innovation in start-up environments and software development banks have adopted them into their way of working and trained one or more units of employees around them. In workshops for employees and activities organized at accelerators or facilities dedicated for innovations these methodologies have been put to use on several occasions in the last years. ING has designed the PACE methodology on their approach to innovation mentioning that they address all three methodologies and intent to get the best out of combining all three. Another point on why would banks adopt these methodologies is the fact that many of the Fintech companies that are being acquired or financed already took this approach to innovation. If banks want to keep their new partners to keep giving innovative solutions and change fast, the methodologies they used from their upbringing should still be kept.

Barclays created a partnership with a renowned design school in London to promote better product development and customer centricity is an example of the adoption of external practices into financial institutions. BBVA is another player that has shouted to the world their commitment with design thinking and how they are using it to transform how people work inside their organization with several workshops and applying the methodology to different departments and processes of the bank with employees and often with external contributors.

4.3 Partners for Collaboration

Collaboration within Financial Services

Different banks have taken a different approach to innovation in the order or their steps, the relationships they build and the activities they organize. No bank has taken the exact same steps as other banks and one thing that is evident from their concrete actions is they several partnerships have been created. The partners that banks are choosing for collaboration include other banks and players within the financial services industry. A deeper explanation of certain partnerships is detailed in this section

Collaboration between banks has happened from a long time so that both or more parties could deliver solutions to their clients around the world. However, more recently banks have teamed up in hope to learn from each other and

tackle the rise of new technologies. Some examples of this are banks being part of the conferences and events brought up by the Fintech Innovation Lab London in which several banks outside the United Kingdom participated. Banks have united forces in order to explore opportunities for the Blockchain technologies in several occasions either running tests or investing and being associated to consortiums. Interbank collaboration has been present in Switzerland with UBS and Credit Suisse launching a joint accelerator for both banks. Sweden and Switzerland have seen the development of unified money transfer solutions like Swish and Twint in which banks had to collaborate but also compete with one another in order to deliver a solution that can be used by users that are not associated with any bank. Banks present in the Nordic region have also sought to collaborate in order to develop solutions into the Know Your Customer processes and share information on simplification of structures and methods. A combination of a bank and a bank's accelerator is HSBC partnering up with Barclays accelerator. In this case both banks bring either their expertise in running accelerators or financing for winning startups.

Payments are a major component of what banks have been investing their time and energy to collaborate with FinTech and other Financial services companies. BNP Paribas has for example partnered with Crédit Mutuel, Mastercard and retailers Carrefour and Total to offer payment solutions to individuals in order to improve customer relationships. Crédit Agricole has invested in Wirecard to provide digital payments solutions to individuals while Barclays and PayPal have announced a partnership between two financial giants, one traditional and one digital. Collaboration has also taken place in order to internationalize services of the bank or bring foreign payment methods to Europe. Société Générale has launched YUP, a payment and transferring solution in Western Africa for the unbanked in collaboration with local banks since every country has a different system while Santander has invested in a Mexican start-up named ePesos to address financial inclusion in one of Latin America's biggest economies. Integration from foreign companies has also occurred, Alipay has arrived to the Spanish market through a strategic partnership with BBVA in which BBVA could also get learnings from Asian customers in Asia.

Banks have also engaged in collaboration with Fintech companies focused on having banks as their main customers. HSBC has invested in a CRM to provide better communication for its employees within units and with customers. The Royal Bank of Scotland on the other hand has worked with FreeAgent, a cloud services provider for financial companies helping SMEs with their bookkeeping activities.

The rise of digital banks is no secret and what European Global banks have opted to do is to either launch their own versions of them or acquire them completely or partially. One major acquisition was done by Groupe BPCE in which Fidor Bank, a German digital bank. Other cases include Unicredit investing in Meniga, a digital banking technology vendor and Atom Bank from the UK being funded partially by BBVA, a Spanish giant. Nordea bank in 2018 acquired all the shares of Gjensidige Bank, a Norwegian player. This acquisition increases the presence of the Nordic bank in this country but mainly supplements the digital competencies of the purchaser

Collaborations within the financial services industry include the exploration of opportunities within Blockchain technologies being the R3 Consortium the biggest happening in which 14 of the 18 European Global banks of this study participated.

Collaboration outside the Financial Services

Many other partners have been regular contributors to the innovation process in banks. In the following section some of this partnerships will be explained in more detail. Partners engaging with banks for the development of products or knowledge sharing include education institutions, design agencies, consulting companies, technology companies, telecommunication companies, digital companies, marketing and fashion companies, innovation experts, governments, and municipalities to name a few.

Universities have also been important partners bringing the knowledge and spirit from students and academia to the service of financial innovation. Société Générale for example has partnered up with École 42 to run Hackathons for their employees using the university premises and their expertise in technology and design. Barclays has partnered up with Ravensbourne University of design have been collaborating in projects for employees to learn new methodologies and also get a team of external design consultants for the development of projects inside the bank. Nordea and Deutsche Bank have run innovation sprints with university students through short term trainee or project programs in which students and bank employees deliver solutions for corporate clients or make proposals for internal changes for the organization.

The establishment of innovation labs by banks is product of successful collaboration with external innovation agencies. The Fintech Innovation Lab has

been a major partner for banks present in the United Kingdom offering advice and access to their network of startups and Fintech companies. Société Générale has established relationships with five innovation labs in order to support different initiatives at the bank and both Nordea and Deutsche bank have decided to collaborate with innovation factories that provide procedures, methodologies and expertise from advisors for the arrangements of events for either startups or employees. Barclays accelerator was powered by Techstars, an innovation partner expert that puts their network of entrepreneurs, investors, mentors and alumni to spot new players that would partner up later with the bank.

Telecommunication companies have been present in collaborations as early as 2012. Barclays and Orange explored the possibility of combining payments through the use of Android phones covered by the Orange network. Santander, other smaller banks and Telefónica, the major Spanish telecom, decided to partner up in order to provide new digital solutions that could be tailored for their different user bases. Standard Chartered has explored the possibility of making online payments with a telecom operator in the Philippines offering services even to people that do not hold bank accounts. This last one is an example of a service in which had no party been involved, the possibility of deliver such a solution would be impossible since the experience from companies in both sectors is necessary.

Another big segment for innovation collaboration partners are the technology companies. This ranges from companies that are specialized in the use of one technology to more general ones that are world players in different areas. Microsoft, Google, IBM are some of this world players. Barclays and Google for work launched a joint project aiming to support the SMEs in the United Kingdom. Other banks have opted for partnerships with tech companies in order to help them into their digital transformation or to harness regulations. Société Générale chose to work with Microsoft while Lloyds partnered with SAP specifically for regulation matters. BBVA on the side has teamed up with Cisco for their digital journey. Groupe BPCE integrated the technology from Meniga with the desire to reinforce their digital channels and launch new personalized services.

Collaboration with technology companies has also been directed for specific projects or product development. Santander had an agreement with the Elavon company to explore new businesses within card payment services while Barclays and PayPal announced a partnership in order to seek for new opportunities within the lending services business. Lloyds has chosen Microsoft 10 while Nordea partnered with Veridium to explore the possibilities of biometrics and

how can they integrate these in their current services while BNP Paribas and BBVA took later steps also with biometrics companies. Nordea has also partnered with AI companies to boost their customer services capabilities and chose IBM as their collaborator to found a block-chain trade finance platform. Furthermore, Deutsche Bank has chosen to mix the partnerships they hold for the creation of innovation labs. Microsoft was their partner for the established innovation lab by the German bank in Berlin while HCL and IBM were the winners for collaboration in London and Silicon Valley respectively. Orienting solutions to help SMEs, Barclays partnered with Xero, a software company that has several processes automated so that entrepreneurs and business owners can keep their time in activities away from paperwork.

On a minor scale, collaboration with government institutions and municipalities has also been achieved. ING has had dialogues with the municipality of Amsterdam to build the ING Campus. Not only have they had to meet due to the construction licenses but also ING would like to integrate the municipality as a strategic partner of what comes up inside the campus and wants them to be part of this new project. Standard Chartered sought the support of the Money Authority of Singapore in order to create their eXellerator. Standard Chartered works with Money Authority of Singapore so that a Smart Financial Center can be developed and innovations that improve the welfare of people in Singapore and increase productivity are created.

Other relevant partnerships outside of the financial sector include social media companies and watch makers. Barclays has partnered with the watch maker brands Guess Watches, Mondaine, Timex, Kronaby, Suunto, ADEXE and LBS in order to provide wearable solutions for clients wanting to use the banks payment application without using their wallet or phone. Santander launched a bracelet tailored for children in collaboration with Mastercard while Nordea has partnered with Fitbit and Garmin to provide solutions within the smartwatches segment and combine them with payments. Standard Chartered partnered with WeChat so that they can deliver solutions to corporate clients. Barclays has engaged with Pingit so that payments through Twitter are enabled. BNP Paribas has been the bank with most partnerships in with social media companies. Through LinkedIn they will ensure a better corporate brand and an extension into their B2B operations online while an alliance with Twitter will give them access to use public data to tailor new solutions. Partnerships with Google and Facebook enable the opportunity to better understand what individuals look into through digital channels and also provides the opportunity for BNP Paribas to

learn about technologies and methodologies used by both companies for product development with a focus on user centricity and experience.

5 DISCUSSION

5.1 Data and Results Overview

The research findings chapter involves several subchapters related to the research questions. The main research question in the development of this thesis is: "How are European global banks responding to the emergence of Fintech companies?". In order to answer this question, many others should be considered and in this chapter they are evaluated in the as follows:

1. "What concrete actions towards innovation are banks taking?",
2. "Which methodologies for innovation and collaboration are being used?"
3. "Who are they innovating and collaborating with?"

European Global Banks are in the current need for organization renewal (Nag, Hambrick, & Chen, 2007) in order to adapt accordingly to the industry situation (Miles & Snow,1978). Through strategic management in the recent years, banks have taken a look into their internal and external environments and decided what needs to be changed and what prioritized in order to respond to a faster paced financial industry (Teece, 2007)

Major banks have strongly tried to reinvent themselves and create new business models in hope to achieve a long term growth through sustainable competitiveness (Kodame, 2017). Banks have approached this digital transformation of their products and services while other players in the financial sector have been changing the existing rules and simplifying existing solutions or delivering new ones. Continuous innovation is what start-ups have addressed better than banks in order to effectively challenge the global markets for the 21st century (Kuratko, Hornsby & Covin, 2014). However, through a spectrum of initiatives and adoption of methodologies, global banks have now taken a big step towards continuous innovation and how they integrate it as a mindset in the organizations.

A major focus of banks in the last years has been their approach into incremental innovations. (Garcia & Calantone, 2002) Banks concrete products and services have been improved through more up to date technologies. Banks have tweaked certain aspects of their existing solutions by taking an innovation lens approach when evaluating their current offerings. Also, banks have made sure not to interfere in the way that Fintech start-ups have been working but rather

bring them support, advice, networks, and financing. In this way, smaller players that banks have collaborated with can enhance their solutions and put them at the service of their own user bases or and the ones from the banks.

Banks in the recent years have been required to take measures of strategic adaptation in the presence of the environmental shock produced by the birth of Fintech companies and through this study it was found that even other companies have a major impact in the shifting of the industrial barriers for the financial sector (Meyer, Brooks, & Goes, 1990; Chakrabarti, 2015) The continuous changes caused by Fintech companies have brought challenges for traditional banks. This threatening changes are the result as mentioned by Vanhaverbeke, Van de Vrande and Chesbrough (2008) from new technologies and their potential applications combined with banks not being relevant in the development of business creation around technologies. However, this upheaval has brought the opportunity for banks to tap into a yet fragmented consumer demand that will be met through the appropriate use of technological initiatives and product development (Leiblein, 2007)

Global banks main way to fight back the change and successfully adapt to it is to develop a proper set of organization strategy, processes, and structure. Through the adaptive process (Miles & Snow, 1978) they are faced with primarily entrepreneurial problems since the major challenge is to concretely define solutions and how to approach different market segments. This problem has been primarily addressed by engaging in collaboration and innovation activities with other banks and their rival, now partners, Fintech companies. In several cases, banks have also addressed innovation by training their employees and engaging with other partners outside of the financial services industry. However, the administrative and engineering problems are not left behind for them since they have to actively seek to integrate new solutions into their existing structures and balance juggling both the old and the new.

As much as it was intended to provide a mapping of banks being identified as defenders, prospectors, analyzers or reactors (Miles & Snow, 1978) this was impossible since they operate in different segments of the financial industry and all have different countries to operate in and decide to give more importance to certain departments such as retail banking, corporate banking, investment banking or wealth management. Nevertheless, it is possible to say that some banks have been more active than others and took earlier steps to engage in collaboration and innovation initiatives when compared to others.

Barclays, Société Générale, and ING have taken a more actions and initiatives when compared to other European Global banks in the 7 years included in this study. However, some banks such as BNP Paribas, Crédit Agricole, BBVA and Standard Chartered have a long history of being first movers when it came to the development of online banks, innovation scout agencies abroad and Innovation Units. The Swiss Banks Credit Suisse and UBS as well as Nordea have taken later steps. Nevertheless, they took much more niche segments such as Wealth Management for the Swiss players, and an interest in Robotics, Machine Learning and Artificial intelligence for all the mentioned players. One of the banks with the least amount of initiatives related to the development of this study was Unicredit.

Some of the organizational designs demand certain changes in order to face the challenges of the 21st century (Miles, Snow, Fjelstad, Miles, & Lettl, 2010) for this reason banks have been developing their collaborative capabilities and values within the company, on their approach to product development, and solutions creation with externals. Since collaboration is a major component to remain relevant, it has been noticed that banks take bilateral collaboration when it comes to paying more attention to the specific needs of their customers, putting them at the center of their strategy and even launching independent units to make sure the voice of the customer is heard, as Credit Suisse did. Direct collaboration has been seen from banks collaborating with other banks, technology companies, Fintech companies, universities, etc. while having each party put resources and expertise according to their experience. Pooled collaboration is the third type of collaboration taken by banks, primarily in their incubators, innovation labs, accelerators, innovation hubs and campuses. These initiatives demand several parties to exchange information, ideas and experiences in a way that others can learn from them and develop their respective solutions. External collaborations by having people outside of a community was not really taking place since communities where primarily designed so that no externals would bring inside their ideas, this collaboration approach mostly occurs in the design and software industries.

Digital organizations have been on the rise as several start-up companies leverage digital technologies to come up with new solutions and business models (Snow, Fjelstad & Langer, 2017). However, banks have shifted their focus after watching small players snatching customers from them by developing digital transformation strategies and actively simplifying their hierarchies, and improving their capacities to be collaborative and agile. They are now intending to work as startups to a possible extent by having specific units in different areas that

push projects forward, improve the communication and information amongst employees and brings different collaboration parties to the same page.

With the world economy becoming more fast and complex, banks' ability to innovate has become a relevant ingredient to sustain competitiveness and success. For this reason, a strategic entrepreneurship orientation (Hitt, Ireland, Camp & Sexton, 2001) from European Global banks has been noticed. This because being entrepreneurial and strategic is the only way to develop the projects and products in times of major uncertainty. Banks have taken an assessment of their business models and existing solutions. While radical changes cannot be made from one day to another, banks have been adjusting and changing their structures and ways of working so that they can pursue opportunities related to advancements in technology by both introducing new solutions for customers and adjusting their existing solutions to the digital a technological age. (Hacklin, Björkdahl & Wallin, 2018)

Fintech companies and their creation of new business models have given space to the creation of new industries (Teece, 2010). This has happened because they have actively paired technological innovations to their new business models. The new business models often enacted by Fintech start-up companies have taken away customers from traditional companies or even defined new customer segments (Markides, 2016). What banks are intending to do is to gain some ground in this new markets and understand better the new segments so that ideas can be scaled up or replicated in other geographical areas. It was first thought that banks and Fintech companies were strictly rivals but the initiatives and data collected in this study demonstrate that banks want to work side by side with Fintech companies providing them advice, coaching, financing, access to networks of investors and their user bases in exchange for knowledge and profit sharing in some cases.

Corporate entrepreneurship has been a vehicle for banks to simplify their efforts for constant innovation and handle environmental changes (Kuratko, Hornsby & Kovin, 2014). As proposed by Covin and Miles (2007), banks have been using corporate venturing and entrepreneurship to build knowledge competencies and expand the banks reach into new opportunities. This has happened both internally with businesses and initiatives emerging inside a parent company but also in the form of external corporate venturing reflected in the investments or businesses outside the organizations domain. This external corporate venturing examples include all the bank efforts to go beyond the financial industry by combining their services but taking a dive in industries such as health, mobility, food, energy and nanotechnology. Joint projects and new ventures have created

or developed through different initiatives that banks have established often with other partners. They have engaged with other partenrs in order to enable innovation and great conditions for entrepreneurship for start-ups within the financial technologies domain. All these types of corporate venturing have been relevant for banks to respond to the innovation degree demanded by their industry

Banks have taken a look both inwards and outwards in their search for innovation and development of their learning capabilities (Chesbrough & Kardon, 2006; Lin, McDonough, Lin & Lin, 2013). They have promoted activities and initiatives that encourage inter-organizational learning amongst workers and partnerships with other parties while keeping an open culture and a predisposition for a knowledge sharing approach to innovation. Examples of this are the innovation labs, independent units, and investments in collaboration tools for employees as well as the establishment of new offices or physical spaces for collaboration between startups, technology experts and employees.

Open Innovation, coined mainly by Chesbrough (2006), encourages companies to use external and internal ideas of a company for value creation. This has been one of the major orientations for banks in the following years by engaging in cultivating relationships for learning but also through acquisitions, co-creation, corporate collaboration and an inclusive attitude towards ideas coming from employees, suppliers and consumers (Chesbrough, Vanhaverbeke & West, 2006). Banks have developed a system ranging from scouting, obtaining, integrating and commercializing innovations through a continuous interaction between collaborators, very much in line with the proposed model by Bogers and West (2013). From the open innovation approach, banks have put attention into the Design thinking methodology to being more user centered but also have included methodologies such as the Lean Startup and Agile in their departments or several initiatives including hackathons, innovation labs and improvements at incubators and accelerators or in the way they develop projects internally. Previous literature (Mahr, Lievens & Blazevic, 2014) mentioned that cocreation with consumers often lead to relevant insights and new angles from which banks can tackle different problematics and this has been confirmed by the data collected in this study.

Since collaboration is essential to absorb and develop competences held by others and increase an organization's knowledge (Franco & Haase, 2013), banks have seriously taken the approach to engage in collaboration activities to boost their innovations and entrepreneurship spirit. Gaining external knowledge efficiently is key for addressing problems regarding new technologies or

markets. For this reason, Banks engaging with Fintech companies have succeeded when aiming to learn better what their customers need. They have approached this knowledge by taking a more aggressive and responsive approach to iteration and product development, having specific units work to its best when exploring and exploiting new ideas.

In order to have a place within knowledge exchange and collaboration, several banks have positioned themselves as the organizers of different activities and being active members in communities. Banks have done this in order to have a better access to different networks and demonstrate to incumbent parties that working together with a bank, something previously thought as hectic and bureaucratic, is in fact easier now done than ever before. Additionally, in several opportunities banks have promised to their collaborating partners either long term contracts, in the case of software and technology companies like IBM and Google, while delivering a different value proposition for Fintech companies. These smaller players in the finance industry would get often a combination of financing, mentoring, access to a great customer base, integration within existing communities, working facilities, reach to a network of investors and industry experts, good branding and marketing by having their idea validated by strong firms and finally, someone to help them scale up their idea and share the risk with. Through several collaboration and partnerships, both with Fintech companies and players outside of their industry, banks are perceived as more entrepreneurial by cooperating in attempts to develop innovations (Antoncic, 2007).

In the Annex 3 in Initiatives Taken by Bank it can be seen that no direct inference of relationship between banks and the actions they have taken can be taken. The French banks and Swiss banks have taken similar approaches respectively while in the United Kingdom and Spanish banks one can only see one more player slightly more active than others. No great assumption could be created when comparing one bank to another but when taking all of their actions as a whole it could be seen that banks have actively sought to get involved in as much initiatives as possible to fight environmental change

5.2 Contributions to the Strategic Adaptation Literature

As presented before by Myles and Snow (1978) organizations are faced with a set of problems such as entrepreneurial, administrative, and engineering. During times of environmental change, it was determined that the biggest

challenge for banks is dealing with their entrepreneurial problem. Although the strategic typology developed which distinguishes defenders, prospectors, analyzers and reactor organizations it was impossible to determine which banks fall into which category. However, the Miles and Snow framework keeps being relevant to look into industries and companies faced with environmental change in which strategic adaptation is required. The banking industry is perceived to go through great uncertainty which poses risks for successful organizational reconfiguration (Chakrabarti, 2015). This uncertainty is mainly produced by industrial segments and organization's shifting barriers caused by environmental shocks. The change perceived in the banking industry is a living example of these strategic adaptation works.

Building upon their later literature, Miles, Snow, Fjelstad & Lettl (2010) successfully identified the need for companies to adapt their traditional organizational designs to something that will respond more effectively to the challenges of the 21st century. Their study tapped into collaboration being a driver for innovation in which they identified four paths in which three were relevant for this study. These paths being the direct, bilateral and pooled collaboration. These types of collaboration would remain relevant for industries outside of the IT and software industries since the external collaboration poses the challenge of created communities and knowledge coming from external parties. Regarding necessary capabilities for companies to hold in order to remain relevant in the 21st century, the concept of continuous innovation was brought in order to challenge the global markets in changing industries (Kuratko, Hornsby & Covin, 2014). As proposed by Bogers & West (2013), collaborators and sources for innovation can come from suppliers, customers, rivals and complementing actors. This happened in line with banks engaging with technology companies, their corporate and individual customers, other rival organizations such as banks and Fintechs.

The findings suggest that the different types of collaboration aimed for the development and absorption of competences held by others in order to improve the innovative potential (Franco & Haase, 2013) is relevant specially in now more digital organizations which are growing in number and complexity (Snow, Fjelstad & Langer, 2017) such as banks and Fintech companies. These digital organizations are demanded to be much more responsive and technologically savvy in their approach to new technologies a collaborative working manner. As suggested by Vanhaverbeke, Van de Vrande & Chesbrough (2008) companies should abstain themselves from committing so early to new collaborations regarding technologies before they have sufficient information to decrease the level of uncertainty. It can be seen that banks, apparently taking slow approaches to

collaborations, might have done engaged in collaboration efforts until they felt comfortable to do so. As a final remark towards Banks and Fintech collaboration, smaller players gain relevant benefits in collaboration initiatives due to their limited knowledge, resources and power even if they are more opportunity seeking organizations (Ketchen, Ireland & Snow, 2007). This poses an advantage for bigger corporate players that lack the agility of new players.

6 CONCLUSIONS

With the world economy becoming more fast and complex, the ability of banks to innovate has become a main ingredient to sustain competitiveness and success. Banks are also today increasingly challenged with environmental change in their industry, challenge which pushes them to strive for organizational renewal and adaptation. The environmental shock caused by Fintech companies in the European and global landscape is very much felt across the industry and shifts the way business has been traditionally carried for the last years since they create new business models and take away costumers from existing banking services.

This work looks into the approaches and initiatives of European global banks in response to the emergence of Fintech companies and solutions. It builds on literature around strategic management and entrepreneurship by giving a posture on how collaboration and corporate innovation are approached by 18 global systemically important banks. It was noticed that banks are able to combat the rise of Fintechs by developing their strategic adaptation capabilities, gaining an innovation mind-set and being collaborative and entrepreneurship orientated. They have been rethinking their existing business models, being more technology oriented, and having the customer in mind better than before.

The findings show that banks are going through an organizational transformation and are intending to increase their collaboration and innovation capabilities. Regarding innovation, it can also be said that corporate entrepreneurship has been a vehicle for banks to simplify their efforts for constant renovation and handle the environmental shock. Steps towards the increase of collaboration capabilities include the collaboration with rivals and companies outside of the financial industry, partnerships with innovation experts and an innovation mindset promotion within their employees. Regarding the increase of collaborative capabilities, firms address improving their organization knowledge with absorption and development of competences held by others which promote a more innovative and entrepreneurial spirit. The different types of collaborations taken by banks include bilateral collaboration (engaging with customers), direct collaboration (with other banks and Fintech companies), and pooled collaboration (through innovation oriented activities such as hackathons, incubators and accelerators).

Strategic adaptation, an innovation mind-set and collaborative entrepreneurship provide an opportunity for banks to reinvent themselves in the areas that need attention. While radical changes cannot be made from one day to another, banks have been adjusting and changing their structures and ways of working by hosting different initiatives and adopting methodologies oriented to innovation. Some initiatives regarding the sharing of knowledge, evaluation of possible ideas, and networking with relevant stakeholders include accelerators, hackathons, conferences, specific themed challenges with internals and externals, incubators, innovation labs, innovation scout units, and funds to finance innovation. Regarding methodologies, an approach to open innovation and different methodologies such as lean start-up, design thinking and agile have been adopted by some banks. Other relevant activities directed to a digital transformation from banks include redesigning or reinventing the customer service experience at branches, launching interbank projects such as P2P models for individuals, and either launching or engaging in support towards digital banks.

It was first thought that banks and Fintech companies were strictly rivals but the initiatives and data collected in this study demonstrate that banks want to work side by side with Fintech companies providing them advice, coaching, financing, access to networks of investors, and their user bases in exchange for knowledge and profit sharing in some cases. Both Fintechs and regulations in the financial industry will continuously change the industrial environment. As seen with the remarks from this investigation and initiatives carried by global banks in Europe, a positive approach to collaboration and innovation could take banks to transform their strategy and operations into what is required from them in this new and inevitable era of digital organizations.

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APPENDIX 1: DATA STRUCTURE OVERVIEW: CONCEPTS, THEMES & DIMENSIONS

Concepts	Themes	Dimensions
Fintech Oriented Social Entrepreneurship Tech Oriented Technology Oriented Personalized Entrepreneurship E-commerce	Knowledge Source & New Markets	Learning Sharing
Fintech partners Technology Partners Innovation Partners Financial Partners Government Partners Telecom Partners Parallel Industry Partners	Partners	
Blockchain Biometrics Artificial Intelligence Wearables Digital Communication QR Codes Proximity Payments	Leveraged Technologies	

Concepts	Themes	Dimensions
Lean Startup	Entrepreneurial Methodologies	Innovation Development
Design Thinking		
Agile		
Proof of Concept		
Ideation		
Customer Centricity	Organizational Mindset	
Personal Approach		
Strategy		
Customer oriented		
Employees	Internal Development	
Work Facilities		
Training & Education		
Collaboration Tools		
Innovation Units		
Recruitment		
Organizational Culture		
Case Replication & Standardization		

Concepts	Themes	Dimensions
SMEs		

Corporate Clients Entrepreneurs Overseen/Neglected Individuals Future Generations	Clients	Clients & Value
Online Mobile Present or Direct	Interaction Channels	
Digital Solutions Advisory Services Community and Network Entrepreneurship Facilitation	Delivered Solutions	

APPENDIX 2: EXAMPLES OF ARTICLES COVERED

Article Example # 1 – ING Bank – 21 October 2015
ING to start strategic partnership and launch pilot with Fintech Kabbage

ING today announced it is starting a strategic partnership with Kabbage, a leading technology and data platform powering automated lending to small and medium enterprises (SMEs). The partnership fits ING's strategy to expand its lending capabilities to SMEs and helps them to get the capital they need to grow. On 14 October 2015, ING made public it had taken an equity stake in the US based fintech company in a financing round in which Kabbage raised USD 135 million.

As part of the partnership, ING and Kabbage will start a pilot in Spain, offering small and medium enterprises (SMEs) loans up to EUR 100,000. Kabbage's automated loan application and approval process is both accelerated and simple for customers. It makes use of full credit scoring and real time risk monitoring and allows SMEs with an existing business account to get a loan within ten minutes, based on real-time business data. "This partnership shows we are dedicated to creating a differentiating customer experience. After a successful launch, we will look into expanding the offering. This initiative perfectly fits our strategic priority to increase the pace of innovation," Ralph Hamers, CEO of ING, said. "The cooperation is also in line with ING's innovation approach to launch new services via both own initiatives and by working together with and investing in fintechs and startups."

"As financial institutions embrace new lending technology, we see that platforms like Kabbage are interesting for them to provide a superior experience to their customers," said Rob Frohwein, Kabbage co-founder and Chief Executive Officer. "We are incredibly proud of our partnership with ING, and most importantly, we are thrilled to serve the small and medium businesses powering the economy in Spain."

From:
https://www.ing.com/Newsroom/All-news/Press-releases/ING-to-start-strategic-partnership-and-launch-pilot-with-fintech-Kabbage.htm

Article Example # 2 – Lloyd's Bank – 23 March 2018
Lloyd's appoints L Marks and BCG to collaborate on Lloyd's Lab

As first announced in February, the Lloyd's Lab will focus on designing technology-driven solutions to meet the unique and rapidly changing needs of the Lloyd's market. The Lab will enable new concepts, ideas and products to be tested in a fast-track, fast-fail environment with the support and active involvement of Lloyd's market participants.
L Marks, an innovation specialist with a deep understanding of the global InsurTech sector, will leverage its vast experience from the successful creation and operation of over 30 innovation labs across industries to define the overall Lab activities and timetable, run global scouting campaigns to identify the most relevant InsurTech start-ups, support the day-to-day operation of the Lab, and arrange mentoring and business support programmes for participating start-ups.
BCG will support the Lab by working with the Lloyd's Market Association (LMA) and managing agents to identify key challenges faced by the Lloyd's market. The challenges identified will be channelled into themes that the Lab will address. BCG will also support continued collaboration between Lab participants and the Lloyd's market beyond the life cycle of the Lab incubation period.
Lloyd's Head of Innovation, Trevor Maynard, said: "We are pleased to announce collaboration with L Marks and BCG, given the knowledge and experience they both bring to this project. L Marks has exceptional operational expertise in running Labs for some of the world's most successful businesses.
BCG has a deep understanding of how the Lloyd's market operates, as well as how to turn digital innovation into actionable change. Both organisations have a strong track record in executing truly collaborative projects such as this and are committed to ensuring it benefits from real market participation and engagement."
Founder and Chairman of L Marks, Stuart Marks, said: "L Marks is proud to be collaborating with Lloyd's and BCG on the first ever Lloyd's Lab. Many corporates are embracing innovation and to see an industry leading organisation like Lloyd's do so through supporting start-ups validates this new way of working. For the start-ups and entrepreneurs that take part, the Lab will provide unprecedented access to Lloyd's and I'm certain that we will find the InsurTech leaders of tomorrow and create new solutions that will benefit the Lloyd's market."
Partner at The Boston Consulting Group, Justin Balcombe, said: "BCG is delighted to work alongside L Marks and Lloyd's on this transformative initiative. With the right level of market input to ensure concepts in the Lab are relevant to the market's needs, combined with the entrepreneurial ideas and creative talent entering the Lab, it will be very exciting to see what technological solutions can be developed that can bring about a step change in the market's digital future."

From:
https://www.lloyds.com/news-and-risk-insight/press-releases/2018/04/lloyds-lab

APPENDIX 3: INITIATIVES EXECUTED BY BANK

Country	France			
Bank Name	**BNP Paribas**	**Groupe Crédit Agricole**	**Groupe BPCE**	**Société Générale**
Providing a Digital Bank		x	x	x
Host an accelerator	x	x	x	x
Have and Innovation Partner	x		x	x
Host a Hackathon	x	x	x	x
Host a Themed Challenge			x	
Have an Incubation Program	x		x	
Host an Internal Innovation Program	x	x		x
New Technology at Branches				
Collaboration oriented Office		x	x	x
Have a dedicated Innovation Lab / Space	x	x		x
Host Knowledge Sharing Events	x	x	x	
Have a Fund for new ventures	x	x	x	x
Application of New Methodologies				
Engaged in Interbank Collaboration	x	x		
Engaged in Fintech Collaboration	x	x	x	x
Engaged in Digital Bank Collaboration			x	
External Industry Partnerships	x		x	x
Sum	11	10	12	9

Country	Germany		Italy	Netherlands
Bank Name	**Commerzbank**	**Deutsche Bank**	**Unicredit Group**	**ING Bank**
Providing a Digital Bank			x	
Host an accelerator		x		x
Have and Innovation Partner		x		
Host a Hackathon		x	x	x
Host a Themed Challenge				
Have an Incubation Program	x			
Host an Internal Innovation Program			x	x
New Technology at Branches	x		X	X
Collaboration oriented Office		x		x
Innovation Lab / Space		x		
Host Knowledge Sharing Events	x	x		x
Have a Fund for new ventures	x		x	x
Application of New Methodologies				x
Engaged in Interbank Collaboration				
Engaged in Fintech Collaboration		x		x
Engaged in Digital Bank Collaboration			x	
External Industry Partnerships	x	x		x
Sum	5	8	6	10

Country	Spain		SE/FI	Switzerland	
Bank Name	**BBVA**	**Santander**	**Nordea**	**Credit Suisse**	**UBS**
Providing a Digital Bank	x	x	x		
Host an accelerator	x		x	x	x
Have and Innovation Partner				x	x
Host a Hackathon		x			
Host a Themed Challenge	x	x			x
Have an Incubation Program					
Host an Internal Innovation Program	x		x	x	
New Technology at Branches					
Collaboration oriented Office					
Innovation Lab / Space			x		x
Host Knowledge Sharing Events			x	x	
Have a Fund for new ventures	x	x	x	x	
Application of New Methodologies	x				
Engaged in Interbank Collaboration			x	x	x
Engaged in Fintech Collaboration	x	x	x	x	x
Engaged in Digital Bank Collaboration	x	x	x		
External Industry Partnerships	x	x	x	x	
Sum	9	7	10	8	6

Country	United Kingdom				
Bank Name	**RBS**	**Barclays**	**HSBC**	**Lloyds**	**SC**
Providing a Digital Bank	x				x
Host an accelerator	x	x	x	x	
Have and Innovation Partner	x		x	x	x
Host a Hackathon	x	x		x	
Host a Themed Challenge		x			
Have an Incubation Program		x			
Host an Internal Innovation Program		x		x	
New Technology at Branches	X	X		x	
Collaboration oriented Office			x		
Innovation Lab / Space	x	x	x	x	x
Host Knowledge Sharing Events	x	x		x	
Have a Fund for new ventures		x	x		x
Application of New Methodologies		x			
Engaged in Interbank Collaboration		x	x		
Engaged in Fintech Collaboration	x	x	x		x
Digital Bank Collaboration	x				
External Industry Partnerships		x	x	x	x
Sum	9	13	8	8	6

APPENDIX 4: TAKEN INITIATIVES BY 18 EUROPE BANKS

15	Engaged in Fintech Collaboration
14	Host an accelerator
14	Have a Fund for new ventures
14	External Industry Partnerships
11	Host a Hackathon
11	Have a dedicated Innovation Lab / Space
11	Host Knowledge Sharing Events
10	Have and Innovation Partner
10	Host an Internal Innovation Program
9	Providing a Digital Bank
7	Engaged in Interbank Collaboration
6	Branch Experience with new technology
6	Collaboration oriented office
6	Engaged in Digital Bank Collaboration
5	Host a Themed Challenge
4	Have an Incubation Program
3	Application of New Methodologies