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Co-creation of Value at Startups: a Case Study with a Brazilian Fintech

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Orientador: Profa. Dra. Aurora Carneiro Zen

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Resumo

Os mercados financeiros global e brasileiro passam por uma transformação, onde startups tecnológicas de serviços financeiros, as fintechs, estão em ascensão e desafiam instituições financeiras tradicionais ao trazer tecnologia, modelos de negócio inovadores e co-criação de valor com clientes para a vanguarda desta transformação. Porém, estudos e literatura sobre fintechs e co-criação de valor são escassos. O principal objetivo deste estudo é analisar como se dá o processo de co-criação de valor em uma fintech brasileira por meio do mapeamento do seu modelo de negócio, identificação de atores e mecanismos de co-criação de valor e análise da integração entre ambos. Os resultados, encontrados através de entrevistas em profundidade semiestruturadas com fintech e clientes e revisão de literatura existente, apontam que seu modelo de negócio é focado na interação com clientes, em produtos e experiências inovadores e, de certo modo, em fatores tecnológicos; sua co-criação de valor ocorre majoritariamente de forma orgânica, com clientes e através de diversos métodos; e a integração de do modelo de negócio e co-criação de valor são exercitadas sobretudo entre a fintech e clientes que se tornam beta testes, atuam como influenciadores e provêm feedback. Este estudo contribui para a literatura de co-criação de valor e fintech e para as áreas de marketing, inovação e empreendedorismo.

Palavras-chaves: fintech, co-criação de valor, startup, inovação, tecnologia.

Abstract

The global and Brazilian financial market are undergoing a transformation, where technological startups of financial services, fintechs, are on the rise and challenge traditional financial institutions by bringing technology, innovative business models and cocreation of value with clients to the forefront of this transformation. However, studies and literature on fintechs and cocreation of value are scarce. The main objective of this study is to analyze how the process of cocreation of value occurs in a Brazilian fintech by mapping its business model, identifying actors and mechanisms of cocreation of value and analyzing the integration of both. The results found, through in-depth semi-structured interviews with fintech and clients and review of existing literature, point that its business model focuses on interaction with clients, innovative products and experiences and, to some degree, technological factors; its cocreation of value occurs mostly organically, with clients and through various methods; the integration of business model and cocreation of value are exercised mostly between the fintech and clients who become beta testers, act as influencers and provide feedback. This study contributes to the cocreation of value and fintech literature and to the marketing, innovation and entrepreneurship areas.

Key-words: fintech, cocreation of value, startup, innovation, technology.

LISTA DE ILUSTRAÇÕES

LISTA DE ABREVIATURAS E SIGLAS

SDL	Service-dominant Logic
GDL	Goods-dominant Logic
MVP	Minimum Viable Product
TBI	Technology-Business Incubation
CS	Customer Success
PO	Product Owner
CEO	Chief Executive Officer
CTO	Chief Technology Officer

Sumário

1 INTRODUCTION

The global and Brazilian financial markets are undergoing a transformation. To understand it, one must take a look at its development over the course of time. The history of this market dates back to the beginning of mankind and its mechanisms are what makes modern life possible due to the complex economic activity of existing societies.

According to Pinheiro (2001), this market started as a barter economy, where the exchange of goods and services occurred between people, without any kind of intermediation. Currencies would later on be introduced as an exchange facilitator, backed by things of quantifiable value. The image of the financial institution is firstly formed when the first financial intermediaries emerge. These agents serve as intermediaries between creditors (surplus) and debtors (deficit). In that context, the bank as it is known today arises (PINHEIRO, 2001).

The current global financial system is interconnected, with a set of institutions, instruments and markets grouped in a harmonic form, with the end goal of channeling the savings of surplus units to the investment demanded by deficit units. This system earned its current setting after a host of events, such as financial crises (i.e. the Great Depression of 1929), international agreements (e.g. Bretton Woods, in 1944, and its end, in 1971) and the creation of international regulatory bodies i.e IMF (International Monetary Fund) and the World Bank (ROSA, 2006).

Since the global financial crisis, in 2008, alternative financial mechanisms have gained strength in the United States, United Kingdom and Europe, where online crowdfunding and peer-to-peer lending platforms (disintermediated) have provided more transparent alternatives for consumers to invest ad and borrow money, fostering innovation. Barriers to entry into the financial sector have also been challenged by the work done by fintechs (technological startups of the financial services sector) along with regulators, especially in a post-crisis context where bank reputation is still shaken. These fintechs offer unique value propositions and intuitive experiences in comparison with traditional financial products (GULAMHUSEINWALA et al., 2015). The credit squeeze after the 2008 global financial crisis suddenly made alternative financial products seem more attractive (MACKENZIE, 2015). Consumer behavior is also changing, and an ever-growing number of interactions now occur in a digital setting, where fintechs set themselves apart from traditional financial institutions (COMPUTERWORLD, 2016). This movement has gained strength internationally (PWC, 2016; CITIGPS, 2016) and in Brazil (FINTECHLAB, 2016).

1.1 DELIMITATION OF THE THEME AND RESEARCH PROBLEM

Financial institutions are traditional and act as operators in the global financial system (BRASIL, 2016). The most well known actors are banks; however, there are other relevant players such as credit unions (EPOCA, 2016). These major players tend to offer a set of products at scale in order to achieve customer loyalty and become the single financial institution with which they have a financial relationship. Given this fact, these institutions usually aim to grow and to become economies of scale in order to drive down costs and be able to offer a wide variety of products.

A growing trend in this market are technological startups of financial services, the so-called fintechs. These firms compete and occupy spaces usually dominated by traditional financial institutions by offering alternate, innovative solutions to solve problems clients of these institutions usually have due to the inherent complexity of this market. These new firms arise with greater strength after the 2008 financial crisis, which sent shock waves through the global financial system and shook market confidence in its players, and are in search of alternate ways to provide financial services and products (NEUMAN, 2015). By bringing the client to the center of their hypotheses[1], working to create innovative, inclusive experiences with them, and building their business models around co-creation and open innovation, fintechs hold a high potential of disrupting the financial market. For example, exclusively online customer service drives down costs with physical facilities (i.e. agencies). The focus on digital experience has synergy with with one of the current issues and trends of this market: transforming the digital experience of traditional financial institutions into a mobile, pleasant one. Lastly, the focus on innovative business models making use of technology in synchrony with traditional (i.e. credit cards) and new (i.e. Bitcoin) products enables these institutions to compete for both niches and scope previously uncatered for and those already serviced by major players (MENAT, 2016). According to CFA (2016), seven hundred seventy-three members of the organization were surveyed with regards to technologies that would have an impact of higher or lesser degree in the financial market in the next one to five years caused by fintechs, what resulted in a list of a set of these technologies, such as robo-advisers, crowdfunding and bitcoin/blockchain.

The factor that motivates this research is the analysis of value co-creation in fintechs. Financial institutions possess larger reserves and budgets dedicated to innovation given their size. However, they are often impacted by heavy, complex governance structures, what might come in the way of the time to market the current market dynamics demand. Conversely, fintechs are startups in their DNA. That means they are usually lean companies, which focus on one product, service, hypothesis or business model, with a limited innovation budget. Therefore, they employ lean management and innovation models and aim to attract co-founders, partners,

[1] The term hypothesis as used in the above-mentioned context are ideas tested iteratively by startups that compose their business model (RASMUSSEN; TANEV, 2016; RIES, 2011) and should not be confounded with hypotheses of a research paper.

investors and clients, who will be invaluable to the value generation proposed by the firm. This research will be limited to fintechs and how they shape innovation through their business models and value co-creation. The study will also limit the concept of fintech to those companies created after the 2008 financial crisis given the rising relevance of those firms in that context (ARNER; BARBERIS; BUCKLEY, 2015).

Vis-a-vis the exposed context, this study deepens into the new emergent dynamics in the financial market, with focus on the role of fintechs in this market and how value is generated. Given the recency of the fintech phenomenon; the rising relevance of value co-creation in consumer experience, innovation, and relationship between client and firm; and the low amount of research on the subject (a search in the Scopus database for "fintech"AND "co-creation"yielded no results), this research poses the question: how does value co-creation occur in fintechs?

1.2 RESEARCH OBJECTIVES

1.2.1 Main Objective

The main objective of this research is to analyze how the process of co-creation of value occurs in Brazilian fintechs.

1.2.2 Specific Objectives

a) Map the business model of Brazilian fintechs;

b) Identify mechanisms and actors of co-creation of value in Brazilian fintechs;

c) Analyze the influence of co-creation of value in the business model of Brazilian fintechs.

1.3 JUSTIFICATION

The practical justification of this research relates to the analysis of the phenomenon and its current market relevance. The Brazilian financial system is a historically strong and renowned sector. However, since the 2008 global financial crisis, the global financial crisis as a whole has suffered with the low confidence of its clients (NEUMAN, 2015). A poll in the United States shows that only 32% of the citizens have confidence in banking institutions (GALLUP, 2017). Therefore, it is of relevance to study the fintech market and how it fills the existing gap of trust of traditional financial institutions in their relationships with clients.

Besides the low confidence factor, there is a rising demand for financial services to be made available in a mobile, simple way to be accessed at any moment, as well as for reinventing supply, experience and value of these services and products for a new, digital environment. In the scenario, the relevance and emergence of fintechs can be observed due to the innovative product and service experience, relationship and interaction with the client, and a higher flexibility to innovate compared to tradition financial institutions (GULAMHUSEINWALA et al., 2015; PWC, 2016; FINTECHLAB, 2016). This development of the field goes along with the theory of co-creation of value, which identifies a changing factor in the interaction between client and firm (and eventually other stakeholders) given a new context of an informed, active and connected client (PRAHALAD; RAMASWAMY, 2004b), which results in companies having to tighten their relationships with clients in order to stay relevant in the digital economy and identify trends and needs in collaboration with clients. Given this context, the relevance of this research meets the need to understand the phenomenon of innovation through value co-creation in fintechs.

The focus on the Brazilian market is justified by the relevance this market represents. When it comes to numbers, in April 2016 there were around 130 fintechs mapped by Fintechlab. Ten months later, the number of new ventures had almost doubled to 247 (FINTECHLAB, 2016; FINTECHLAB, 2017). Those 247 fintechs are scattered across the following categories: payments (32%), financial management (18%), lending (13%), investments (8%), funding (7%), insurance (6%), debt negotiation (5%), cryptocurrencies and DLTs (5%), currency exchange (4%) and multiservices (2%). Altogether, these new businesses have reportedly received over a R$1 billion in funding (FINTECHLAB, 2017). According to an interview with an expert on emerging markets financials: "Brazil is simply the ripest fintech market we have come across. [...] it is as if (Brazilian banks) have become masters of maintaining the most inefficient and thus profitable banking market on the planet. [...] Hence, we have seen more fintech opportunities in Brazil"(CITIGPS, 2017). Given the previous scenario, it is justifiable, from a market perspective, to research the impact of those new businesses in the Brazilian market.

On the theoretical side, this study aims to contribute to theories in many fronts. Firstly, technological startups of the financial services sector will be analyzed, including aspects of how they shape their business models and organization, where an expected finding will be the influence of value co-creation in the validation of business model. It also aims to contribute to the value co-creation literature in the financial services sector. Studies such as Klaus et al. (2015) and Martovoy e Santos (2012) have delved deeper into value co-creation in the field, but there is no research available on value co-creation and fintechs. When searched for "financial service* AND co-creation", a list of 50 results was returned, of which only two could be listed as close to the analysis in this study. Martovoy e Santos (2012) study co-creation of value and co-profiting in financial services, above all in large financial institutions and with a focus on the clients. The result of this research points that financial institutions tend to focus on clients with a longer and more active relationship with the institution, with innovations being commercialized by the institution. Klaus et al. (2015) approach the cases of 23 companies in the financial sector, with focus on how they manage customer experience from the perspective of the organization. The result is a list of five identified practices used regularly in those companies. A search query on the Scopus portal on March 3. 2017 did not return any results when the expression "fintech* AND co-creation"was used. Therefore, this research points out the relevance of such contribution to financial services sector by expanding the study on fintechs and co-creation of value.

2 CO-CREATION OF VALUE AND INNOVATION IN FINTECH STARTUPS

Co-creation of value has roots in the innovation field (GALVAGNO; DALLI, 2014). Innovatios is a theme that is associated with the emergence of firms. A pioneer in the studies related to that field, Joseph Schumpeter analyzes the relationship between the entrepreneur, innovation and the modification of the market status quo. The study of innovation is broad, though recent. The phenomenon subject to this study will be fintechs, characterized in this study as startups, the development of innovation and the eventual proposition of value co-creation will be explored. To that purpose, relevant literature will be reviewed and proposed.

2.1 INNOVATION: FROM THE FOUNDATIONS TO THE PARADIGM OF OPEN INNOVATION

To better understand how it was necessary to revisit the basics of innovation and how this concept evoled over time. For that, two authors were referenced: Coase (1937) and Schumpeter (1985). Starting from this theoretical basis, contemporary authors and their work were used to analyze and the evolution of the innovation line of research until the concept of open innovation, proposed by Chesbrough (2006).

Coase (1937) goes over the nature of the firm, specifically why individuals, called entrepreneurs, make the decision to create partnerships, companies and other business entities instead of buying and contracting other businesses in the market. In his study, the author approaches which factors make entrepreneurs employ people and make things as opposed to buying them in the market. There factors are strictly related to the costs of transaction inherent to products and services offered in the broad market, such as costs of information, opportunity and negotiation. His study is important to understand how the firm emerges as an actor and innovates later on.

Most know for his theory of creative destruction, Schumpeter (1985) presents the figure of the inventive entrepreneur, creator of an organization for taking advantage of opportunities. This entrepreneur, a visionary, "has the role of altering and revolutionizing the current standard by exploring an invention or new technology. It is someone who seeks the novelty, creates opportunities and thus modifies the status quo’ (SCHUMPETER, 1985 apud DULLIUS, 2016, p. 30).

Literature related to the phenomenon of innovation is recent. From 1950 on, the first observable innovation process models are analyzed by Rothwell (1994) and Marinova e Phillimore (2003) inm generations.

The first generation of innovation processes benefitted from the years of economic growth in the post-Second World War period, between the fifties and mid-sixties, in which demand was occasionally higher than production capacity. The ongoing assumption was that of the technology push, in which more resources invested in research and development would result in more marketable products (ROTHWELL, 1994). According to Marinova e Phillimore (2003) technology push comes from Schumpeter and his theory of the entrepreneur as the individual who takes risks and overcomes barriers to extract benefits from the monopoly of the introduction of new ideas.

Given supply and demand conditions, during the mid 1960s and early 1970s the second generation focused much more on demand, and it can be regarded that the market was the main source of innovation drivers. This model is also known as the market pull (MARINOVA; PHILLIMORE, 2003; ROTHWELL, 1994).

After two large oil crises, the third generation (early 1970s through mid 1980s) was forced to innovate in methods of consolidation and rationalization, with growing emphasis on scale and experiment benefits (ROTHWELL, 1994). In this interactive model, the sequential order of previous innovation models starts to be questioned and subdivided into separate stages, each of them interacting with the other (MARINOVA; PHILLIMORE, 2003).

Between the early 1980s and early 1990s the fourth generation of innovation processes heralded a period of economic recovery with companies focusing on core businesses and core technology. Some structural changes brought by this generation was the strategic need to evolve and accummulate generic technology; global strategy and the growth of strategic alliances; and the reduction of the product life cycle (ROTHWELL, 1994). The main change in this model was the focus on interactions, inter-connectedness and synergies (MARINOVA; PHILLIMORE, 2003).

Among other models, Rothwell (1994) also suggests that there's the formation of a fifth generation, starting from the 1990s and focused on the power to control the speed of development and its trade-offs. For example, an acceleration would bring additional costs, but it would also enable the firm to take advantage of opportunity costs by being the first to launch a product. This model also suggests collaboration and the inter-connectedness model of networks and alliances in innovation (ROTHWELL, 1994).

The association of innovation with economic aspects and the perpetuation of the firm is common. Enterprises are economic agents that will allocated resources for the exploration and development of new products and production techniques if they know (or believe) the existence of some kind of scientific or technological opportunity; if it expects to find a market for its products and processes; or if they anticipate some benefit that derives from innovation (DOSI, 1988). Companies also deal with dualism, with the need to continue operating efficiently while also focusing on innovating for the challenges of tomorrow. Regardless of how organized they are, they need to build these two contradictory structures, cultures and competencies. These firms maintain standards equally capable of manging a business with efficiency, consistency and confidence and, at the same time, challenging the business with new thinking and experimentation. It is necessary to have in mind that the conditions (and innovations) that allow for the company to growmight become its achilles heel as technological and market conditions change with time (KATZ, 2003). According to Tidd, Bessant e Pavitt (1997)[p. 39]"In essence, unless organizations are prepared to renew their products and processes on a continuing basis, their survival chances are seriously threatened."

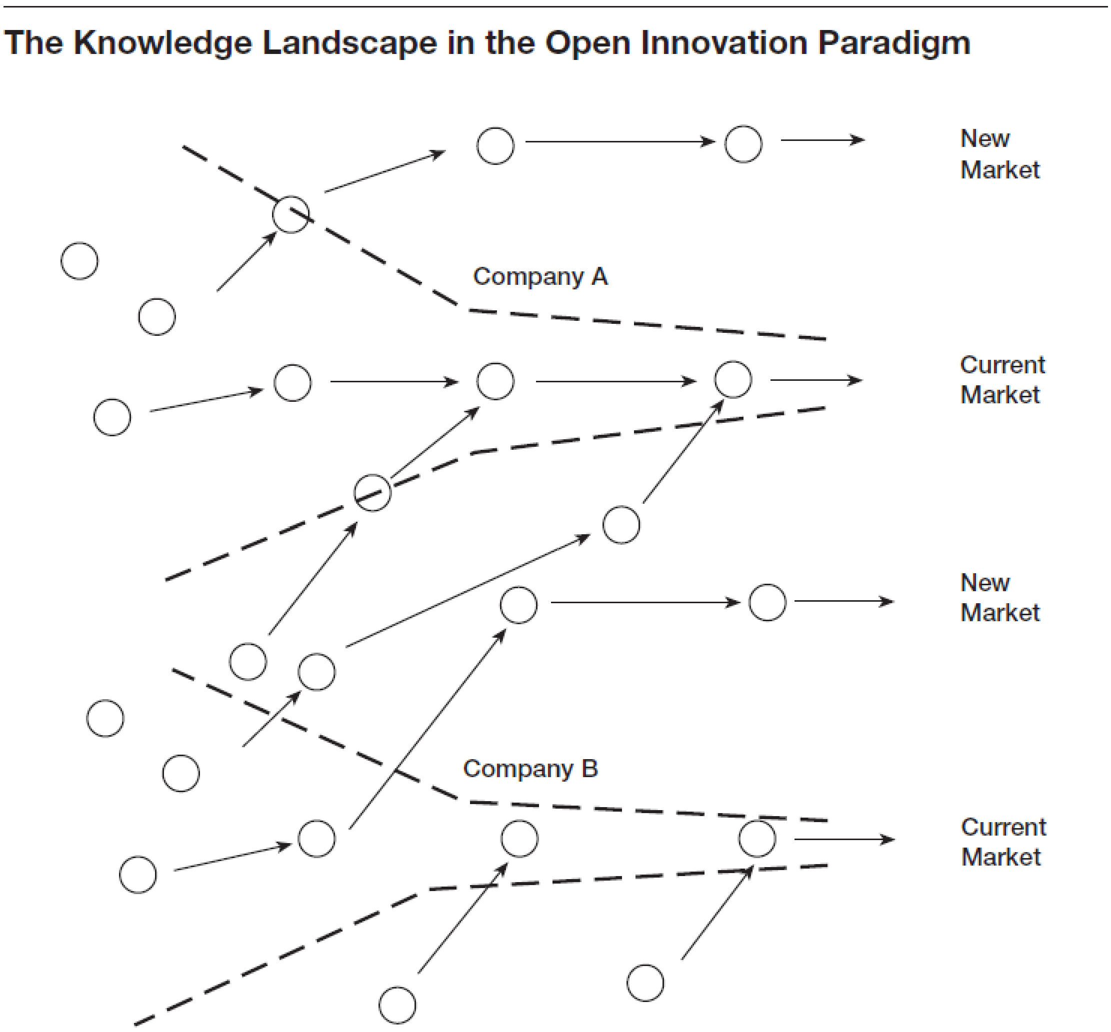
During a large part of the twentieth century, the model used to conduct innovation within companies could be described as that of closed innovation. This model is consistent with the knowledge environment of the beginning of the century, in which innovation was not actively sought after by universities and the government, especially not for commercial applications. As an alternative, companies would focus all their efforts into the search for innovation within their borders and structures via research and development (R&D) departments. In this model, researches were executed by scientists at the research department for later development by the devleopment team (CHESBROUGH, 2006).

This model, however, showed signs of wear over the last decades of the twentieth century due to factors such as the availability and mobility of specialized workforce, venture capital as financing forces of innovation, external options to the firm for researched, non-developed ideas and the capacity of external vendors. For example, Xerox and its research center were a case that closed innovation demonstrated signs of wear and difficulty to capture the value of the investment into research. Founded in 1969, it was an investment whose returno to society can be considered greater than the return to Xerox itself, given that many ideas that were research within the boundaries of the company eventually left and were developed outside of it via engineers who were looking for the development of their ideas on their own of via spin-offs (CHESBROUGH, 2006).

Based on those observations, Chesbrough (2006) proposed the model of open innovation, whose meaning is that valuable ideas can come from both within and outside of the organization, as well as can go to market from within and outside of it. By establishing a synergy between internal processes and external ideas, companies can benefit from creative concepts external to the it and produce new, profitable products and services (ZHAO; SUN; XU, 2016). Figura 1 demonstrates how open innovation takes place as proposed by Chesbrough (2006). The new driving precepts that guide this theory are that of the abundance of information, worker mobility between firms, access to knowledge and the active participations of universities in solving market related issues.

This scenario creates a new paradigm. Instead of companies having the monopoly of knowledge, what can be observed is that it is increasingly more distributed. Given that fact, companies must restructure their organizations to leverage distributed knowledge instead of ignoring it when seeking their research objectives (CHESBROUGH, 2006). Innovation is deeply related to knowledge and to the creation of new possibilities through the combination of different

Figura 1 – The knowledge scenario in the open innovation paradigm.



Fonte: Chesbrough (2006), p. 44.

sources of knowledge (CHESBROUGH, 2006).

Lastly, (CHESBROUGH, 2006) mentiones the concept of business model. Technology in itself does not bring and objective value until it is commercialized in some way. Given this fact, it is necessary to structure a business model that allows for innovation to create value. Teece (2010) defines the concept of business value as a way the company finds to deliver value to its clients, to attract them to pay for this value and to convert these payments into profit. Technological innovation must be closely linked to a business model that defines its strategies to go to market and capture value.

Open innovation is a relatively new concept, and initial studies focused on the successful adoptions and pioneers of the strategy, based on case studies which are descriptive in nature. The new concepts, before being absorbed by companies, tend to mix up and turn into the new business as usual. Given the evolution thus far, it is possible to infer that open innovation will become the new innovation, which will integrate sources of knowledge internal and external to the firm (HUIZINGH, 2011).

Innovation is incresingly considered a key factor for firm survival (HIDALGO; ALBORS, 2008; GALUK et al., 2016). One of the driving strategic and economic factors in the economy is that knowldedge is a crucial method for firms to innovate. The main changes observed in the way how firms compete are that knowledge has become a commodity, being sold and bought in the open market; advances in information and communication technoligies (ICTs) have reduced the costs of many aspects of knowledge activity; and the degree of connectivity between knowledge and agents has dramatically increased. While initial ideas argued that innovation could be explained through technology push or unordered interaction between firms and other actors (technological networks theory), there is an understanding that the continuous accumulation of technical knowledge over time, and the use of communication technologies are factors that determine innovation (HIDALGO; ALBORS, 2008).

An extension of the open innovation model is the concept of co-creation and situational creativity. These concepts are related to the disequilibrium between the economic and cultural systems. Examples of how these systems intersect would be i.e. the open source software movement, Wikipedia and co-created games evolved to digital media (POTTS et al., 2008). OVer the course of the last decades, the emergence of user-generated content and the innovation brought bout by the user has become a cultural and economic phenomenon that in part explains the creation o culture globally. The co-created production of media is a disruptive agent of change that challenges the what we understand for work (BANKS; DEUZE, 2009). Little attention is given to the consumer, audiente, citizen or user. The growth of co-creation by consumers through resources such as the internet and network of social markets is comparable to the invention of printing. These new dynamics takes innovation out of the context of libraries and laboratories and puts it within range of the entire population, creating a true network of networks (POTTS et al., 2008).

Given the new dynamics of knowledge, networks and access of consumers, it is necessary to understand how to better involve them in the innovation process. To do so, this paper will delve into the concept of co-creation of value, which is a concept related to open innovation, and will be explored in the next section.

2.2 CO-CREATION OF VALUE

A host of authors such as Prahalad e Ramaswamy (2002), Prahalad e Ramaswamy (2004a), Frow et al. (2015), and Payne, Storbacka e Frow (2008) explore the relationship between innovation and co-creation of value. For the purpose of this study, those concepts will be considered complementary.

During the first decade of the 21st century, a change in the paradigm inside of marketing disciplines with regards to how it views value creation starts to occur. The dominant view around this topic was one based on industrial principles which dated back to the 2oth century. The is a disconnection between what the enterprise considered value (efficiency and cost reduction) and what the client did (experience and interaction), a logic that is challenged by clients integrated to the Tnternet culture, whose emphasis relies on interactivity, speed, individuality and openness (PRAHALAD; RAMASWAMY, 2002). It can be observed that, as organizations grow, they lose sense of who is their client and their purpose (VARGO; LUSCH, 2004). Many processes of the firm, which occur in a provider sphere with no interaction with the client, do not have a direct impact in the real value delivered to clients (GRÖNROOS; VOIMA, 2013).

Given this paradigm change, Vargo e Lusch (2004) suggests that the perceived movement is a change in the dominant logic. The discipline of marketing, historically focused on the exchange of tangible goods, the so-called goods-dominant logic (GDL), evolves towards a logic of the exchange of intangibles, specialized abilities and knowledge. This change is characterized as the service-dominanto logic (SDL).

This new logic brings along new precepts and perspectives, which can be viewed in Figura 2. SDL changes the perception of value by portraying it not as something that is fulfullied when the client makes an acquisition - an operand resource -, but when there is a process of interaction and collaboration, in which the client acts together with the company on co-creation of value - clients, knowledge and interactions act as operant resources in value creation. This logic is relational, open to dialog, to the creation of velue networks and to collaborative marketing (LUSCH; VARGO; WESSELS, 2008). Instead of being perceived as a mechanism related to GDL, where the value is perceived as something added to products and created at one point of exchange (i.e. price), SDL defines that value can only be created through use, or value-in-use (LUSCH; VARGO, 2006). The company can therefore only create value propositions, but not the value itself, which must be created collaboratively (VARGO; LUSCH, 2004; PAYNE; STORBACKA; FROW, 2008).

As an extension to the research on innovation in services and to the SDL proposed by Vargo e Lusch (2004), Furrer et al. (2016) proposes a framework uniting design, marketing and services to aid in the creation of innovative services. According to the authors, the ability to interact with, adapt to the circumstances of, customize to and co-produce with users and clients are at the core of service sciences. The proposition of the authors us that the company (represented by the marketing deaprtment) and the consumer take on a host of roles over the course of a service, from the emergence of the problem, where the firm takes on the role of a coach, and the consumer, who becomes client, until the delivery of value, in which the company is the delivery provider, with the consumer acting as a co-creator and benefiter.

The change in the roles firm and customers play is analyzed in depth by Prahalad e Ramaswamy (2002). According to the authors, the company-centric view is gradually being replaced by a a consumer-centric view, as can be seen in Figura 3. For the purpose of this article,

Figura 2 – G-D logic versus S-D logic: A change of perspective

From: G-D Logic	To: S-D Logic
Operand resources	Operant resources
Resource acquisition	Resourcing (creating and integrating resources and removing resistances)
Goods and services	Servicing and experiencing
Price	Value proposing
Promotion	Dialog
Supply chain	Value-creation network
Maximizing behavior	Learning via exchange
“Marketing to”	Collaborative marketing (“marketing with”)

Fonte: Lusch, Vargo e Wessels (2008), p. 7.

the words consumer, customer and client will be used interchangeably.

In the traditional view, companies produce goods and services, and clients acquire goods and services (PAYNE; STORBACKA; FROW, 2008). It considers that value is created with a value chain, totally controlled by the firm, where there was a single point of exchange with the client, from which value was extracted from the client to the company (PRAHALAD; RAMASWAMY, 2002). Clients and companies had different roles in procuction and consumption, and markets, seen as an aggregation of passive consumers, did not have a signifcant role in value creation, being only a passive target for the company’s offering (PRAHALAD; RAMASWAMY, 2002).

Conversely, the new view proposed brings the client to the main role, the role of the co-creator of value, moving away from an isolated to a connected view, from unconscious to conscious, from passive to active. The impact of the informed, connected and conscious client manifests in different ways. Access to information, for example, enables clients to make more conscious decisions. Global view and networking enhance their perception and enable the exchange with other people equally informed. Experimentation through use and the Internet results in the creation of new products from shared experiments. Lastly, activism emerges from these points as unsolicited feedback from clients to companies (PRAHALAD; RAMASWAMY, 2004b). Their influence and participation are absolutely necessary for the generation of value, process that occurs through co-creation of value with the company (PRAHALAD; RAMASWAMY, 2002). Lusch e Vargo (2006) argues that the real function of the firm is to provide services to stakeholders, including clients, shareholders and collaborators. This view points directly to normative notions of investment in people, long-term relationships, quality service flows, and indirectly toward notions of symmetric relations, transparency, ethical approaches to exchange, and sustainability.

Figura 3 – Company-centric view vs. consumer-centric view.

Company-centric view	Consumer-centric view
1. The consumer is outside the domain of the value chain	1. The consumer is an integral part of the system for value creation
2. The enterprise controls where, when, and how value is added in the value chain	2. The consumer can influence where, when, and how value is generated
3. Value is created in a series of activities controlled by the enterprisebefore the point of purchase	3. The consumer need not respect industry boundaries in the search for value
4. There is a single point of exchange where value is extracted from the customer for the enterprise	4. The consumer can compete with companies for value creation
	5. There are multiple points of exchange where the consumer and the company can co-create value.

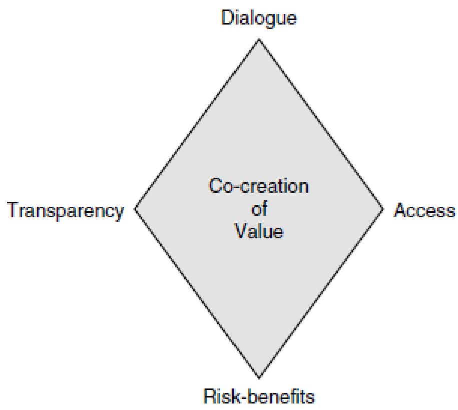
Fonte: Adapted by the author from Prahalad e Ramaswamy (2002).

Given that co-creation of value occurs in interactions between clients and firms, and the underlying value that results from those exchanges, according to Prahalad e Ramaswamy (2002), Prahalad e Ramaswamy (2004a), for a co-creation of value experience to be viable, it is necessary that the company be conscious of the opportunities of interaction. The DART model (dialogue, access, risk-benefits and transparency) are listed b y the authors as the fundamental building blocks of co-creation of value, according to Figura 4. About these blocks,

> Dialogue at every stage of the value chain encourages not just knowledge sharing, but, even more importantly, understanding between companies and customers. It also gives consumers more opportunity to interject their view of value into the creation process. In short, access challenges the notion that ownership is the only way for the consumer to experience value. By focusing on access to value at multiple points of exchange, as opposed to simply ownership of products, companies can broaden their view of the business opportunities creating good experiences. Risk reduction assumes that if consumers become co-creators of value with companies, they will demand more information about potential risks of goods and services; but they may also have to bear more responsibility for handling those risks. Transparency of information is required to create the trust between institutions and individuals. (PRAHALAD; RAMASWAMY, 2002, p. 9).

The result of this change in the from of value creation must be comprehended by company management in order to create quality mechanisms to support this experience. In this sense, quality is seen as the structure that enables the interaction and variety of experiences of co-creation of value between clients and companies. This interaction in turns becomes the base of unique value for each individual (PRAHALAD; RAMASWAMY, 2004b). Through these new dynamics, it becomes clear that products can be commoditized, but experiences cannot (PRAHALAD; RAMASWAMY, 2004a).

Figura 4 – Building blocks of interactions for co-creation of value.

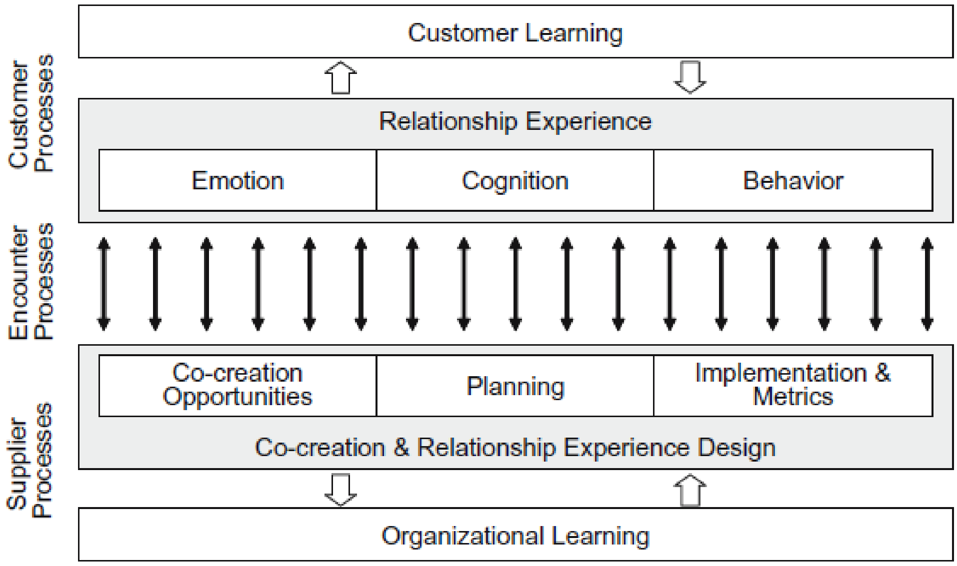


Fonte: Prahalad e Ramaswamy (2004a), p. 9.

From the theoretical and empirical contributions provided by Prahalad e Ramaswamy (2002) and Vargo e Lusch (2004), additional authors have created practical models and frameworks for the application of innovation to processes managed by companies. Two studies were also assessed for the literature review of this study to complement the concept of co-creation of value: Payne, Storbacka e Frow (2008) e Frow et al. (2015).

To assist in the transition from GDL to SDL, focused on the centrality of co-creation of value and its processualization, it is necessary to understand how this interaction happens between the main stakeholders (usually client and company). From the interation process between those two actors results the mutual learning on both sides, that feeds back into the entire process. Customer value creating processes should no be viewed in traditional sense, but as dynamic, interactive, non-linear, and frequently unconscious. Clients can be engaged in the emotional, cognitive, and behavioral spheres. On the company side, value propositions must be seen as a way to facilitate co-creation of value together with the client. For that purpose, the company must processualize opportunities of co-creation, as well as adapt planning, implemnetation and metrics, that must be directed at measuring the relationship with the client and have a multifunctional view. This multifunctionality is necessary and results from each co-creation opportunity, since interactions (encounters) with clients are delivered via different areas of the company (PAYNE; STORBACKA; FROW, 2008). Figura 5 shows a scheme of the proposed framework.

Figura 5 – *C*onceptual framework for value co-creation



Fonte: Payne, Storbacka e Frow (2008), p. 86.

Frow et al. (2015) unfolds the co-creation process in multiple dimensions and categories with the goal of assisting firms and managers in identifying new value co-creation opportunities. The proposed framework is derived from a series of workshops with executives from 29 companies from Europe and the world, responsible by the business development, research and development, strategy and external partnerships departments. The objetive of this study was to generate knowledge of direct practical value in the context being studied (FROW et al., 2015).

firms still do not have structured processes to indentify value co-creation possibilities, even though there is managerial interest in the potential of such opportunities and their benefits. Literature on co-creation of value also does not present a guide to in depth exploration of the opportunities of value co-creation. To fill this gap, a holistic approach is proposed by Frow et al. (2015) that brings together aspects such as design and categories to identify value co-creation opportunities, according to Figura 6. The dimensions include: co-creation motive, co-creation form, engaging actor, engagement platform, level of engagement, an d duration of engagement.

The rise of Web 2.0 was a key factor to enable consumers to assume a more proactive role in value co-creation (RAYNA; STRIUKOVA, 2015; WONG et al., 2016). Through the technology, users could share and post their content in a simple way. That way, Web 2.0 reduced costs of entry for online collaboration between companies and consumers, and also between consumers amongst themselves (RAYNA; STRIUKOVA, 2015). Additionally, the potential of mobile technologies in innovation through value co-creation allows the user to have a continuous access to information, what assures greater flexibility in communication, in information sharing and collaboration. Due to these aspects, mobile technologies offer those who possess them

Figura 6 – Co-creation design framework.

	Dimensions					
	Co-creation motive	Co-creation form	Engaging actor	Engagement platform	Level of engagement	Duration of engagement
Categories	Access to resources	Co-conception of ideas	Focal firm	Digital application	Cognitive	One-off
	Enhance customer experience	Co-design	Customer	Tool or product	Emotional	Recurring
	Create customer commitment	Co-production	Supplier	Physical resources, spaces/events	Behavioural	Continuous
	Enable self-service	Co-promotion	Partner	Joint processes		
	Create more competitive offerings	Co-pricing	Competitor	Personnel groups		
	Decrease cost	Co-distribution	Influencer			
	Faster time to market	Co-consumption				
	Emergent strategy	Co-maintenance				
	Build brand awareness	Co-outsourcing				
		Co-disposal				
		Co-experience				
		Co-meaning creation				

Fonte: Frow et al. (2015), p. 9.

amplified networks and access to information to innovate through co-creation (WONG et al., 2016). Co-creation has risen in importance to the point in which companies base their business models on activities that generate co-creation of value, what would not be possible without the current communication technologies (RAYNA; STRIUKOVA, 2015). With regards to the future of co-creation facilitated by technologies:

> In any case, technologies such as 3D printing will enable in the near future even more co-creation opportunities. In this context, the future competitive advantage will probably be less about ‘picking up good ideas here and there’, but instead having a stable community of innovators around. For that to happen, costs and motivations should of course, be thoroughly understood, but beyond that, the social relations and dynamics within these communities need to be apprehended. (RAYNA; STRIUKOVA, 2015, p. 14).

2.3 STARTUPS AND BUSINESS MODEL

For the purpose of this article, fintechs will be considered technological startups of the financial services sector. In order to analyze them properly, it is necessary to define what is a startup. Even though the discussion around startups is recent, Rasmussen e Tanev (2016), Trimi e Berbegal-Mirabent (2012), Stayton e Mangematin (2016), Ries (2011), Blank (2013), Frederiksen e Brem (2016), and Dullius (2016), among others, shed the initial foundation upon which the definition of startup will be built.

According to Casson (2005), Kirzner (1997), and Venkataraman (1997) *apud* Dullius (2016), startups can be considered new businesses created from the perception of an opportunity to be explored, and derived from the asymmetry of information cause by the possession of differentiated knowledge. Startups tend to emerge and grow in areas where high technology is fundamental, associating therefore their their creation with the usage of this type of technology. By exploring opportunities to solve problems with innovative potential, they aim to enter areas previously unexplored, where there is potential for innovation and profit. Dullius (2016) proposed the following definition for a startup:

> "A temporary organizational arrangement inserted into an environment of high uncertainty and risk, whose outlines resemble a firm through the search by entrepreneurs for a business model that is repeatable and scalable, having a foundation on potentially innovative goods and services developed from differentiated knowledge on science, technology, economy, and new markets (DULLIUS, 2016, p. 35)."

Blank (2013) defines a lean startup as a temporary organization designed to search for a repeatable and scalable business model. According to the author, the three main point of these organizations are: 1) rather than have long business plans that take months to plan, their business models are created using a technique called business model canvas, that will depict how the startup will seek value creation for its clients; 2) these new ventures rely on rapid feedback and customer development (as opposed to product development) to test their hypothesis and MVPs, this in turn feed back into the process of developing new ideas and pivoting those which are not working; and 3) startups opt for agile and iterative development to minimize waste by focusing on MVPs and growing them with feedback. Rasmussen e Tanev (2016) and Ries (2011) define the concept of MVP as the initial hypotheses to be tested and validated via feedback from clients. Startups operate in cycles of MVPs/hypotheses, which are iterative and incremental, and constantly validate with clients, in order to prioritize developments of higher value.

The stages through which a startup goes in the spheres of product emergence and organization emergence are studied by Stayton e Mangematin (2016). The results of an analysis of four startups in the USA reveal that the tension between time, financial resources, and human capital impacts the success of the product emergence and the organization emergence in distinct ways. On the one hand, the scarcity of time was an accelerator of the launch of new products. On the other hand, little time might mean an overlap of responsibilities and decision-making might need to be ad hoc, what is a challenge to the firm later on. Figura 7 represents a diagram of the phases through which the product and organization sides of a startup go.

Figura 7 – Stages of fast venture development

Product emergence	Stage 1 Idea formation and selection	Stage 2 Prototyping	Stage 3 Pivot (usual)	Stage 4 Development of minimum viable product	Stage 5 Systematization of production	Stage 6 Continuous improvement
Organization emergence	Team formation	Ad hoc decision-making and extraordinary resourcefulness			Organization formation pivot	Formalization of agreements and professionalization of management
	Stage 1	Stage 2			Stage 3	Stage 4

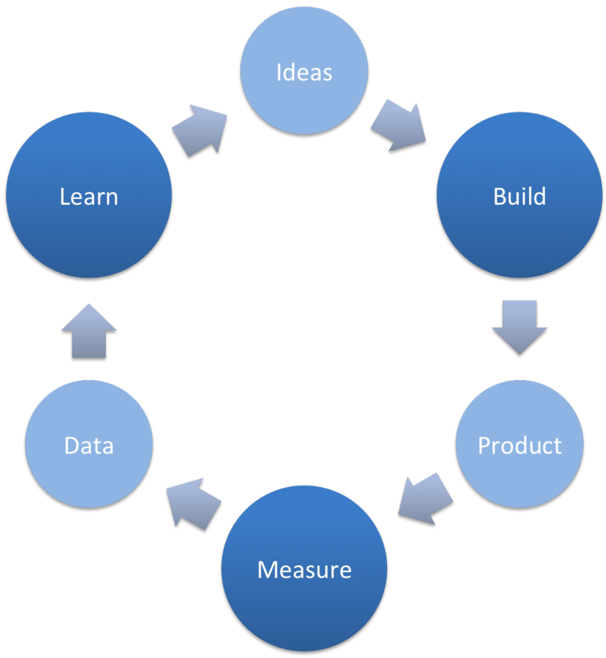
Fonte: Stayton e Mangematin (2016), p. 397.

The discovery through learning is one of the foundations of the lean startup (TRIMI; BERBEGAL-MIRABENT, 2012). To reach that goal, Rasmussen e Tanev (2016) and Ries (2011) propose an iterative model for startups to operate: the build-measure-learn model. This cycle is composed of three stages. Initially, the MVP is conceived, along with the hypothesis to validate. Then the value of the MVP is validated qualitatively and quantitatively, through data collection and analysis, user and client feedback, and metrics defined to measure success. Lastly, The is a learning stage, in which the startup analyzes the results and defines the next MVPs/hypotheses to be validated. "In its essence, TLS (the Lean Startup) can be boiled down to the concept of innovation through repeated, validated experimentation. TLS acknowledges the great uncertainty found in a startup and rejects pure analysis and long-term planning in favor of generating data to minimize uncertainty through learning"(FREDERIKSEN; BREM, 2016, p. 4) . This cycle is represented in Figura 8.

An important component and regarded as consensus is the use of business models as sources of innovation to leverage the core competency of the firm. In the case of startups, a flexible business model is essential, based on iterations of validation with clients (TRIMI; BERBEGAL-MIRABENT, 2012). Currently, software-based products are usually created for new and highly dynamic markets, involving a high level of uncertainty at technical and business levels. The main question becomes how to avoid waste while building software and how to grow the chances of success before resources are depleted (LINDGREN; MÜNCH, 2016). Practices that help with this objective are those of open business models - what comes closer to the concept of open innovation proposed by Chesbrough (2006) - and the business model canvas.

An aspect of product development at lean startups is that of continuous experimentation (FAGERHOLM et al., 2014). A study conducted in Finland analyzed practices of software development, of collection of client feedback and how it influenced the product life cycle. Results pointed a desire to focus on value for the client and decision-making based on data, even

Figura 8 – The build-measure-learn cycle.



Fonte: Adapted from Ries (2011), Trimi e Berbegal-Mirabent (2012), Frederiksen e Brem (2016).

though the establishment of relevant metrics was pointed out as a challenge. Initiatives such as agile software development, continuous integration and short launch cycles were observed at companies, considered as supporters of the experimentation process. It was pointed out as obstacles to continuous experimentation the organization culture, with inadequate levels of agility, proactivity, transparency, and uncertainty tolerance (LINDGREN; MÜNCH, 2016). "A suitable experimentation system requires at least the ability to release minimum viable products or features with suitable instrumentation, design and manage experiment plans, link experiment results with a product roadmap, and manage a flexible business strategy"(FAGERHOLM et al., 2017, p. 292).

The customer development process is proposed by Blank (2013) is an alternative to long product development cycles, closely related to the old-fashioned research and development departments at companies. In the process, the company concentrates on discovering and validating ideas with potential clients, restarting the process until it finds an idea with potential value, to explore this idea commercially and build a company around this business model (TRIMI; BERBEGAL-MIRABENT, 2012).

One of the dilemmas of lean, technological startups isn that they need to deal with issues regarding business development, innovation and early internationalization. This aspect is this aspect is analyzed by Stayton e Mangematin (2016), Tanev et al. (2015). Time is a critical resource, for international technological startups, given the amount of time needed to start a venture might have an impact on resource requirements, property and control, marketing timing and international competitive advantages (STAYTON; MANGEMATIN, 2016). Tanev et al. (2015) analyze research areas on lean startups and companies which were born global, and find similarities in the challenges faced by both. The result of their study the concept of a lean-global-startup, in which companies can become global from the foundation or the lean way to operate, above all the technology-intensive. Companies analyzed in this study had problems to deal with complexity, uncertainty and risks of being innovation at a global level, which were dealt with through actions of intellectual property protection, business support and learning new ways to deliver their value proposition.

2.4 FINTECHS

The study of fintechs is still incipient, and so is literature on the topic. The emergence of fintechs (the word comes from the contraction of finance and technology) can be observed when technological innovations such as the telegraph, in 1838, and the transatlantic cable, in 1866, were used as infrastructure for the first global integration of the financial system at the end of the 19th century, which has been called fintech 1.0 (ARNER; BARBERIS; BUCKLEY, 2015).

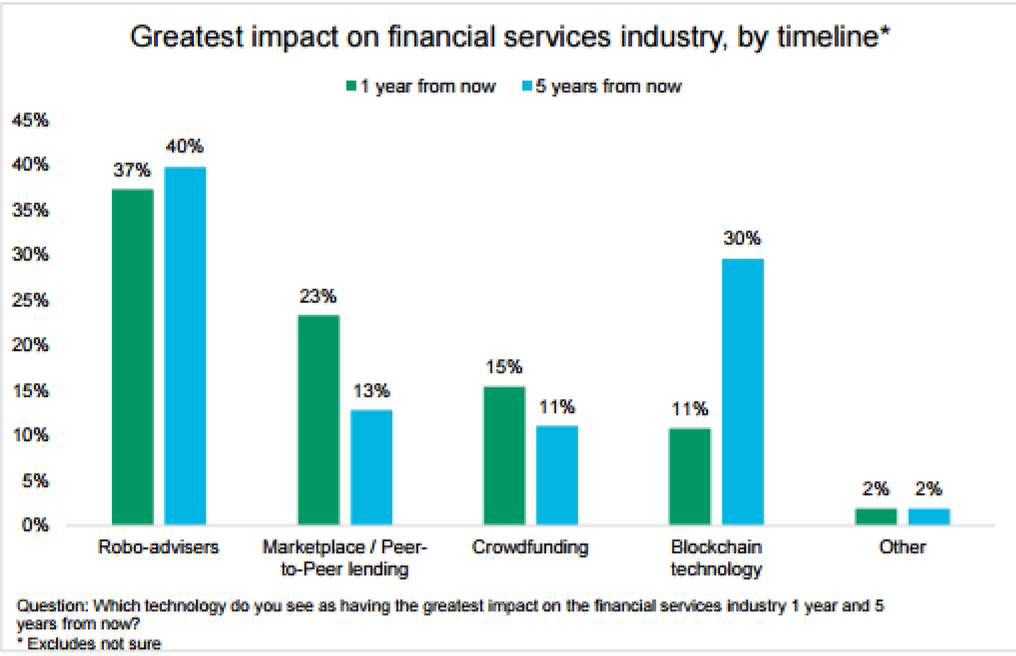
Later on, with the introduction of the automated teller machine, larger integration between financial agents, the introduction of the Internet, and the regulation of the financial market globally, an age dominated by fintech 2.0 saw the ascension of DFS (digital financial systems) (ARNER; BARBERIS; BUCKLEY, 2015). In this period, it is common to identify many players that are classified today as operators of the financial market, according to Brasil (2016): banks, insurance companies, credit unions, etc.

The 2008 global financial crisis brings along a new paradigm, which, together with technological evolution and developments and the rise of startups, kick-starts the fintech 3.0 phenomenon (ARNER; BARBERIS; BUCKLEY, 2015; SINGH, 2016), whose setting and creation are similar to those of startups. These fintechs challenge the legitimacy of traditional players of the financial market by entering a highly regulated market and aiming to leverage disruptive technologies to compete in this market (SINGH, 2016). According to Gulamhuseinwala et al. (2015), fintechs have a digital experience, new technologies and new business models.

According to Lee e Lee (2016), the fintech industry arose naturally from the change in standard of living, which can be divided into four areas. First, changes in the consumerism environment are accelerating due to the use of connected mobile devices, raising the potential in the area of payments and remittances. Second, the development of technology enables the collection of high amounts of data across several platforms, expanding the potential of credit analysis, lending and asset management. Third, competition is incessant at a global level in the financial market, augmented by mobile technology. Fourth, fintechs offer alternative products in the financial market, bringing innovation to traditional products in the market, which become attractive given the experience with the subprime crisis, insolvent loans and the financial crisis.

The use of disruptive technologies has been the object of study to quantify the impact fintechs will have in the global financial market. In a survey with its members, the CFA Institute surveyed over 775 members on technologies which would have an impact in the financial sector. The result is displayed in Figura 9. Acording to the survey, the majority of the members believe that robo-advisers will have the most short and long-term impact. Another technology brought up was blockchain, the technology behind Bitcoin, which might become a risk or opportunity in the medium to long-term, despite the lack of use of the technology in asset management (CFA, 2016).

Figura 9 – Greatest impact on financial services industry, by timeline.



Fonte: CFA (2016), p 17.

The PWC (2016) report lists key trends pointed by CEOs, CIOs and heads of innovation interviewed: improvements to client and customer experience, self-service, sophisticated data analysis and cybersecurity. Altogether, more than 20% of the segment of financial services is at risk due to fintechs, which are succeeding where traditional financial institutions have failed. Regarding disruptive technologies, such as blockchain, 56% of the intreviewees recognize its importance, but 57% do not know how to deal with this threat. Technology might potentially create a radically different scenario for financial services, where profit might be disrupted and redistributed in favor of highly efficient blockchain platform owners . The challenge will be to incorporate such kind of disruptive technologies in their business model. According to Fintechlab (2016), fintechs:

> "Are initiatives which join together technology and financial services, bringing innovation to people and companies. This is reflected on better journeys in the

> use of products and services that bring better user experience; generation of intelligence from inimaginable amounts of data and collective knowledge to optimize decisions; and the integration of different market links in a much more efficient way, with less operation failures, increasing the speed of transactions and reducing costs."(FINTECHLAB, 2016, p. 3).

Conexão Fintech (2017) lists the top 10 trends in the fintech scene in Brazil in 2017. That list is composed of 1) robo-advisers; 2) unbanked; 3) open banking and API; 4) invisible payments; 5) regulation; 6) small and medium enterprises; 7) approach of the banks; 8) insurtech; 9) blockchain; and 10) chatbots. The report defines that fintechs have three main purposes: improve client experience, accelerate operations, and simplify processes.

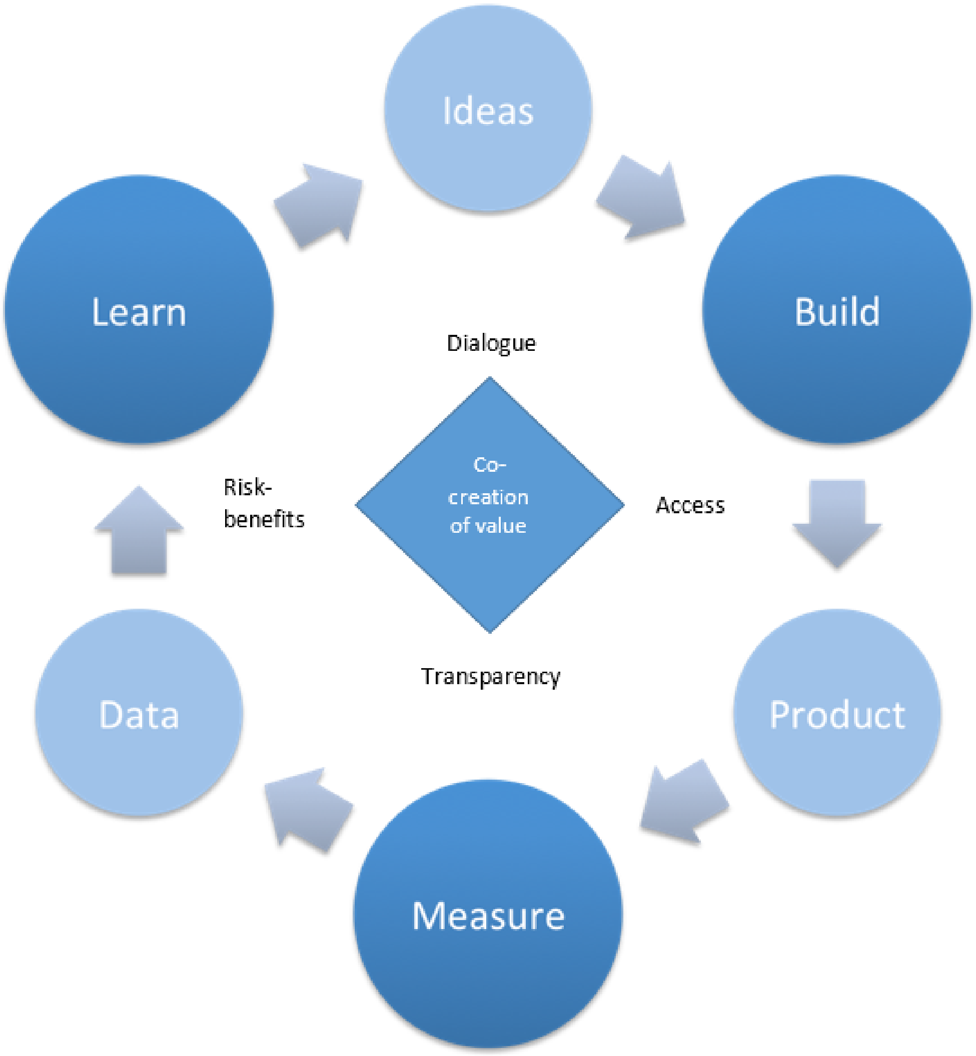
Fintechs in Brazil are a kind of startup that is in constant growth. In 2015, companies which were followed closely amassed an estimated total investment of R$200 million. For 2016, the estimates add up to R$450 million (FINTECHLAB, 2016). According to Conexão Fintech (2017), those investments have exceeded R$500 million. In terms of distribution, 31% of Brazilian fintechs are B2C, 27% are B2B, and 42% service both audiences. Categories identified, among the many new business models, are payments, asset management, lending, debt negotiation, investments, funding, insurance, financial efficiency, security, connectivity and Bitcoin/blockchain (FINTECHLAB, 2016).

For the purpose of this study, fintech will be considered technological startups of the financial services sector, with innovative business model propositions, which were founded after 2008, therefore categorized as fintech 3.0 (ARNER; BARBERIS; BUCKLEY, 2015).

3 MODEL OF THE INFLUENCE OF CO-CREATION OF VALUE IN THE BUSINESS MODEL IN FINTECHS

In previous chapters and sections studies were raised to base the theoretical driving construct of this study. This section will synthesize the main ideas which compose this construct, with the goal to reach the objective of this research. Given the scarcity of studies on the subject, it is imperative that a framework of analysis be created, through which it is possible to analyze co-creation of value and business models in Brazilian fintechs. For that purpose, Figura 10 was created in a junction of co-creation of value and startup literature.

Figura 10 – Proposed framework to analyze the influence of co-creation of value in the business model of fintechs



Fonte: Created by the author from Trimi e Berbegal-Mirabent (2012), Frederiksen e Brem (2016), Ries (2011), Prahalad e Ramaswamy (2002), Prahalad e Ramaswamy (2004a).

Business model analysis will be conducted by looking at the following aspects of the fintech: value proposition, macroprocesses of interaction, segment of financial services, monetization and technology application. To fulfill this goal, the literature review will leverage both startup and fintech studies. In order to analyze value proposition, macroprocesses of interaction and monetization, the literature by Trimi e Berbegal-Mirabent (2012), Rasmussen e Tanev (2016), Gulamhuseinwala et al. (2015), Stayton e Mangematin (2016), Ries (2011), Blank (2013). For the purpose of analyzing segment and technologyn application, reports such as (FINTECHLAB, 2016; FINTECHLAB, 2017; Conexão Fintech, 2017) will be referenced.

Actors and mechanisms of co-creation of value will be assessed using the aforementioned frameworks. In order to analyze actors of value co-creation, aspects of the framework proposed by Frow et al. (2015). Mechanisms of co-creation of value will be divided into strategy, relationship, challenges and the DART model. The authors used in these sections will be Payne, Storbacka e Frow (2008), Prahalad e Ramaswamy (2002), Prahalad e Ramaswamy (2004a), Prahalad e Ramaswamy (2004b).

The last objective, the influence of co-creation of value in the business model, will be analyzed using a mixed model of both the Build-Measure-Learn and DART models. Since startups work in an iterative way, this study expects to understand if and how co-creation of value influences the business model of the startup. The proposed mixed model is represented in Figura 10 and will be used to analyze how the company and clients act in each of the proposed stages of the Build-Measure-Learn model (TRIMI; BERBEGAL-MIRABENT, 2012; FREDERIKSEN; BREM, 2016; RIES, 2011) and the influence of the DART model (PRAHALAD; RAMASWAMY, 2002; PRAHALAD; RAMASWAMY, 2004a) in this cycle.

The Build stage takes in ideas and hypotheses as input and focuses on creating the MVP, upon which following stages will be based. It begins in the build stage where a set of ideas take shape. Once the prototype or MVP is built and codified, it is presented to customers (TRIMI; BERBEGAL-MIRABENT, 2012). These early prototypes (MVPs) are developed in close collaboration with customers and as such their scope is almost directly specified by them as well. (FREDERIKSEN; BREM, 2016). Startups and clients might interact in this stage here to come up with ideas and help build them.

The next stage is Measure, and it tackles the techniques to identify how the MVP will be evaluated. Customer response is measured using different qualitative and quantitative techniques (TRIMI; BERBEGAL-MIRABENT, 2012). In this stage, co-creation best describes this inbound flow, as TLS involves users and customers in ways that generate or create new data, rather than being merely a source for data that existed pre-inquiry (FREDERIKSEN; BREM, 2016). Startups might create those from experience or team up with clients to understand how to measure the success of a product, service or experience.

The learning process via Learn stage is an important part where the startup will decide whether to persevere or pivot a solution, based on early failure. The information gathered may provide specific learning that serves to validate or reject the hypotheses proposed, which in turn initiates the next iteration process. (TRIMI; BERBEGAL-MIRABENT, 2012) “Unfortunately, if the plan is to see what happens, a team is guaranteed to succeed — at seeing what happens — but won’t necessarily gain validated learning. This is one of the most important lessons of the scientific method: if you cannot fail, you cannot learn” (RIES, 2011, p. 56). This approach to learning is fairly rigorous and scientific, and built with the aim of being able to learn at the end of the process (FREDERIKSEN; BREM, 2016). While companies will learn how their efforts meet clients’ problems, clients in turn will learn from the whole experience whether the company’s offering, the experience, is a match for them. The cycle then continues on iteratively.

In order for co-creation of value between client and startup to exist, the DART model must be regarded. The combination of Dialogue, Access, Risk-benefits and Transparency are suggested as the building blocks upon which this relationship may grow (PRAHALAD; RAMASWAMY, 2002; PRAHALAD; RAMASWAMY, 2004a). These aspects can be regarded in each step of the Build-Measure-Learn process for both company and client.

Dialogue is crucial at every step. Through it, the client can find a way to offer their view into the creation process. Without Dialogue the company might not be able to identify the contribution of clients or might discourage such contribution completely (PRAHALAD; RAMASWAMY, 2002; PRAHALAD; RAMASWAMY, 2004a).

Access has to with access to value at multiple points of exchange, instead of a single one (i.e. the purchase of a good), while also challenging the notion that ownership is the only way for the client to experience value. Access might mean that clients will be able to interact with the company and experience (PRAHALAD; RAMASWAMY, 2002; PRAHALAD; RAMASWAMY, 2004a).

Risk-benefits has to do with the client being more transparent about risks, and also clients taking a more active role about it. The interaction and co-creation of value will make it more natural that clients accept and take more responsibility for the inherent risks of the business and their choices (PRAHALAD; RAMASWAMY, 2002; PRAHALAD; RAMASWAMY, 2004a).

Lastly, Transparency has to do with the the creation of trust between company and client and the sharing of information between both parties. By relinquishing control of information before the traditional point of exchange, companies can encourage clients to become co-creators of value (PRAHALAD; RAMASWAMY, 2002; PRAHALAD; RAMASWAMY, 2004a).

The integration of both the Build-Measure-Learn and DART models will be used as a framework to analyze the influence of co-creation of value in the business model of fintechs. Furthermore, that integration allows for the analysis of co-creation of value among fintechs, clients and other stakeholders.

4 METHOD

This study is predominantly exploratory and qualitative. It was conducted through a case study research strategy. Case studies are an adequate tool to analyze contemporary phenomena without the need for behavioral control over the researched elements (YIN, 2013). A case study is a method to investigate an empirical theme following a group of pre-specified procedures (YIN, 2013). For such procedures, semi-structured interviews were conducted, followed by the analysis of data collected via these interviews (primary sources) together with information gathered from media outlets, reports and scientific publications (secondary sources). Semi-structured interviews are in-depth interviews with a higher degree of flexibility than structured interviews, which ensure, however, the interviewer to maintain limited the scope of interest of the research (SREEJESH; MOHAPATRA; ANUSREE, 2014).

4.1 CASE STUDY SELECTION CRITERIA

The criteria adopted to select the fintech subject of this study was adherence and exercise of co-creation of value; relevance of buiness model; use of innovative technology; and the condition of belonging to the fintech 3.0 category.

The first criterion is of high importance given the relevance to this specific study. To make sure the fintech was a relevant subject of study, the researcher attended workshops and presentations given by the fintech's CEO to ascertain that co-creation of value was exercised in any degree, whether objectively or subjectively, which was the first point of validation. The second point of validation was confirmed after the interview with the CEO, where it became clear that Warren indeed focused on co-creation of value with its clients (and to a lesser degree also with other stakeholders).

The second criterion relates to the relevance of the fintech in question. Warren is regarded by media outlets as an innovative, promising venture in Brazil (Mapa Fintech, 2017) and Latin America (Tech Bullion, 2017). Therefore, it fit the criterion of relevance, which also resonates with the nature of disruption expected by startups and fintechs. Interviews with clients show that the business model proposed by the fintech is innovative due to several factors that set it apart from other solutions by fintechs and other financial institutions i.e. due to the simplicity, portfolio diversity and interaction with the client.

The studied fintech showcased the use of technologies identified as trends in the fintech market. Robo-advisers and chatbots are some of the trends identified for 2017 in the financial and fintech market in Brazil, and both of those technologies are present at Warren.

Lastly, the is the foundation date, which must be after the 2008 global financial crisis.

This criterion makes sure the fintech belongs to the fintech 3.0 group, which mostly relates to the new wave of technological startups of the financial sector (ARNER; BARBERIS; BUCKLEY, 2015). Warren was founded in 2014, so it fit this criterion.

4.2 DATA COLLECTION

Data collection contemplated primary and secondary data, as explained in the sections below.

4.2.1 Primary data

Primary data was collected through semi-structured interviews with both the fintech and clients. All interviews were recorded using audio recording mechanisms. The fintech interviewee was the startup's CEO and therefore occupies a relevant role to partake in this study. The clients were selected using different methods. The list of clients interviewed was composed of two clients referred by the fintech, two clients of the researcher's network of contacts and one client referred by another client. All of the clients as well as the fintech's CEO reside in Rio Grande do Sul.

Interviews were held in Porto Alegre, either face-to-face (with four clients and the CEO) or via Skype (one client). In total, three hours and fifty-six minutes were recorded. The CEO reported having 15 years of knowledge and work experience in finance. The interview with him had the duration of approximately fifty one minutes and was held in July.

The majority of the clients reported having a knowledge of three or less years of finance. Two clients reported working at a financial institution. Others said they worked as programmer/entrepreneur, web developer and public servant. One client stated that she was no longer a client. Her answers were considered in this interview for the duration of the relationship between her and the fintech. Other clients reported their relationship with Warren had been active for around six to eight months. In total, interviews with clients had the duration of three hours and five minutes.

Figura 11 summarizes interviews held.

4.2.2 Secondary Data

Secondary data were used in this research. These data stemmed from several sources. The first source is scientific papers, journals and publications. These were related mostly to the literature review on co-creation of value, innovation and startups explored in previous sections of this research.

The second source were specialized reports and sources related to fintechs or consulting firms and bank papers related to fintechs. Due to the recency of this phenomenon, those sources were essential to capture the state-of-the-art of the fintech development. Sources such as

Fintechlab (2017) and Finnovista (2016) were used, which specialize in fintechs and study the development of fintech in Brazil and Latin America in-depth. The consulting firms and banks listed in this study were PWC (2016), CitiGPS (2016) and CFA (2016).

The last source were blogs, media outlets and social networks related to the fintech subject of this study. Those sources of information were invaluable due to the recency of the subject. The recent launch of this fintech in the Brazilian market is also a constraint. Because of that, there was limited information available and multiple sources were leveraged for the purpose of the analysis.

4.3 RESEARCH PROTOCOL

Two interview scripts were used for data collection. The first one was directed at the fintech and its representative, in this case the CEO. It had four sections. The first section went over personal data. The second section handled fintech data i.e. foundation date, number of employees, etc. The third section apporach the fintech's business model. Aspects such as business model description, value proposition, montetization, etc. were discussed in this section. The last section explored co-creation of value in the fintech, strategy, methods, means, principles and values.

The second interview script was prepared for clients and had three sections. The first one was around personal data, knowledge of finance and the duration of the relationship with Warren. The second sections discussed business model and how clients perceived it from a client perspective. The last section explored co-creation of value together with the fintech and the client's views on it.

4.4 DATA ANALYSIS

The analysis process was composed of a series of stages. First, interviewed were transcribed literally, according to the interviewees' responses. Secondly, a content analysis technique was used. According to Bardin (1977), content analysis is a set of techniques of communication analysis in order to get qualitative or quantitative indicators that allow for the inference and conclusions regarding a specific message.

The content analysis was conducted in three stages. Pre-analysis, the first stage, creates schemes for the organization of ideas. The second one, material exploration, defines analysis categories and identifies context in documents. Lastly, processing of results, inference and interpretation happens through reflexive and critical analysis (BARDIN, 1977). To aid in this task, the NVivo software was used. The use of such software increased agility, quality and overall organization of the categories in analysis.

Figura 11 – Summary of interviews held

Type	Occupation	Gender	Age	Education	Work experience in financial services	Knowledge of finance	relationship with the fintech	Interview date (mm/dd/yyyy)	Interview duration (h/min/s)	Method
Warren	CEO	Male	37	Economics	15 years	15 years	-	07.12.2017	00:51:28	Face-to-face
Client #1	Programmer and entrepeneur	Male	23	Information systems	None.	6 months.	Has been a client for 7 months.	08.10.2017	00:32:49	Face-to-face
Client #2	Public servant	Male	24	Cartographic engineering	None.	1 year.	Has been a client for 6 months.	08.03.2017	00:36:57	Face-to-face
Client #3	Project leader	Male	34	Informatics, management and technology, quality management, production	1 year	3 years	Has been a client for 8 months.	08.15.2017	00:21:50	Face-to-face
Client #4	Investment products coordinator	Female	28	Business management, finance.	9 years	9 years	Was a client for 2 months.	08.03.2017	00:38:14	Face-to-face
Client #5	Web developer	Male	34	Advertising	None.	1 year (approx.)	Has been a client for 6 months.	08.08.2017	00:55:10	Skype

Fonte: Created by the author.

5 RESULTS

5.1 THE FINTECH

Warren, short for Warren Brasil, is an investment fintech headquartered in the Brazilian Southern city of Porto Alegre and describes itself as an investment platform which helps people to invest well by creating investment objectives, a different take on investing, as per the CEO. It has 27 employees in its ranks as of the date of the interview with the CEO, all based in the city. Besides the headquarters, the company also has a support office in São Paulo.

The history of Warren is tightly intertwined with its CEO's. After years as a partner of one of Brazil's largest brokers, XP Investimentos, he decided to part ways with the firm and start an entrepreneurship in the fintech field, as he states. Besides the CEO, there are three other partners: André Gusmão (head of development, also a former XP), Rodrigo Grundig (head of user experience and design), and Marcelo Maisonnave (investor and co-founder of XP investimentos). Together they invested around R$5 million (VALENZA, 2017).

According to the CEO, there are a few significant milestones the fintech has experienced. The first one dates back to 2014, when the firm firstly started operating in New York. Shortly after and following up on a change of plan, Warren decided to move all of its operations to Brazil, where the founders, including the CEO, had worked for most of their professional careers. The fintech firstly welcomed its first clients in 2017, following the initial ideation and validation phase. To date, the company has approximately 14.000 clients - individuals who have invested the minimum amount of $100 or higher - and has more than R$60 million under management (WARREN NEWS, 2017b).

5.1.1 History

The idea behind Warren can be traced back to a particular moment in its CEO's life. To understand the context of that decision, there's a need to take a look at his experience in the financial services field. It started when he was still a partner at XP Investimentos. His career development and experience in the field followed that of XP's. He started working at the company over 10 years ago and was present at its important milestones, he states. The company moved from Porto Alegre to Rio de Janeiro to São Paulo. After a year in the latter, he had the opportunity to open the company's office in New York, in 2012.

He describes New York as the Mecca of fintechs with regards to technology, business models and financial services trends, such as payments, lending, transfers, remittances, among which there was investments. In the neighborhood where he used to live there was a small investments company which tackled, in the CEO's opinion, two of the main problems with the industry to date: the investment experience and the conflict of interest. The investment experience itself was a little rough around the edges, however it provided a softer, simpler and more pleasant experience than other similar companies. Benchmarking against that firm, he says that he decided to drop out of XP Investimentos to start and entrepreneurship to tackle these problems and pursue what he describes as whats looked like the future of the financial world.

Shortly after he started a partnership with two friends - André Gusmão and Rodrigo Grundig - to create the prototype of what would become the fintech called Warren. As he describes, the main purpose behind the idea was to create an efficient, simple, intelligent and fun platform to deal with the world of investments. The endeavor started in New York, where the three partners, using the future CEO's apartment as an HQ, started brainstorming and researching ideas, and fleshing out a first prototype to showcase at major tech conferences in the United States. The running prototype was eventually showcased in 2014 at Collision, a major tech conference being held in Las Vegas. The result was satisfying: out of 500 startups, Warren was shortlisted to the top 10. The first round of validation was over, as per the CEO.

The last partner came on board after Collision. Marcelo Maisonnave, an ex-XP Investimentos partner, had also quit the company in order to pursue new paths which were similar to the CEO's. They eventually closed a partnership and started to work on next steps. In spite of the several offers Warren received from incubators and investors in the United States, they decided to start operations in Brazil, taking the advice of the new partner. The CEO says the main reasons behind this move were: 1) the lack of a similar solution in the country; 2) the accumulated experience the partners had in the Brazilian market and network; and 3) a new legislation due to be passed by CVM (Securities and Exchange Commission of Brazil), which would allow asset managers to distribute their own products online. The move to Brazil occurred in October 2015 (WARREN BRASIL, 2017).

In Brazil, the fintech started to shape its operations, get all of the legal requirements sorted out and work on its launch. With regards to operations and legal licenses with CVM and Anbima, due to the path taken by the fintech to automatize most of its back end processes, the company had to show CVM it would be able to perform with 2 people what normally took 10 people to achieve at other financial companies, the CEO says. With this move, Warren intended to drive down costs and focus on providing a good experience to its customers.

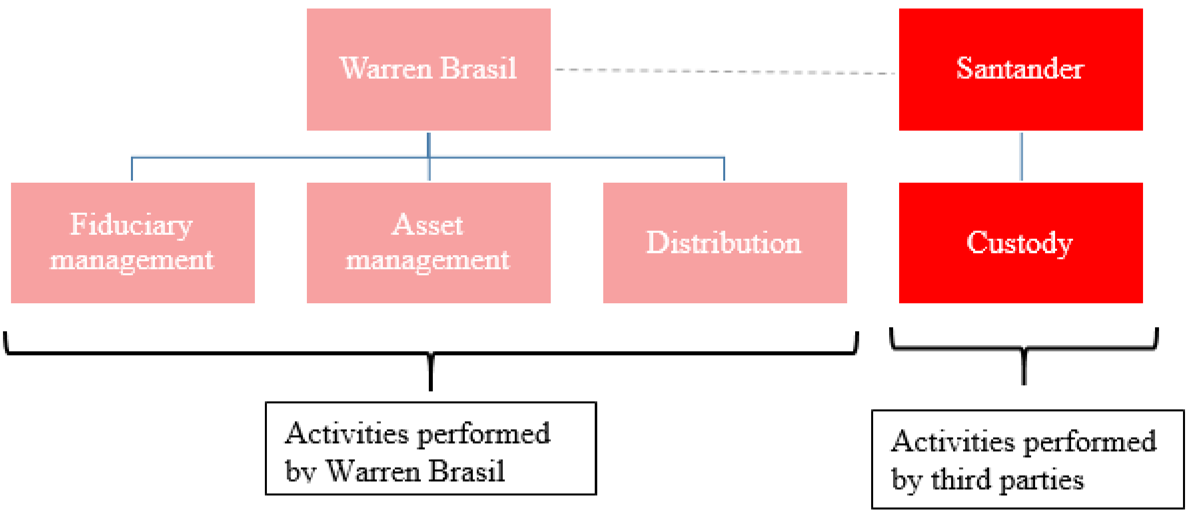
The launch strategy consisted of another round of validation, this time with actual users and early adopters. Altogether, 500 beta testers, among which influencers and early adopters, were invited to test the application, validate its user experience and provide feedback. This technique was used in sync with a waiting queue strategy, aimed at starting a buzz around the platform. The waiting queue reached over 30 thousand people at its peak. On January 4 2017, the first 500 clients were allowed to access the platform for the first time, a milestone for the start of commercial operations (BORRELLI, 2017).

5.1.2 Activities and Internal Divisions

Warren was designed to encompass 3 out of 4 usual roles and activities in a typical investments business model as depicted in Figura 12, according to the CEO. The activities contained within Warren are fiduciary management, distribution and asset management. The fourth activity, custody, is of responsibility of Santander.

According to the CEO, fiduciary management deals with opening and closing of client accounts, calculating quotas and disclosing fund-related information. Asset management is responsible for executing the investment fund's strategy i.e. purchase and sale of products for the funds. Distribution is carried out online via website and application. Finally, custody regards the safekeeping of assets.

Figura 12 – Investments activities performed by Warren and third-parties



Fonte: created by the author based on interview with CEO.

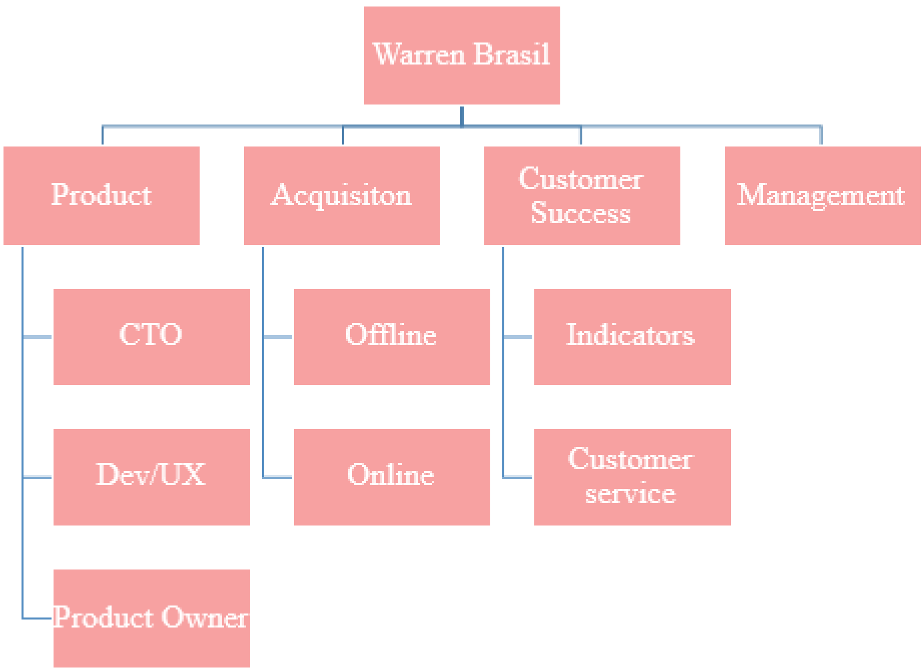
The divisions within Warren can be summarized in 4 boxes: product, acquisition, customer success and management, says the CEO. The first one is closely related to the distribution activity of the fintech, since it manages the product strategy, development and user experience of the website and application i.e features. Under this division are the fintech's Chief Technology Officer (CTO), the development and user experience officer and the product owner, besides the development team.

Acquisition is responsible for customer acquisition channels and has two subdivisions: offline and online. Online is in charge of planning, executing and measuring ad campaigns on social networks, such as Google, Facebook, etc. Offline is in charge of organizing events and basically any acquisition activity that does not relate to the digital environment. A new customer is handed over by the Acquisition division to the Customer Success division when they are activated i.e. they invest a minimum of R$100 in an objective.

Customer Success is ahead of a few activities on its own. First, it answers for the fintech's customer service. To assist in that task, they collect data and follow indicators like how many likes there were on Facebook, churn rates i.e. customers leaving Warren, referrals and NPS (Net Promoter Score, the likelihood to recommend the company to a friend). They are also responsible for upselling when they identify clients with higher investment potential.

Lastly, there's the management. This division is in charge of the asset and fiduciary management of the fintech, among other activities. Such processes are complex and time-consuming. In order to scale and keep costs down, Warren adopted a strategy of automation of almost 100% of back-office processes.

Figura 13 – Divisions within Warren Brasil



Fonte: created by the author based on interview with CEO.

5.2 BUSINESS MODEL

Fintechs are new businesses focused on the financial services which tend to comprise different types of innovation, such as a digital experience, new technologies and new business models (GULAMHUSEINWALA et al., 2015). By definition, there are many fintechs, and it could be argued that banks and financial institutions are also fintechs, due to the evolution of their technology and information systems. However, it's the disruptive aspect of the new fintechs which defines this new wave of entrants, much more similar to startups in their structures, way of operating and validating ideas and hypotheses, and defiance of the status quo (ARNER; BARBERIS; BUCKLEY, 2015; SINGH, 2016).

One of the main aspects of a fintech is its business model. Teece (2010) defines a business model as "the management's hypothesis about what customers want, how they want it and what they will pay, and how an enterprise can organize to best meet customer needs, and get paid well for doing so". As a new venture with limited funding, those companies must validate their business ideas and hypotheses in an iterative way, in order to stay relevant and cost-efficient. In the case of a startup, a flexible business model is essential, and should be validated together with its customers (TRIMI; BERBEGAL-MIRABENT, 2012). The discovery of its value through learning is one of the bases of a lean startup, the case of a fintech (TRIMI; BERBEGAL-MIRABENT, 2012).

This section aims to map the business model of Warren and analyze how company and customers alike perceive it. Common themes in startups - such as value proposition, monetization, hypothesis and MVP validation, innovation and technology application - will be analyzed both from the perspective of the fintech and the clients, given the results of the in-depth interviews.

5.2.1 Value Proposition

The value proposition of the fintech is at the core of its business model. This value proposition is often validated and evolved iteratively, therefore it's important that the fintech's and client's perception of it be as similar as possible. The value proposition is the solution to a problem and is what gets customers enthusiastic enough to buy and use it (RASMUSSEN; TANEV, 2016). Due to the rapid spread of technology, "a more customer-centred model is needed, requiring business to constantly re-evaluate their value propositions to ensure their offer matches well with customer demands"(TRIMI; BERBEGAL-MIRABENT, 2012).

There were many themes that came up during interviews and in secondary data with regards to Warren's value propositions. This section will approach those which were the most mentioned or perceived by both fintech and clients. Those were costs, liquidity and access; user and client experience; simplicity; the "objectives"feature; portfolio diversity; and customer service and relationship.

It is noteworthy that one of the main reasons portrayed to choose Warren is the lack of conflict of interests due to the focus on the client's objectives as opposed to a third-party's (WARREN BRASIL, 2017). This aspect is also highlighted by the CEO, besides being one of the defining key factors why the he has decided to quit a financial institution and start Warren. There is one mention by client #3 that interacting with a bank manager is an unnecessary hassle, but it is not depicted as a conflicted relationship. This could be an indicator that Warren might want to consider how to better exploit this aspect.

Costs, liquidity and access have to do with the financial aspect of the fintech's solution and how they are perceived from the client's perspective. Costs refer to the annual management fee of 0.8% over total wealth, which has been regarded as more competitive than market alternatives. Liquidity refers to the time between redeeming the money of an objective and having it available. Finally, access pertains to the initial deposit minimum amount to make an investment at Warren. Three out of five clients named this an important value proposition.

The fact that there is no monthly fee is an advantage, as notes client #1, though he is aware that there is an annual management fee of 0.8% over total wealth managed. The ability to invest as little as R$ 100 and not be committed to investing further is also a perk. Liquidity is also pointed out as an advantage against other vendors, since other platforms offer "longer-term, low-liquidity and low-yield products."

"Since I can invest as little as R$ 100 in stocks, I find it very easy, especially compared with alternatives from the market", says client #5. He also points that a one-to-three-day liquidity is fantastic, along with client #2. Also according to client #2, the comparison that Warren makes is accurate: to purchase stocks from financial institutions and banks, a 2 to 2.5% management fee is charged, while at Warren there is a lower reference annual management fee of 0.8

Being a fiduciary and asset managers gives the fintech the possibility to accept deposits as low as R$100. It doesn't necessarily mean that deposits this low make for a sustainable business, but it does open up Warren to a host of new clients willing to test it, according to the CEO. He says other Brazilian fintechs in the investments field have a much higher minimum deposit (i.e. R$12.000 and R$ 15.000), what makes Warren stand out. Also, on average, Warren charges a third of the amount regular banks do (WARREN BRASIL, 2017).

The second aspect is client and user experience. This aspect has to do with the overall experience clients and users are presented with while interacting with the fintech. Four out of five clients mention this when naming Warren's value propositions. "Warren is 100% focused on experience. The experience of investing with a bank is horrible", as per the CEO.

The overall usability and simplicity of the smartphone application is fantastic, says client #1. Client #3 goes through the step-by-step of using the application: "you log in, answer a few quick questions, it gives you a suggestion. If it doesn't suit you, you can start over. This is the main difference: it's agile and online", which in his opinion is much better in comparison with having to physically go to an agency, what many banks demand. Client #4 describes the app as clear and simple to understand, unlike other apps, while client #5 emphasizes the agility of logging in and the overall design, while on other apps there are several passwords to remember.

Besides the digital aspect of the experience, the effort to understand what the client wants is also a value mentioned by clients #3 and #4. To the first, Warren has successfully removed hurdles people faced when trying to invest with a bank, like other Brazilian fintechs, like the lack of understanding of client needs and desires. To the latter, it's the proximity that the fintech strives to achieve with the client, in order to better understand and offer products that are valuable to them.

Regarding simplicity, three clients list it as one of the value propositions of the fintech. The overall perception here, both by fintech and clients, is that Warren makes investing simpler. Investment products are very complicated, and Warren had a very simple solution to investing, both within the app and via customer service, says client #5. Client #4 says the main value proposition in Warren's product is the language of their product:

> "I think their main product is the language they use, and I see it as an excellent product. In my opinion, it is the challenge that banks have ahead of them, which is to follow in those footsteps to reach the people Warren is reaching today. [...] They have translated investments and that really makes life easier." .

Warren does not require you to start relationships with multiple financial institutions, since it comprises all of the required licenses to be the single point of contact to the customer for investment purposes, thus disintermediating the process and making it simpler. To invest with Warren, a customer must discover their investor profile, create an objective and make a deposit. The whole process is done online (WARREN BRASIL, 2017). The fact that it creates objectives aligned with your investor profile makes it simpler for people to invest, says the CEO.

The feature to create investment objectives i.e. "World Trip"is a recurring aspect clients brought up during interviews, having been mentioned by three out of five clients. Client #2 says that this feature captivates people by encouraging them to think of realistic objectives in order to save money, while Warren does all the calculations and presents them with a plan. With each deposit you get a step closer to accomplishing the objective, and that perception is passed on to you, he says. At other banks and financial institutions you invest your money in a product, not necessarily with the goal of achieving an objective. The fact that objectives are so tangible at Warren makes it fantastic, say clients #5 and #1.

The fintech defines itself as an investments platform that helps people invest well by building objectives. There are four main objective types: "monthly income"(live off your investment sometime in the future), "goal"(based on where you want to get), "free"(based on how much you intend to invest each month), and "emergency"(emergency fund for the short term) for the next three years) (WARREN BRASIL, 2017). The CEO says:

> "If you want to invest with a bank or a broker, they will offer and sell you a host

> of products. [...] At Warren we do things a little differently. Instead of buying a product, you buy an objective: "I want to go to Australia next year", "I want to retire with a million Reais", "I want to buy a car". Given the objective, Warren will tell you where to invest."

Two clients have identified the portfolio diversity as a strong value proposition of the fintech. The main financial products that compose the investment funds at Warren are fixed income and stocks. Depending on which objective you are investing into and your investor profile, Warren will suggest one of five different portfolios (WARREN BRASIL, 2017). Borrelli (2017) describes the portfolios:

Fundo Warren Renda Fixa: 100% fixed income;

Fundo Warren Multimercado I: 95% fixed income, 5% stocks;

Fundo Warren Multimercado II: 89% fixed income, 11% stocks;

Fundo Warren Multimercado III: 80% fixed income, 20% stocks;

Fundo Warren Multimercado IV: 66% fixed income, 34% stocks;

Client #2 says that one of the things that drew his attention to Warren is the fact that they also mix stocks into their portfolio, along with fixed income. He says that the price you pay to invest in stocks is usually high, and Warren is a good option because of the low costs involved. Client #5 also shares the opinion that it is an accessible way to invest in stocks and get a higher yield than investing in savings account. He says the liquidity also helps to boost the experience.

The presence of a strong customer service and relationship is named by all of the clients, some with a more positive impact than others, but all of them name it as a positive aspect. Under this umbrella falls a considerable part of the interactions between client and fintech. Customer service and relationship is a core of the business, says the CEO. At the end of the day, customer service is also an acquisition platform, besides being a tool to keep current clients happy and engaged.

As noted by clients #1, #2, #3 and #5, customer service and relationship is an aspect that sets the fintech apart. The current trend of focusing on providing a good customer service by fintechs such as Nubank, especially over social media - i.e. Facebook, WhatsApp and Twitter - adds extra value to their brand and product, says client #1. The amount of attention given by the customer service team on Facebook has been decisive to enhance client experience, "I'm not sure if it was because I was one of the first clients, but I felt like I had a service that was exclusive for myself", says client #2. Client #3 states:

> "They are very good, thoughtful and sincere at answering questions. Before I made my first deposit at Warren, I sent an email to them and to another fintech

> with some questions I had. Warren answered my questions in a personal tone, while the other sent me a text that was generic - i.e. we are a company with a lot of experience in this field, count on us, we look forward to your contact. I really liked the personal tone Warren used."

Clients #3 and #4 also mention that the relationship is a strong point of Warren, but highlight other aspects of it. The main difference from other financial institutions is that he can choose to have a relationship or not, says client #3. He prefers to use the app his way, but also states that customer service is helpful when needed, and via several communication channels, such as WhatsApp, Messenger of Facebook. Client #4 says that the relationship was pleasant, and all of her questions were answered when she needed help. She criticizes fintechs which want to replace banks, since the scale of operations is very different from one to another, and thinks fintechs - and Warren - should keep focusing on the relationship with clients, which she says is already being done by the fintech, but there is room for expansion. According to her, fintechs which aim to grow and replace banks end up becoming another bank.

5.2.2 Segment in the Financial Services Field

Warren defines itself as an investment fintech in the financial services field, as per the CEO. Warren has structured itself to be an fiduciary manager, an asset manager and a distributor, while outsourcing the custody to bank partner Santander. The fintech was allowed to shape its operations in such way due to a legislation passed in 2016 by CVM, which allows asset managers to directly distribute their funds online. This is an edge advertised by the company as a key difference from the competition: a client does not need an intermediary to benefit from being a client of Warren, since it can provide all the services itself at a lower cost (WARREN BRASIL, 2017).

According to the CEO, banks are the main competitor when it comes to market share, with over 4 trillion Reais under Custody. Warren competes with them by solving two of their problems, previously discussed in the value proposition section: client experience and conflict of interest. There are two other competitors in Brazil which are trying a similar approach to Warren's, as per the CEO. However, the initial deposit at those competitors are R$12.000 and R$15.000, which makes it harder for people to try their platforms due to the high initial deposit. Those competitors also demand that the client have a a relationship with a broker, what makes the whole experience more complex and expensive, says the CEO.

5.2.3 Technology Application

As previously defined, fintechs are startups of the financial services field, looking to create innovative business models with the help of technology. That is reflected on better user journeys in products and services, better usability, generation of intelligence from bigger data sets, and more efficient integration of different links of the market, reducing operational errors, increasing transaction speed and reducing costs (FINTECHLAB, 2016).

The main technology brought up by four out of five clients is the chatbot, which is aligned with the rising trend of robo-advisers in fintech. Clients remark that the experience created with the chatbot is similar to interacting with a person, close to a personal conversation. Client #4 states that this technology makes it easier for the fintech to communicate with the client, and for the client to understand the steps of the investment process. "The platform that talks to you and makes you feel cared for"is an aspect of the chatbot technology that client #2 brings up. When he refers Warren to a friend, he usually tells them to talk to the platform and see for themselves. The disintermediation part of talking to a chatbot is useful, since Warren does not demand I have a relationship with another financial institution and can solve my problems directly on the platform. The CEO explains that since they named the platform Warren, it made sense to have an initial conversation with the user.

The multi-device (website and application) aspect of Warren is also a point brought up with regards to technology. It is also noted by clients #2 and #3 that Warren doesn't have an Android app, though it operates on Android devices via website. The usability of both app and website is described by clients #1, #2, #4 and #4 as interactive, easy to use, thoughtful and intuitive. Client #2 states that, while the platform and user experiences are a strong point, he finds it similar to other platforms and does not consider it a key factor. "For a startup, I feel they should be a little quicker to launch smaller features, and work on the larger ones in the long run [...] but an aggravating factor might be that they are handling our money, so they ought to be extra careful ", says client #5. Technology is fundamental because it is an online platform, fundamental to the user experience, says the CEO.

One last technological aspect mentioned is the automation of back-office processes. This aspect of technological innovation is not mentioned specifically by any client, but is listed as one of the most important factors by Warren. According to the CEO:

> "I would say that the most important factor is in the background, where back-office processes related to fiduciary management are running, from running the quotes to creating an objective to investing in each objective. There is a really sophisticated back end to the solution. [...] CVM told us that our fiduciary management area should have 10 people instead of 2. I told them it was no problem to hire another 8 people, but they would be idle playing solitaire the entire day. The whole system was built to handle 15 thousand clients with only 2 people, because we automated almost 100% of back-office processes."

5.2.4 Macroprocesses of Interaction Among Clients, Fintech and External Stakeholders

A constant flow of interaction between clients and users is essential to a startup since the business and product development processes are extremely iterative and involve substantial user feedback continuously (FREDERIKSEN; BREM, 2016). The validation of ideas and hypotheses is at the core of a startup. Due to this iterative process of validation, the product goes though stages of idea formation and selection, prototyping, pivot (usual), development of MVP, systematization of production and continuous improvement (STAYTON; MANGEMATIN, 2016). Additionally, the test of hypotheses of products and business models is expected to set the boundaries of the organizational structure (TRIMI; BERBEGAL-MIRABENT, 2012). The early version is called the minimum viable product (MVP), and serves to gauge the reaction of early adopters and further engage them in the development process. This is in many ways similar to the involvement of lead users in other development schemes (FREDERIKSEN; BREM, 2016).

For this analysis, these processes at Warren will be divided into two distinct moments: pre-launch and post-launch. Pre-launch will analyze initial ideas and hypotheses, the deriving MVP and its validation stages. This stage will focus specifically on the phase before and during which the waiting queue was employed, culminating with the opening to users in the beginning of 2017. Post-launch will analyze the period immediately after the previous one, with ongoing interactions between clients, fintech and other stakeholders after the opening to clients.

During the pre-launch stage, there are a couple of moments where MVPs were markedly validated against feedback from users and external sources by Warren. The first decisive pre-launch moment for Warren was the tech conference Collision. Their idea was an efficient, simple, intelligent and fun platform to deal with the investment world. To validate that idea, the three first partners have researched and interviewed many people. However, the milestone was the contest held at the conference, where their prototype and MVP were up against 500 other startups and their MVPs. After they finished among the top 10 best ideas, business started taking shape, according to the CEO.

After settling in Brazil for the development of their platform, the whole construction stage was done together with people, which also became beta testers, as per the CEO. There were around 500 beta testers, 80 of which were physically engaged at the Warren headquarters. Those were shadowed by the user experience team, who was in charge of taking notes of improvements raised by them. Each shadowing session used to last around 2 hours, according to the CEO, and was lengthy, costly and fruitful. The rest of the beta testers were engaged online and were asked to submit a form with their impressions and feedback.

The waiting queue was a form of early interaction in the weeks prior to launch and for the first months of operation that was an intelligent strategy and valued the people that the fintech was most focusing on, says client #4. She also says that, even though she interacted with Warren for the discovery of her investor profile during the signup for the queue, she does not know if the answers around the investor profile were somehow used to drive the platform construction, which could be leveraged as a technique to further drive acquisition, she says.

The most common themes mentioned by fintech and clients when it came to interactions that can be classified as post-launch were user feedback, customer service, events and content creation. User feedback is named as the main form of interaction by both clients and fintech. The feedback loop is anticipated and fostered by Warren. That feedback is expected both online and offline though the organization of events. That feedback is then acted upon via regular board meeting with product, acquisition and customer success divisions. Another reason why Warren opted for a beta test round shortly before its launch was go raise user engagement and get their help with propagation, says the CEO.

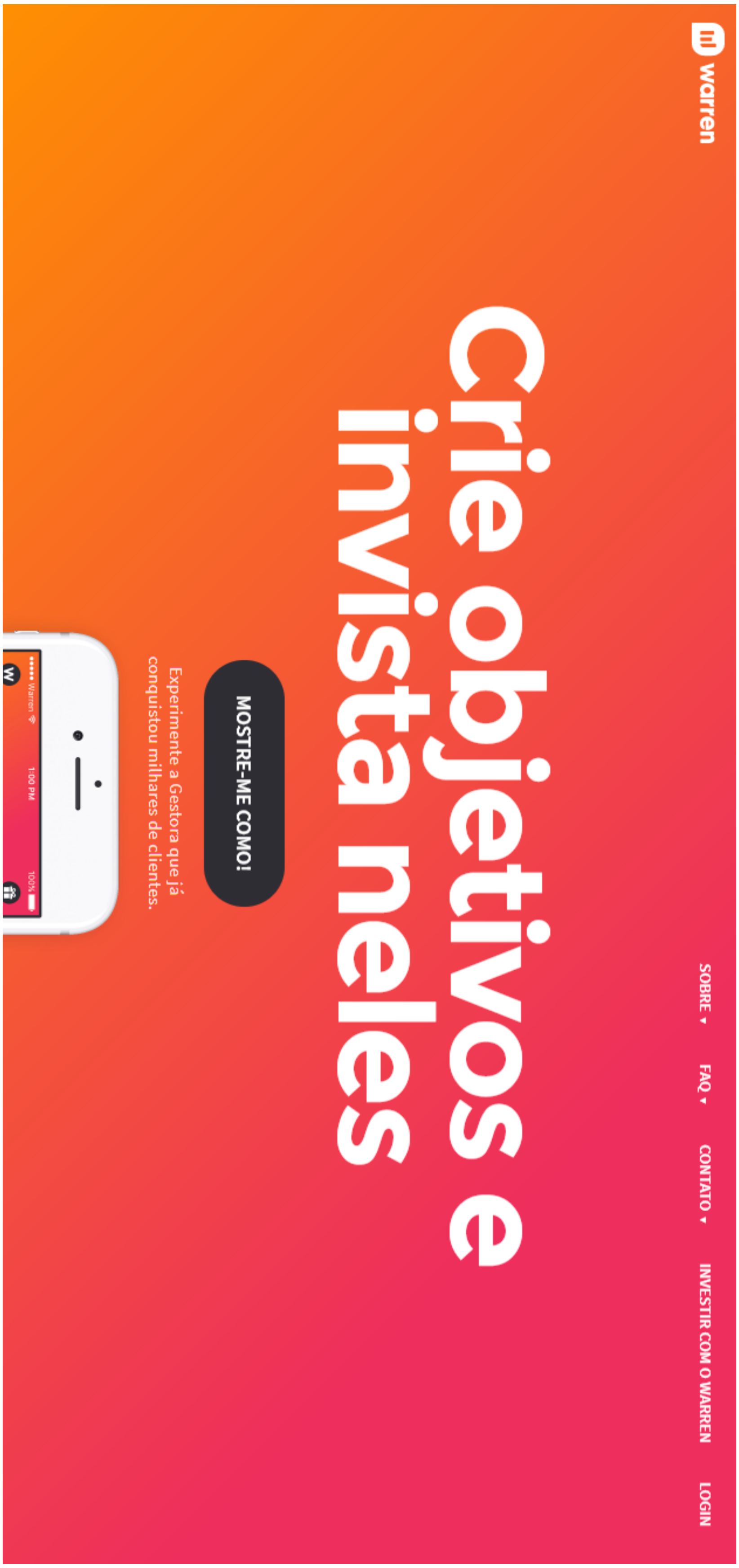
Clients #1, #2 and #5 report that they were invited to participate in beta testing groups for the Android and iOs versions of the Warren app. Client #1 deems important that the fintech is open and thankful for feedback and seeks to solve bugs found on a steady basis, while he is rewarded for that. He says he has reported a couple of bugs, and finds this process to be valuable to fintech, since the best way to validate anything is to launch it and collect user feedback. "An invitation was made in a group on Facebook, and I joined in. I downloaded the new version (of the Android app) and shortly after submitted to them my report, says client #5.

Warren is constantly validating new ideas and feedback from its users. An example the CEO gives is the call to action on the homepage, which has changed from "Say hi to Warren"to "Click here"to "Show me how", as can be seen in Figura 14. These changes are tracked via metrics by the digital marketing team to establish the best option for conversion. "We learned that the best way is to use simulators or to invite beta users to test before developing and delivering anything", according to the CEO (VALENZA, 2017).

The organization of events is also another way to gather feedback and interact with people and clients physically. Online is scalable, but offline is sensational and must be kept, as per the CEO. Warren organizes events on a recurring basis, such as monthly "Papo de Grana"held in several cities , seasonal basis, i.e. yearly "WSummit", and others like "Cocriando". Clients #3 and #5 mention their participation in some of those events and underline the effort of the fintech to improve using the feedback from them.

Customer service is mentioned as a recurring form of interaction between fintech and clients, all the clients evaluate that this form of interaction was pleasant, transparent and thoughtful. Clients #2 and #5 say that they were contacted by Warren to create special content for the Blog channel, which they report was also insightful for Warren to create other types of content.

Figura 14 – Homepage of the Warren Brasil website



Fonte: WARREN BRASIL (2017).

5.2.5 Monetization

One important part of a business model is how the startup plans to make money in the long run and where the startup will put its money for the sustainability of the firm, which explains the value creating potential of the new business (TRIMI; BERBEGAL-MIRABENT, 2012). During the search for a sustainable business model, it is common that startups choose to pivot certain strategies while persevering others according to feedback (RIES, 2011). Pivoting is essential for software startups to survive, grow and eventually obtain sustainable business models, since only a few startups get their business models right at first (BAJWA et al., 2017).

Warren creates profit and value by charging clients a 0.8% annual management fee on every type of objective, which are represented by one of the five possible funds in Warren's portfolio. By September 2017 Warren accounted for 14 thousand clients and R$60 million under management (WARREN NEWS, 2017b). The annual management fee is the only type of revenue of the fintech. This strategy is not based on the idea that solely charging 0.8% and having initial and minimum deposits of R$100 is a sustainable business, but on an open door strategy. "The target audience of the firm, our persona, are clients in the 25-35 age range - there are 30 million of them with money in savings accounts at large banks - and we aim to be affordable for everyone who wishes to test us", says the CEO. Warren can offer a lower fee due to the lack of physical agencies and high automation of back end processes, what helps to drive operational costs down. The short term goal is not focused on breaking even, but on growing and reaching even more clients. The firm plans to have 50 thousand clients by half of 2018 (VALENZA, 2017).

Client perception around the monetization model of Warren seems on point with the information the fintech discloses. All of the clients have identified the 0.8% annual fee that is charged, though clients #1 and #3 mention that those fees apply over performance as well, which is not accurate. This might indicate that some clients don't fully comprehend under which circumstances those fees apply. Four out of five clients (#1, #2, #4 and #5) mention that the 0.8% fee is very low, some even show concern with the short term profit of the fintech. This approach is on point with the focus on the long term growth plan as explained by CEO, though the fintech might consider addressing client concerns with regards to short term sustainability if this is perceived in the future as an issue to acquire more clients.

5.3 ACTORS AND MECHANISMS OF VALUE CO-CREATION

Value co-creation brings the interaction between client and company and other stakeholders to the forefront of the value creation. Value co-creation is based on the premise that there is a connected view, as opposed to an isolated view, of the client and the company creating value together. In this new perspective, the client acts as an active, informed force, instead of passive, uninformed one. the consequence of the connected client is manifest in the information access, global view, networking, experimentation and activism (PRAHALAD; RAMASWAMY, 2004b).

This section is divided into two main parts. The first one analyzes actors of value co-creation with Warren. The framework proposed by Frow et al. (2015) was also used with the goal of identifying possible actors of value co-creation with Warren, besides clients. The second part is mechanisms of value co-creation. For that purpose, the DART model - dialogue, access, risk reduction and transparency - is used to analyze value co-creation between companies and clients, given the . Those are the building blocks proposed by Prahalad e Ramaswamy (2002) to help companies be more aware of opportunities to interact with clients in order to co-create value. Payne, Storbacka e Frow (2008) are also referenced to understand aspects of relationship and planning of value co-creation experiences.

5.3.1 Actors of Value Co-creation

Value co-creation is usually analyzed from the perspective of the interaction between firm and client. However, it can occur from the interactions of multiple other actors as well, as proposed by the framework of Frow et al. (2015). This part analyzes the actors and the motive of their value co-creation with Warren. The main actor to co-create value with at Warren are clients, what happens in an organic way, as per the CEO. Value co-creation with clients will be analyzed in details in the next part, due to the inherent complexity and breadth of this interaction. There were other actors which came up during the interview and in secondary data collection that are worthy of mention, which can be regarded in the future as interesting actors to be engaged.

The first interaction with a co-creation actor can be considered the advice the three initial partners of Warren got from Marcelo Maisonnave, characterized as a partner actor. According to the CEO, the partner suggested that Warren take advantage of a changing legislation, the existing network and inexistence of a similar solution in Brazil and moved operations there, which was a decisive input to kickstart Warren. The motive of this value co-creating interaction can be described as an emergent strategy due to the the opportunities perceived by such partner in Brazil.

Beta testers have been an important actor in the history of Warren. Those were influencers engaged pre-launch to validate Warren's MVP, but the fintech also engages clients as beta-testers on an ongoing basis. The first stage of beta testers were engaged with the goal of help to build and validate the solution, as well as to spread the word on the launch of Warren after the launch with their networks. The motive behind this interaction can be described as enhancing customer experience, creating customer commitment and building brand awareness. Beta testers engaged in this initial phase would try out the platform ahead of others and have the opportunity to contribute and feel as a significant party in its construction, thus enhancing customer experience. They would also have the opportunity to become early clients, thus creating customer commitment. They would then potentially move on to announce Warren on their social media feeds, building brand awareness.

There are two other examples of value co-creating interactions that can be identified in

Warren's path. The organization of an event named "Cocriando"(co-creating) to which current clients were invited was done together with a third-party partner, says the CEO. The event approached different sides of the business, such as possible opportunities Warren might take in the future, but also the risky side of the business, where clients were encouraged to shed light on what could Warren do to fail. It can be argued that that event had the goal of enhancing customer experience, creating customer commitment and creating more competitive offerings by bringing clients and the third-party partner on board to help steer Warren. The second example is a partnership between Warren and an educational organization focused on work-readiness, entrepreneurship and financial literacy skills for children and adolescents. This partnership has been established with the goal of bringing financial education to thousands of children and adolescents (WARREN NEWS, 2017a). This motive can be described as building brand awareness, since the Warren brand will be largely associated with the promotion of financial literacy among those impacted and external stakeholders.

Warren engages a host of actors in order to co-create value. Those engagements have helped define Warren and had an impact to higher and lesser degrees in the way Warren behaves and shapes its actions. The main actor of value co-creation are clients, as per the CEO, and Warren builds this relationship with special care. The next part will be dedicated to analyzing the relationship between Warren and its clients.

5.3.2 Mechanisms of Value Co-creation

This part will analyze in depth which mechanisms are used by Warren and perceived by clients in co-creating value together. Due to the special focus on the relationship between company and clients in the discipline of value co-creation, this part will be dedicated to analyzing these mechanisms in depth.

To do so, the DART model by Prahalad e Ramaswamy (2002) and the conceptual framework for value co-creation by Payne, Storbacka e Frow (2008) will be used. The DART model is be used to analyze what the authors describe as the building blocks of co-creation (dialogue, access, risk reduction and transparency), which are elements that facilitate the co-creation of value firms and clients (PRAHALAD; RAMASWAMY, 2004a). The conceptual framework for value co-creation helps to analyze supplier processes (how does the company prepare and learn from it), customer processes (how does the client feel and learn from it) and encounter processes (where do these encounters occur).

5.3.2.1 Strategy for Value Co-creation

In order to adopt a strategy of value co-creation, the firm must first be aware that there is such a need. the rise of connected, informed and active clients creates the need for companies to stop focusing on company-centric creation of value and start focusing on co-creating value with customer (PRAHALAD; RAMASWAMY, 2004b). To plan for such change:

> "Planning for co-creation is outside–in as it starts from an understanding of the customer's value-creating processes, and aims at providing support for better co-creation of value. Value co-creation demands a change in the dominant logic for marketing from 'making, selling and servicing' to 'listening, customizing and co-creating'. It is also cross-functional: It assumes and requires alignment between those organizational functions which make the customer promise and those which deliver the customer promise."(PAYNE; STORBACKA; FROW, 2008).

The overall perception among clients is that the fintech indeed has some kind of strategy of value co-creation with clients, though the intensity and methods perceived vary from client to client. Clients #1, #2 and #5 name word of mouth and referrals as the method of choice to establish a brand and co-create value. Clients #2 and #5 emphasize that Warren is not aggressive in advertising and seem to rely more on word of mouth. Client #1 assumes that the fintech invests in organic communication in order earn trust. Client #4 believes that there is a co-creation strategy, and, even though she is not fully aware how much she contributed to that effort by the fintech, she sees the overall client-fintech relationship and experience as positive. Client #3 thinks there was a more active co-creation strategy in the immediate post-launch period, but it appears to have cooled down due to the fewer of events happening.

Warren does not have a value co-creation strategy with a defined set of goals. It's organic, says the CEO. The main motive (of using co-creation) was to enhance the customer experience and help with the promotion. Customer experience was fine tuned with the help of beta testers and influencers, but they also helped with the promotion in the pre-launch and waiting queue stage. On a daily basis, Warren focuses on providing an exceptional customer service and leveraging user feedback in roadmap meetings. Getting back to clients after one of their ideas is considered and implemented is important, since that will make them feel a part of the construction of the platform. An engagement monitor is being brainstormed for implementation, but currently there is none, states the CEO.

5.3.2.2 Dialogue

Dialogue with clients is a crucial aspect for firms to start a co-creation experience. When it happens at every stage, it encourages not only knowledge sharing, but also understanding between companies and clients and opportunities for clients to offer their view into the creation process (PRAHALAD; RAMASWAMY, 2002). Firms must learn as much as possible about clients though rich dialogue, the information infrastructure must be centered on the consumer an encourage active participation in all aspects of the co-creation experience (PRAHALAD; RAMASWAMY, 2004a). Dialogue is:

> "...creating shared meaning. In dialogues, people listen and learn from each other; in the most productive dialogues, people communicate and debate as equals. Dialogue helps companies to understand the emotional, social, and cultural contexts that shape consumer experiences and provides knowledge companies can use to innovate. [...] Dialogue involves more than listening and

> reacting. It requires deep engagement, lively interactivity, empathetic understanding, and a willingness by both parties to act, especially when they're at odds."(PRAHALAD; RAMASWAMY, 2002).

According to clients and fintech, the main aspects brought up during interviews that can be referred to as the establishment of dialogue between Warren and its clients are the following: 1) feedback; 2) customer service; 3) communication and social media; 4) client and user engagement; 5) events; and 6) content production.

The first aspect, feedback, is a recurring aspect of dialogue at Warren: four out of five clients see the company as open to and waiting for feedback. Clients #1 and #2 mention that the fintech wants feedback from their users and seem interested. "They are open to feedback, and people pay attention ton that", says client #5. Client #3 sees that the firm is open to feedback, especially during events, and says that there is co-creation when the firm does it, he says. Client #4 feels that there could be more moments where people are invited to talk and explain their difficulties.

Regarding the type of contribution, clients point out that there is spontaneous feedback and requested feedback. One kind of spontaneous contribution is stated by client #2: "I used to send them many suggestions, which they would respond promptly and show interest about."Client #5 mentions that he would tell Warren about information that was not present on the website, so that they could add it. Regarding requested feedback, clients #1, #2 and #5 report being involved as beta testers for validating iOs and Android versions of the Warren application after they volunteered.

According to the CEO, Warren receives a considerable amount of user feedback. All the feedback is taken to roadmap meeting, where it is categorized. This feedback is then validated with a higher amount of users before being developed and delivered. After the feedback is implemented, Warren gets back to the users to let them know and feel involved in the construction, says the CEO. Beta testers are also a way to make users feel engaged in the construction of Warren and receive feedback, he says.

Customer service is mentioned by all the clients interviewed and can be seen as a method of dialogue. According to the CEO, customer service is a core offering of Warren, it must be exceptional. Clients #1 and #3 highlight that Warren's customer service is flexible and accessible though a many channels, which will be approached in the next section. The importance of a good customer service is that it is also an investment in organic communication, says client #1.

Client #5 explains that the difference in Warren's customer service is the personal touch to it, which creates proximity with the client. The amount of attention makes you feel as if you had a service only to yourself, says client #2. Client #4 also emphasizes the personal touch of Warren's the customer service. She says that since she stopped being a recurring client of Warren, Warren has not contacted her to reactivate their relationship. "They could have contacted me", she says.

The third aspect that can be related to dialogue is communication with clients and the use of social media. Client #3 highlights: "I can communicate with Warren through any means I prefer. That can happen over Messenger, Facebook, Skype, etc.", he says. Client #1 says he appreciates the summary Warren sends of what's happening in the economy, stock market, and why stocks are going up or down. That's also financial education for clients. As a consequence of that, their brand is on my mind everyday, he says. Client #2 states that their communications have a human side, and it shows.

Three clients mention Warren's blog specifically. Client #4 says that Warren keeps a blog where they post about the economy, what's happening in the market, and do so using a simple language. Warren has invited clients #2 and #5 to write blog posts of their personal views on investments, which were later published and used to produce additional content at Warren.

There are a few points that clients have brought up that Warren might consider. Client #3 points out that the current communication style - mostly digital and events - of Warren is adequate for the audience they are trying to reach. However, he feels that the company could explore other means, such as print newspapers, to reach a different kind of generation. Client #4 says that he remembers a case of miscommunication by Warren. In the past he referred Warren to a friend, who signed up for an account, but nevertheless didn' invest the initial amount. That triggered a communication by Warren that the account would be deleted if no amount was invested, which did not please the potential client.

According to the CEO, communication and access to Warren must be constant. Undoubtedly online communication has facilitated the way company and clients get in contact. Facebook and other online tools make communication easier, which in turn solves a problem, and prompts the client to refer us to a friend, he says. The CEO also mentions the miscommunication story reported by client #5. He says Warren learned the hard way that communication with the client has to be well-thought, if not the fintech might end up deleted on the client's smartphone.

Another method of dialogue is user and client engagement. Warren fosters client and user engagement and relies on it to create a strategy of evangelizers[1]. The waiting queue during the pre-launch phase and part of the post-launch is a good example, says the CEO. The beta testers engaged during the validation were the ones who helped spread the word about Warren during that phase, says the CEO. According to him, Warren has good a level of engagement on social media, which are people who are co-creating Warren together with the fintech and referring friends, it's organic. The fintech does not have an engagement level indicator, but is looking into ways to make it more visible in order to approach each user according to their engagement level. It is easier to ask for somebody who is already to refer a friend. If Warren does it to a non-engaged user, they might not see it well, the CEO says.

[1] An evangelizer in this context is a client who is engaged to the point of promoting the fintech without request, according to the context in which the CEO describes the strategy.

Three out of five clients report some kind of engagement with Warren. Client #5 says that he defends and clarifies questions on Facebook on behalf of the fintech since they have a fantastic product. Referring Warren to friends has become natural due to the relationship created between client and company, says client #1. Client #2 refers the fintech to every friend who wants to save money because he wants people to feel the experience as well. Clients #2 and #5 mention that Warren is not aggressive when it comes to marketing, they rely more on word of mouth instead. This is in accordance with Warren's strategy (VALENZA, 2017).

Events is another dialogue method identified in the interviews. To a lesser or higher degree, all clients have participated or identify events organized by Warren. Warren organizes events periodically according to the CEO. According to him, online is scalable, but offline contact must always exist, and events is the way to uphold this contact with their clients. Some events organized by Warren are "Papo de Grana"("chat about money"), WSummit and "Cocriando"("co-creating").

The first one, "Papo de Grana", is periodic and held in 7 capitals cities across Brazil. The main objective of this event, according to one of its Facebook event pages, is to help people take better care of their finances by approaching themes such as where to save, how to invest better and why they should quit the savings account as soon as possible. The usual event agenda has a 30-minute networking and happy hour, one and a half hour presentation on the main topic and a closing ceremony (BRASIL, 2017a).

WSummit's first edition was held in July 2017 and had capacity for 500 people. The event description relates to how people go about taking care of their money and that this is usually a very emotional process. The event's objective is to have a sincere and open discussion on personal finances. The lineup featured a host of speakers, mostly unrelated to finance, who presented their personal views on personal finances (BRASIL, 2017b).

"Cocriando"was held once in partnership with a third-party. According to the CEO, they all have the objective to some degree of co-creating experiences with the audience, clients or not. An invitation was sent out for clients to register and participate in the event, which was free of charge.

Clients recognize that events are a form of dialogue encouraged by Warren. Client #2 has been to WSummit, which he describes as an event that wasn' focused on the math of investing, but rather on motivational and psychological aspects. He assumes that the audience had a good impression overall. Client #2 says that he liked the event because of the dynamics, networking and getting to know the people behind Warren. The author of this research has also been to the event, and the overall impression was that the lineup of speakers was defined to have a broad view of finances, not specifically experts on the subject, but people who could share insights into the theme. There was also an exercise of identifying investor profiles and objectives facilitated by the CEO, which is an example of co-creation that happened in the event.

Client #1 raises the point the Warren seems to be investing in events and financial education. According to him, the fintech wants to show they are working on educating clients on best investment practices. "It would be interesting to know if people are changing their investment habits due due to Warren. This would be deeper than just investing for the sake of it", says client #2. With regards to "Cocriando", client's #5 view is that it was an exercise to help Warren with ideas for making and breaking the company. Client #3 views the use of events as a way Warren employs to get feedback and co-create. However, he feels that those events were more frequent earlier on.

5.3.2.3 Access

Access challenges the notion that ownership is the only way for the consumer to experience value. By focusing on access to value at multiple points of exchange, as opposed to simply ownership of products, companies can broaden their view of the business opportunities creating good experiences (PRAHALAD; RAMASWAMY, 2002).

There are a couple of kinds of access that can be identified at Warren based on client and firm answers. The first one, mentioned by clients and fintech, is the possibility to invest with an initial amount of R$100. This is possible due to a number of factors: one the one hand, Warren's business model is of a fiduciary manager, asset manager and distributor of funds, what allows them to set the initial amount required to make the first investment in an objective, according to the CEO; on the other hand, not having an extensive physical structures like agencies and automating back-office processes allows the company to drive down operational costs (VALENZA, 2017). Clients #1 and #5 note that this is a benefit. "You can invest with as little as R$100 and control it from your app. There is no more excuse not to get out of your savings account."says client #5, the same as a Twitter user on the website of Warren (WARREN BRASIL, 2017). The plan is to allow access to as many clients as possible, as per the CEO.

Another kind of access is the access to understand the product. One of the aspects client #4 mentions is that the language of the product investment funds has been simplified, what makes the product much more accessible to the general audience. She says:

> "The language used by Warren [...] they sell investments in a much simpler way than traditional financial institutions. They simplify what is usually very complex to the majority of people. They offer funds to an audience which does not see themselves as investors and have difficulty to comprehend the subject. [...] Banks cannot reach this audience because they do not know how to talk to people about it. I think their main product is the language they use."

5.3.2.4 Risk-Benefits

Risk-benefits has to do with the company being more transparent about risks, but also the client having a more active role about them. As clients become more involved in co-creating experiences, they should be able to make more informed decisions about risks, as well as be willing to take on more responsibility for managing risk exposures (PRAHALAD; RAMASWAMY, 2002). Releasing information regarding the likely risks is often mandated. It must become voluntary. Giving the client all the information to assess the risks and make a joint decision can be beneficial to both parties: it can reduce waste for the company and waiting time for customers, for instance (PRAHALAD; RAMASWAMY, 2004a).

Clients have raised some risks they think both the fintech and clients should be aware of. The first one is the trustability, raised by clients # 1, #2 and #4. This aspect has to be well approached, since Warren is a fintech, and relatively new to the market. Some positive aspects regarding how the fintech deals with this risk is that it is very transparent with regards to how the business is structured, the fact that there is a bank behind it - which might help foster initial credibility - and that transfers can only be made to and from accounts with the same CPF (id). Client #5 and the CEO mention that there are actions towards raising awareness of risks and how to avoid them i.e. the event "Cocriando"(co-creating), in which fintech and clients brainstorm what could make Warren fail.

Geographical proximity to the Warren headquarter is raised by clients #2 and #5 as an important risk. They mention they were much more confident in the company after they visited the headquarters and knew that Warren was close to their homes. This can be a barrier to acquire new clients, they say. The competition with banks can bring hurdles, like the risk of some legislation being passed to benefit big players, says client #1. Warren has benefited from a legislation change by CVM in 2016, however, says the CEO. Client #3 proposes a way for Warren to help reduce risks for the entire society: by focusing on changing the Brazilian culture of short term thinking to a long term one. This way Warren could help society lower its indebtedness and raise its purchasing power by focusing on a savings and investment culture and acquire clients and raise brand awareness in the process.

A risk that Warren constantly needs to gauge is its investment in enhancing customer experience and responding to client feedback for improvements. By raising those costs, Warren could probably raise its NPS, but it might risk running a business with low margins, what might compromise the entire company, says the CEO. Another risk that is on the firm's radar is how younger generations, the kind of audience Warren is targeting, treat companies. "If you lack transparency or communicate something in a wrong way, all it takes to end a relationship is 30 seconds, just enough time to delete your application."

5.3.2.5 Transparency, Relationship, Principles and Values

This section analyzes the relationship, principles, values and transparency between Relationships between the supplier - in this case, the fintech - and the client are fundamental for co-creation of value to exist between them. The conceptual framework of value co-creation proposed by Payne, Storbacka e Frow (2008) brings to the forefront of the analysis the importance of processes and their procedures, tasks, mechanisms, activities and interactions in relationships, which are described as a longitudinal, dynamic, interactive set of experiences and activities performed by fintech and client, using tools and practices within a context that is deliberate or not. For co-creation of value to exist, the relationship between firm and client must be reexamined and shaped accordingly (PRAHALAD; RAMASWAMY, 2004a). Interviewees were asked how they define their relationship to Warren, or, in the case of the fintech, how they perceived the relationship with clients.

Transparency becomes a key factor in the new context of value co-creation. In order to establish dialogue, one of the other 4 building blocks proposed by Prahalad e Ramaswamy (2004a), there must be transparency. The company must relinquish the control of the value creation process (and the information asymmetry that once gave the firm that edge) in order to establish a co-creation of value together with the client, who is much more informed and connected. This way, the client can participate in the construction and use the solution that they have jointly constructed (PRAHALAD; RAMASWAMY, 2004a). Interviewees were asked which principles and values they identified in order for co-creation of value to succeed.

Regarding the relationship between fintech and clients, clients report that it ranges from good to extremely positive. Client #1 describes it as definitely positive, "it's a place I found where I can keep my money safe, I think I have never saved as much money as now. Plus the customer service adds a lot of value."A pleasant relationship while she was still a client, says client #4. She felt serviced in every moment she needed, she could solve all of her problems in the app and did not need to use customer service. "A good relationship", says client #3. He likes the ideas, the communication, but does not see himself participating in the product creation, though the company is very open to client participation. Client #2 says: "the relationship is passionate. The robot talking to you, the amount of attention on Facebook, you feel as if you had an exclusive service all for yourself. Very positive experience, especially yield-wise."According to client #5:

> "They are very sincere, they have answered all my questions, their product is very simple and easy to use. This part of the startup is interesting: there's a lot of passion, of love for the product. They have a fantastic product. [...] I defend them a lot on Facebook, I have also helped people with security and usability questions regarding the product. The relationship is extremely positive."

According to the CEO, Warren has a relatively high social media engagement, the fintech's NPS[2] is currently around 85. These users, as per the CEO, are co-creating value with Warren in an organic way, without having to forced to spread the word on Warren, this happens happens as a consequence of the customer experience. Those clients will eventually refer Warren to another potential client, in which case Warren will send them a "thank you"note. This keeps engagement high in return.

[2] Net Promoter or Net Promoter Score (NPS) is a management tool that can be used to gauge the loyalty of a firm's customer relationships (Wikipedia, 2017).

The principles that Warren believes are key factors to create a value co-creation experience with customers are transparency, exceptional customer service, products features, solving a problem in an intelligent way and delivering a sensational experience. The fintech believes that the mix of humans and machines is the way to go, according to the CEO.

Clients name a host of values and principles as key factors for value co-creation. While only clients #4 and #5 name transparency as a principle, others mention direct, sincere communication and clarity as pre-requisites which can be related to transparency. "At Warren everything was very clear, very transparent. I had the support I needed to answer my questions when I needed it. My questions were mainly related to the way it worked and were all answered", says client #4. Client #5 says that had a slight slip in transparency in a graph feature change after a moment of political instability in Brazil, but were overall very sincere. The fact that the CEO participates in events with clients and interested audience is also a key factor in his opinion, emphasizing the principle of Warren being personal.

According to client #1, the start of the relationship has to be devoid of small prints and exceptions, thus being as clear as possible. In his opinion, Warren is exercising that principle. Warren also has a simple and direct communication, which is a principle client #3 names. Client #2 views trustability as the key principle to uphold: "a good customer service and trustability, since we are talking money."

5.3.2.6 Challenges of Value Co-creation in the Financial Services Field

When it comes to challenges of value co-creation in the financial services field, there was no consensus. Two clients mentioned the relationship side of it, but for different reasons. The rest of the answers were insightful, but non-concurrent. The relationship with clients who do not grasp all the nuances of the financial sector might be facilitated, but Warren might have a more difficult time with specialists in the field, says client #5, especially when it come to choosing financial products for the funds. Client #4 mentions that fintechs should strive to establish relationships with their clients, and not become a big bank as it grows. There is much room to work on the gap that banks leave by not being able to reach a segment of the market, and fintechs can take advantage of that.

The legal risk is pointed out by client #1. Fintechs might start to lose agility and innovation potential as it grows and starts having to comply with more legal, and that might be a challenge given that this is what fintech clients expect, says client #4. Conversely, client #2 states that Warren might suffer from a lack of credibility from potential new users and clients, since it is a fintech that just started operations.

According to the CEO, the only challenge to implement a co-creation strategy is to talk to the customer. He says: "when clients are already engaged, feel their needs are being met and their problems are being solved solved, see customer service as adequate and perceive transparency in the relationship, all you have to do is talk to them."

5.4 INFLUENCE OF CO-CREATION OF VALUE IN THE BUSINESS MODEL

The purpose of this section is to analyze if and how value co-creation influences the business model of the fintech. From a lean startup perspective, the fintech should always strive to test its business model hypotheses early on, in order to minimize waste (and pivot) or optimize investment (and persevere). Co-creation of value with clients goes along with that strategy by looping in clients during the experience of interaction with the company, regardless of the stage in which this interaction occurs. Taking into consideration the proposed Build-Measure-Learn and DART models, Figura 15 can be proposed as a summary of how co-creation of value happens between Warren and clients and how it influences its business model.

Figura 15 – Iterative Business Model Evolution together with Value Co-creation between Clients and Fintech

Startup stages (Build-Measure-Learn)	Actors		Co-creation principles throughout interaction
	Fintech	Client	
Ideas	New ideas and hypotheses to validate	Contributes with feedback	**Dialogue** is fostered via social media, customer service and openness for collaboration to happen;
Build	Develop product according to product roadmap	Engaged / volunteer as beta testers	
Product	Deliver and promote product for client use, actively engage clients for feedback and promotion	Uses/buys product; engaged / volunteer for product promotion	**Access** for value to be perceived at multiple points of interaction;
Measure	Create strategies and mechanisms to measure product traction and success	Perceives product offering and measures it against own expectations	
Data	Structure qualitative and quantitative data around product use and feedback	Views results of product use	**Risk-benefit** for risk and benefits to be actively realized by both engaged parties;
Learn	Analyze data in order to validate MVPs and extract new product ideas	Understands product dynamics and establishes opinion	

Fonte: created by the author based on Trimi e Berbegal-Mirabent (2012), Ries (2011), Frederiksen e Brem (2016), Prahalad e Ramaswamy (2002), Prahalad e Ramaswamy (2004a).

According to the CEO, co-creation of value does influence the business model of Warren, above all when it comes to co-creating with clients: influencers will attract more clients and new features will be added as a result of client feedback. It is also possible to notice that the business itself is shaped by the feedback of beta testers involved in the recurring validation of new features. This cyclical process can be related to the Build-Measure-Learn proposed by (RIES, 2011) since it is iterative and ongoing.

Influencers are also a way to spread the word on Warren. By focusing on customer service, communication, events and other forms of interaction, the fintech tries to maintain the client engaged. Besides the objective of keeping client experience high, the fintech strives to create influencers who will then spread the word about Warren to friends, family and contacts, according to the CEO. The referrals program also focuses on rewarding clients in a personal way, according to the CEO.

Beta tester engagement with clients is also a way to create influencers. By engaging those clients, the fintech aims to provide a feeling of being able to collaborate and collectively build

Warren, what resonates with the idea of engaging clients throughout the process to co-create value, as opposed at a single point of exchange. Besides that, users also provide feedback on new versions of the application and help to keep quality standards according to what they expect.

Regarding feedback, Warren tries to keep an open-door policy, which is perceived by users as a welcoming environment to collaborate and provide feedback, as noted by clients #1 and #2. This feedback is then processed inside of Warren by a roadmap meeting, where priorities are assessed. The product (CTO, UX/design and PO), acquisition and customer success divisions are responsible for assessing user feedback and prioritizing it. there is also a round of validation with additional clients before developing a new feature. After all that process, the user who submitted the feedback will be notified and thanked, says the CEO.

It appears that, in the case of Warren, co-creation of value has been organically linked with the evolution of the business model of the fintech. The DART model proposed by can also be observed throughout the interaction when we take into consideration the Build-Measure-Learn model. Though the influence does occur, it is not within range for this research to ascertain the extent and benefits of such influence, which are aspects that can be the subject a future research.

6 FINAL CONSIDERATIONS

The financial system has evolved over time, going from barter economy to currency to financial institutions to their current state of interconnected, global financial system. With the rise of technology and the consequences of a post-2008 global financial crisis onset, i.e. credit squeeze (MACKENZIE, 2015) and lack of confidence in banking institutions (NEUMAN, 2015), new ventures have started emerging and challenging the status quo of the financial system, those ventures being popularly called fintechs (technological startups of the financial services sector).

Fintechs are a phenomenon that have been observed in the global (PWC, 2016; CITIGPS, 2016) and the Brazilian (FINTECHLAB, 2016) financial systems. By bringing the client to the center of their business models, they hold a great potential to disrupt that system. The DART model (PRAHALAD; RAMASWAMY, 2002; PRAHALAD; RAMASWAMY, 2004a) and other value co-creation frameworks (PAYNE; STORBACKA; FROW, 2008; FROW et al., 2015) are proposed by to regard the rising role of the client (and eventually other actors) in value creation between company and firm. Due to this aspect, it is relevant to study value co-creation in fintechs from a technological startup perspective (GULAMHUSEINWALA et al., 2015) and how it organizes its business model (RIES, 2011; TRIMI; BERBEGAL-MIRABENT, 2012) around it.

To conduct this research, the case of Warren, a Brazilian investments fintech, was used. The CEO of the fintech and five clients were interviewed, with the objective of understanding how co-creation of value happens between the fintech and its clients. To achieve that objective, the business model, co-creation of value and influence of co-creation of value in the business model (using the Build-Measure-Learn and DART models) were analyzed.

On the business model side, the main aspects highlighted of Warren with regards to value proposition by clients and fintech were costs, liquidity and access; user and client experience; simplicity; the "objectives"feature; portfolio diversity; and customer service and relationship. The monetization model of the startup was generally understood by clients. The interactions the startup has with its clients were divided into pre and post-launch for this analysis and rely heavily on validation through beta-testing and engagement via feedback and promotion by clients in the evolution of the business model. Technology-wise, Warren recognizes it is not the most innovative, key factor, though the chatbot feature and the simplicity of the multi-device solution are positive aspects brought up by clients. According to the CEO, the bulk of the technological innovation is in the automation of back end processes.

Co-creation of value at Warren is mostly organic - to enhance client experience -, and, though other actors of co-creation of value have been identified, co-creation with clients is the most recurring form. Transparency is an aspect highlighted by both parties as a key factor for co-creation to exist between Warren and clients; and access is perceived at multiple points of interaction. Dialogue is fostered via a couple of key factors perceived by clients and fintech: events, client feedback, social media, customer service and content production. Lastly, risks are shared and at times brainstormed with clients in events and other occasions.

The influence of co-creation of value can be verified in the business model when the DART and Build-Measure-Learn models are integrated. Warren is a fintech that relies on user feedback to validate its value proposition and MVPs due to the lean aspect of the business. In that sense, the engagement of clients is vital for three aspects: providing feedback on the existing product and experience, acting as beta testers of new products before they go to market, and becoming influencers once users have reached a level of trust and perceive Warren's value proposition as valuable. That iterative process is backed up by Warren with transparency in the relationship, multiple points of access and ways to dialogue with clients and share risks with them. Even though the extent of the value co-creation cannot be measured, it is possible to say that co-creation of value is ingrained in Warren's business model.

This research has academic contributions. This research contributes to marketing and innovation areas, and offers a new theme for a further research to explore. It also expands the study on the fintech phenomenon and lays the foundation for other studies into the same reserach areas.

This research contributes to understanding co-creation of value in fintechs, and especially in the context of business model dynamics. We demonstrate that co-creation of value can be a perspective that can be used together towards the evolution of business models at fintechs.

Another contribution of this study is the importance of the cultural aspect of the organization in the operationalization of co-creation of value. It also highlights the importance of principles and values such as transparency for a culture of co-creation to be effective, as pointed out by clients and fintech in this study.

This study also highlights the synergy of the Build-Measure-Learn (startups) and the DART (co-creation of value) models. The integration of both models can offer a view into how the business model is co-created by actions between client and startup, both in a pre- and post-launch to market stage. The reflection proposed in this study contributes to the entrepreneurship area by offering an integrated model for digital startups.

One last contribution to the academy, especially for the strategy area, are two possible reserach questions for further research. The first is that, considering that co-creation of value has increasingly been used by digital startups, how can it be used to create a sustainable competitive advantage? The second is that, given the relevance of co-creation of value to the business strategy, how can its mechanisms and derived results be measured?

The findings of this research also have managerial contributions. Given the rising factor of client engagement, fintechs and companies might consider using the proposed framework integration of Build-Measure-Learn and DART models for assessing all the opportunities to involve clients in the business model evolution in order to reduce misalignment risks in value proposition and foster client relationship and engagement. Companies might also use the framework to structure their operations in a way that fosters co-creation of value with clients by assessing interaction channels and barriers to co-creation. Besides clients, fintechs and companies might also assess which actors can also contribute in the co-creation of value due to the potential added benefit and risk reduction of the involvement of such actors.

Regarding the financial services sector, this research sheds light on the rising participation and transparency expected by clients vis-à-vis fintechs and financial institutions they choose to have relationships with. Regarding the company subject of this study, Warren might want to review how to best explore with clients some of its value propositions based on client responses to the interview, such as the lack of conflict of interest in the relationship and the low costs to invest. The first one might be a potential key factor for bringing in more clients, while the latter might be the cause of suspicion if clients believe the low costs are not sustainable in the long term. Clients also point out that Warren can be a supporter of financial education, an idea Warren is already invested in, but might want to assess additional co-creation potential.

6.1 RESEARCH LIMITATIONS AND SUGGESTIONS FOR FUTURE STUDIES

This research has established that indeed co-creation of value can occur in fintechs and influence their business models. However, this study has been largely based on interviews and perceptions of both fintech and clients, and therefore it is not within the range of this research to ascertain the extent of such influence and how to best measure its benefits, a limitation and also potentially the subject of a future research.

Even though co-creation of value was identified in the fintech studied in this case study, the fact that it is one fintech out of a population of approximately 247 fintechs in Brazil (FINTECHLAB, 2017) limits the results of this study, which does not allow for the assumption of generalization of this result. The segment to which the fintech belongs in financial services might also come into play for assessing co-creation of value. Different segments, such as debt negotiation, might have different results based on the intricacies of different business models. This might also be the subject of a future research.

One last limitation of this study is the current state of fintech development in Brazil. For the objective of this research, it is enough to analyze a single fintech. Nevertheless, a future research may explore co-creation of value in a quantitative way, i.e. how do clients and fintechs view the benefits and risks in the integration of lean startup and co-creation of value models proposed in this study.

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APÊNDICE A – Interview script - Fintech

Personal Data

1. Name;
2. Occupation;
3. Age;
4. Education;
5. Experience in the financial segment.

Fintech Data

1. Segment in financial services;
2. Location (HQ and offices);
3. Foundation date;
4. Number of employees.

Business Model

1. How do you describe the fintech's business model in the financial services segment?
2. What is the product and/or service and/or experience offered by the fintech? How does it differ from the competition?
3. What are the main activities and fintech areas that support them?
4. What is the main monetization model of the fintech?
5. Taking into consideration the Brazilian financial market, do you consider the the fintech's business model innovative? Why?
6. How did the ideation of the initial business model of the fintech occur? Was there an MVP? How was this MVP validated?
7. How does technology influence the fintech's business model? What technology was used?

8. How does the fintech seek change / evolutions to its business model?
9. What are the main points of interaction between client and fintech in its business model?

Value Co-Creation

1. Does the fintech use a value co-creation strategy? Describe it.
2. What are the objectives that made the fintech develop a value co-creation strategy? How does in value co-creation incorporated into the fintech's strategy?
3. What value co-creation actions are used by the fintech? Describe them and their goals.
4. How is the value co-creation experience planned? Is there an accountable division?
5. How are value co-creation initiatives operationalized? Is there an accountable division?
6. What are the main actors involved in value co-creation with the fintech?
7. In your opinion, what is the role of the client in value co-creation? How are they engaged in the process?
8. Does value co-creation influence the fintech's business model? How?
9. What values and principles are fundamental to create a relationship of value co-creation between fintech and client?
10. What are the points of exchange where client and fintech can co-create value?
11. Is there a risk assessment in planning and executing value co-creation strategies?
12. In your opinion, does value co-creation impact the risk of the business?
13. How do technology and digital platforms influence value co-creation between fintech and client?
14. What are the main technologies used to co-create value between fintech and client?
15. How is the result of value co-creation experience measured?
16. Is there a continuous process to integrate results obtained from value co-creation with the fintech's business model?
17. What are the main advantages of the value co-creation process between fintech and client?
18. What are the main disadvantages of the value co-creation process between fintech and client?
19. What is the main challenge to value co-creation in the financial services segment?

APÊNDICE B – Interview script - Clients

Personal Data

1. Name;
2. Occupation;
3. Age;
4. Education;
5. Experience in the financial segment.
6. Knowledge of finance.
7. How did you discover the fintech?
8. Are you a client of the fintech? How long?
9. What motivated you to start a relationship with the fintech?

Business Model

1. How would you describe the product or service offered by the fintech?
2. What is the aspect of the product or service of the fintech that sets it apart from the competition?
3. What are the main innovation elements offered by the fintech in its products and services?
4. In your perception, what is the monetization model of the fintech?
5. Did you participate in the creation stage of the fintech and its business model? How?
6. Do you consider the technology offered in the service or product of the fintech innovative? Why?

Value Co-creation

1. How would you describe your relationship with the fintech?

2. Would you describe your experience with the fintech as positive, negative or neutral? Why?
3. Does the fintech use value co-creation practices with its clients? Describe the practices you identify.
4. How can you and the fintech co-create value?
5. What is the main challenge to value co-creation between fintech and client considering the financial services segment?
6. What values and principles are fundamental for a value co-creation relationship between fintech and client to exist?
7. Does the fintech adopt a value co-creation strategy? Does it act actively to create this experience with the client?
8. Do you provide feedback to the fintech? When this occurs, does the company take this feedback into consideration?
9. What points of interaction are most positive in your experience with the fintech?
10. What points of interaction can be improved in your experience with the fintech?
11. What are the main technologies and platforms that you use to interact with the fintech?
12. Did you participate in any event hosted by the fintech in the past? Why?