LUCAS MOTTA ROCHA

A STUDY OF INSURANCE BUSINESS MODELS AND ITS APPLICABILITY IN
THE BRAZILIAN CONTEXT

São Paulo
2019

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Trabalho de Formatura apresentado à Escola
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Catalogação-na-publicação

*À minha mãe Jacqueline, ao meu
pai Luciano e ao meu irmão Victor, por
todo o apoio ao longo da minha vida.*

# ACKNOWLEDGEMENTS

*"If I have seen further, it is by standing upon the shoulders of giants."*

*Isaac Newton*

# ABSTRACT

The fast development of new technologies has led to major changes in our society, significantly changing several business models. In the insurance market, the application of technological tools for the development of new business models is still very incipient, especially in developing countries, such as Brazil. In some countries, business models that take user behavior into account when pricing a product are gaining relevance, illustrating a trend toward innovation in the insurance market.

In Brazil, the insurance market is very relevant, representing 3.2% of Gross Domestic Product (GDP). Nevertheless, it is estimated that the country's potential market is about 30% larger than that, so the insurance market may represent about 4.2% of GDP in the coming years. Still considering the Brazilian market, market concentration is very high, with few companies dominating a very significant percentage of the market. In the life insurance market, for example, the three largest insurers hold 49% of the market share.

In this scenario, Company X (fictitious name of the company where the work will be developed), which is a digital bank, is studying new business to diversify its portfolio to become profitable in the next two years. Thus, the ultimate goal of this paper is to provide a recommendation about the company's entry into the insurance industry. It is expected that relevant variables will be analyzed to choose the most appropriate product for Company X, as well as to apply the tools selected in the theoretical framework to identify business opportunities and to develop the business model of this new product.

A projection of the main costs and revenues involved in this new operation is also expected. Finally, the paper proposes a roadmap for implementing the chosen solution, taking into consideration the staff allocation and the effort involved in each of the activities.

**Key words:** Strategy, Strategic analysis, Digital banking, Insurance, Business model

# RESUMO

O acelerado desenvolvimento de novas tecnologias tem implicado em grandes mudanças na nossa sociedade, alterando de maneira significativa determinados modelos de negócio. No mercado de seguros, a aplicação de ferramentas tecnológicas para o desenvolvimento de novos modelos de negócio ainda é muito incipiente, sobretudo em países em desenvolvimento, como o Brasil. Em alguns países, modelos de negócio que levam em conta o comportamento do usuário na hora de precificar um produto vêm ganhando relevância, ilustrando uma tendência de inovação no mercado de seguros.

No Brasil, o mercado de seguros é muito relevante, representando 3.2% do Produto Interno Bruto (PIB). Apesar disso, estima-se que o potencial mercado do país seja cerca de 30% maior do que isso, ou seja, o mercado de seguros pode passar a representar cerca de 4.2% do PIB nos próximos anos. Ainda considerando o mercado brasileiro, a concentração de mercado é muito alta, com poucas empresas dominando um percentual muito expressivo do mercado. No mercado de seguro de vida, por exemplo, as três maiores seguradoras possuem 49% do *market share.*

Nesse cenário, a *Company X* (nome fictício da empresa onde o trabalho será desenvolvido), que é um banco digital, está estudando novos negócios para diversificar seu portfolio e tornar-se rentável nos próximos dois anos. Assim, o objetivo final desse trabalho é prover uma recomendação acerca da entrada da empresa na indústria de seguros. Espera-se que sejam analisadas variáveis relevantes para a escolha do produto mais adequado à *Company X*, bem como que sejam aplicadas as ferramentas levantadas no referencial teórico para identificar oportunidades de negócio e para desenvolver o modelo de negócio desse novo produto.

Espera-se também obter uma estimativa dos principais custos e receitas envolvidas nessa nova operação. Por fim, o trabalho propõe um roteiro para implementar a solução escolhida, levando em consideração a alocação de pessoal e o esforço envolvido em cada uma das atividades.

**Palavras Chave:** Estratégia, Análise estratégica, Bancos digitais, Seguros, Modelo de negócios

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| AHP | Analytic Hierarchy Process |
| AI | Artificial Intelligence |
| ANS | Agência Nacional de Saúde |
| API | Application Programming Interface |
| B2B | Business to Business |
| B2C | Business to Customer |
| BA | Business Analyst |
| Barch | Business Architect |
| BD | Business Developer |
| BM | Brand Manager |
| BPO | Business Process Outsourcing |
| CE | Customer Experience |
| CI | Consistency Index |
| CMR | Capital Mínimo Requerido |
| CNSP | National Council of Private Insurance |
| CR | Consistency Ratio |
| D | Designer |
| E | Engineer |
| EP | Earned Premiuns |
| GDP | Gross Domestic Product |
| GMM | Geometric Mean Matrix |
| GWP | Gross Written Premiums |
| HHI | Herfindahl Index |
| IBGE | Instituto Brasileiro de Geografia e Estatística |
| IBR | Instituto Brasileiro de Resseguros |
| IGP | Insurance Gap |
| IPO | Initial Public Offer |
| KSF | Key Success Factors |
| L | Legal analyst |
| MGM | Member Get Member |
| MVP | Minimum Viable Product |
| NDA | Non-Disclosure Agreement |

| | |
|---|---|
| NPS | Net Promoter Score |
| NPV | Net Present Value |
| PBT | Payback Time |
| PGBL | Plano Gerador de Benefício Livre |
| PIB | Produto Interno Bruto |
| PM | Product Manager |
| POS | Point Of Sale |
| PROCON | Programa de Proteção e Defesa do Consumidor |
| R&D | Research and Development |
| RA | Recruitment Analyst |
| RC | Retained claims |
| ROE | Return on Equity |
| ROI | Return on Investment |
| ROS | Return on Sales |
| SELIC | Sistema Especial de Liquidação e Custodia |
| SUSEP | Superintendência de Seguros Privados |
| VGBL | Vida Gerador de Benefício Livre |
| WACC | Weighted Average Cost of Capital |

CONTENTS

# 1    INTRODUCTION

## 1.1    Context

Insurance is a mechanism by which an agent can transfer risks to an issuer, in exchange for the payment of a premium (the amount that customers pay for being covered by the insurer). It has tremendous importance in the global economy, with the sum of all premiums paid in 2017 reaching U$ 4.8 trillion globally (EY, 2018). In the past 10 years, the market increased by an average ratio of 3.1% annually, but the growth pace might change and reach a ratio as high as 5.9% annually (ALLIANZ SE, 2017).

Insurance penetration - computed as direct premiums divided by a country's Gross Domestic Profit (GDP) - is a measure of the insurance relative importance as a component of a country's overall economy (MA e POPE, 2008). Insurance penetration in developing markets is significantly lower when compared with developed countries (ALLIANZ SE, 2017). This indicates both that insurance is a normal good, which means that an increased income leads to higher demand (positive income elasticity of demand) and that developing markets are immature and represent a huge business opportunity. In a global level, insurance penetration has reached 6.3% in 2017, far less than the 7.5% peak in 2007 (DELOITTE, 2018). Despite being the largest economy in Latin America, Brazil has not the higher insurance penetration in the region, reaching a modest third position with a 3.2% ratio, lagging behind Puerto Rico (12.9%) and Chile (4.2%) and closely followed by Argentina (2.9%) and Colombia (2.9%) (FUNDACIÓN MAPFRE, 2018).

The growth in premiums paid to insurers in an economy is closely related to the Gross Domestic Profit (GDP) growth, with income elasticity generally greater than one (ENZ, 2000). In Brazil, the insurance market has grown consistently in the past years, even during the recent economic downturn, averaging 10,75% yearly growth from 2013 to 2017 (CNSEG, 2018). The profitability of Brazilian insurance companies is high, ranging from 17% to 22% in the past 15 years. In addition, market concentration is strong, given that the five main economic groups own 48% of Gross Written Premiums (GWP) volume.

The regulatory system is composed by the National Council of Private Insurance (CNSP), that represents the sector normative collegiate, by the Private Insurance Supervisor (Susep), responsible for all the market except the health segment, and by the Health National Agency (ANS), accountable for health insurance control. Regulators play an important role in

this industry, for instance, being responsible for defining Minimum Capital Requirements (CMR) and solvency rules, service standards, oversight service providers, etc. Therefore, one must scrutinize the regulator's requirements before deciding to enter the market.

In a global level, several innovative insurance business models have been proposed. Companies are leveraging technology to decrease frauds, to improve cost structure, to streamline underwriting processes and to better assess customers' usage profile. Microinsurance and "pay-as-you-use" insurance are examples of new products released recently that are considered disruptive ideas.

## 1.2 The company

Company X is a fintech company with business in Latin America. It started in 2014 as a credit card managed digitally and without annual fees. Then, Company X launched a loyalty program in 2017, a bank account in 2018 and in 2019 it has made available loans to its clients. Also, Company X has announced the beginning of its international expansions, opening offices in Mexico and Argentina. Company X hasn't physical branches and all the products and services offered by the firm can be hired and managed using the app.

With a strong appeal between young people, the company has a consolidated brand and it's seen as a company that offers enchanting customer services and distinctive products by using leading-edge technologies.

The company has now 9 million credit card clients and 8 million bank account clients, totaling 13 million unique customers. Recently, it became a "decacorn" and currently, it is valued in U$10,4 billion dollars. Company X has received several awards since its foundation, such as "The most innovative company of Latin America - 2019" by Fast Company and "Best Brazilian bank - 2019" by Forbes magazine.

Company X is currently investigating new business to diversify its portfolio. Although it has started as a financial services company, it is considering by now offering insurance products as well, aiming to become the best and the most complete digital bank in the world.

Also, Company X's founders and investors are pushing for profitability. The company did not reach the breakeven point yet and diversifying the portfolio of products is one of the main bets for finally becoming profitable.

## 1.3     Goals

The purpose of this thesis is to investigate the insurance market and to identify profitable business opportunities to Company X in the Brazilian scenario. First of all, this work will analyze the global and the Brazilian insurance markets and also the macroeconomic Brazilian environment. Then, a multicriteria decision method will be applied to decide which insurance product is more suitable to be the first Company X insurance product. After understanding the customer needs, the competitive environment, the macroeconomic scenario and the main challenges this new product would face, the features that should be presented in a Minimum Viable Product (MVP) are defined. Then, some relevant Strategy frameworks presented during the literature review will be applied to the specific insurance segment recommended by the author to Company X.

Lastly, an implementation schedule is proposed. Also, the author will estimate the size of this opportunity and the investment required.

## 1.4     Internship

The author works as Business Development intern in Company X, caring out feasibility studies of new business, as well as investigating improvement opportunities in current products. In addition, the author is responsible for the relationship with the loyalty program current partners, and for the hunting of new potential partners. Also, the author works closely to the engineering team to coordinate new features launch for the loyalty program. This is an important part of the work because it allows non-engineers to assess the complexity of possible features and to propose reasonable tradeoffs between implementation effort, benefits to customers and financial return to Company X.

The company is organized in a matrix organizational structure, and the author is working on the heavy spenders' segment team. Internal qualitative and quantitative researches have shown that customers with high income usually use several services from their main bank - for example, bank account, credit card, loans, insurance etc. Therefore, diversifying Company X product portfolio can help in the acquisition and in the retention of these clients. Also, the company has grown extremely fast in past years, but still unprofitable in 2019, and diversifying the product portfolio can help to reach the breakeven point earlier.

## 2  LITERATURE REVIEW

This chapter's objective is to assess the state of the art in strategy research, gathering the most suitable tools to analyze the attractiveness of the insurance market in Brazil, as well as to understand the Brazilian market forces and to spot business opportunities. In addition, some marketing tools are presented to support a possible entry in the insurance market, allowing the company to be well-positioned in terms of product and market. Then, a few methods to prioritize alternatives are presented, providing rational guidance to support the decision of which insurance product the firm should choose to start entering this new industry. Finally, tools to evaluate a project in a financial perspective are presented.

### 2.1  Strategy analysis

Grasping industry structure and assessing the forces that drive competition are important steps to understand the external environment in which Company X is planning to enter. Among the main outcomes of industry analysis, one can point out the understanding of how intense competition is, how attractive the industry is and if it's possible to change the industry structure to increase profitability

Industry structure plays an important role to define the profitability of a company. Some industries (such as tobacco and pharmaceuticals) consistently earn high rates of profit, while others (airlines, paper, and food production) fail to cover their cost of capital (GRANT, 2010). Table 1 depicts the average profitability of several industries between 2000 and 2010, measured by the median Return on Equity (ROE).

Table 1. Average profitability of industries from 1999 to 2007.

| High profitability industries | | Low profitability industries | |
|---|---|---|---|
| Tobacco | 33.5% | Packaging and containers | 10.2% |
| Household and personal products | 27.8% | Automotive and retailing services | 9.8% |
| Pharmaceuticals | 20.5% | Food and drug stores | 9.6% |
| Food consumer products | 20.0% | Insurance | 9.1% |
| Medical products and equipment | 18.5% | Metals | 8.2% |
| Mining, crude oil production | 16.3% | Semiconductors and electronic components | 7.7% |
| Securities | 15.9% | Forest papers and products | 7.3% |
| Chemicals | 15.7% | Food production | 5.2% |
| Aerospace and defense | 15.7% | Telecommunications | 5.8% |
| Construction and farm equipment | 14.5% | Motor vehicles and parts | 4.4% |
| IT services | 14.1% | Airlines | -11.3% |

Source: Adapted from GRANT, 2010.

## 2.1.1 Porter's Five Forces

According to Porter (1996), a company can outperform rivals only if it manages to establish and preserve a difference from its competitors, either by delivering great value for its customers or a comparable value at a lower cost.

A widely used framework to assess industry attractiveness is Porter's Five Forces. By using this tool, one can classify and analyze the five competitive forces that drive competition in an industry, being three sources of horizontal competition (competition from substitutes, competition from entrants and competition from established rivals) and two vertical sources (power of suppliers and buyers) (PORTER, 1979). Figure 1 summarizes this framework.

Figure 1. Porter's five forces framework.

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                          ┌──────────────┐
                          │  SUPPLIERS   │
                          │              │
                          │ Bargain power of │
                          │  suppliers   │
                          └──────┬───────┘
                                 │
                                 ▼
┌──────────────┐         ┌──────────────┐         ┌──────────────┐
│  POTENTIAL   │         │  INDUSTRY    │         │ SUBSTITUTES  │
│  ENTRANTS    │         │ COMPETITORS  │         │              │
│              │ ──────▶ │              │ ◀────── │  Threat of   │
│ Threat of new │         │ Rivalry among │         │ substitutes  │
│  entrants    │         │ existing firms │         │              │
└──────────────┘         └──────┬───────┘         └──────────────┘
                                 ▲
                                 │
                          ┌──────┴───────┐
                          │  POTENTIAL   │
                          │   BUYERS     │
                          │              │
                          │ Bargain power of │
                          │    buyers    │
                          └──────────────┘
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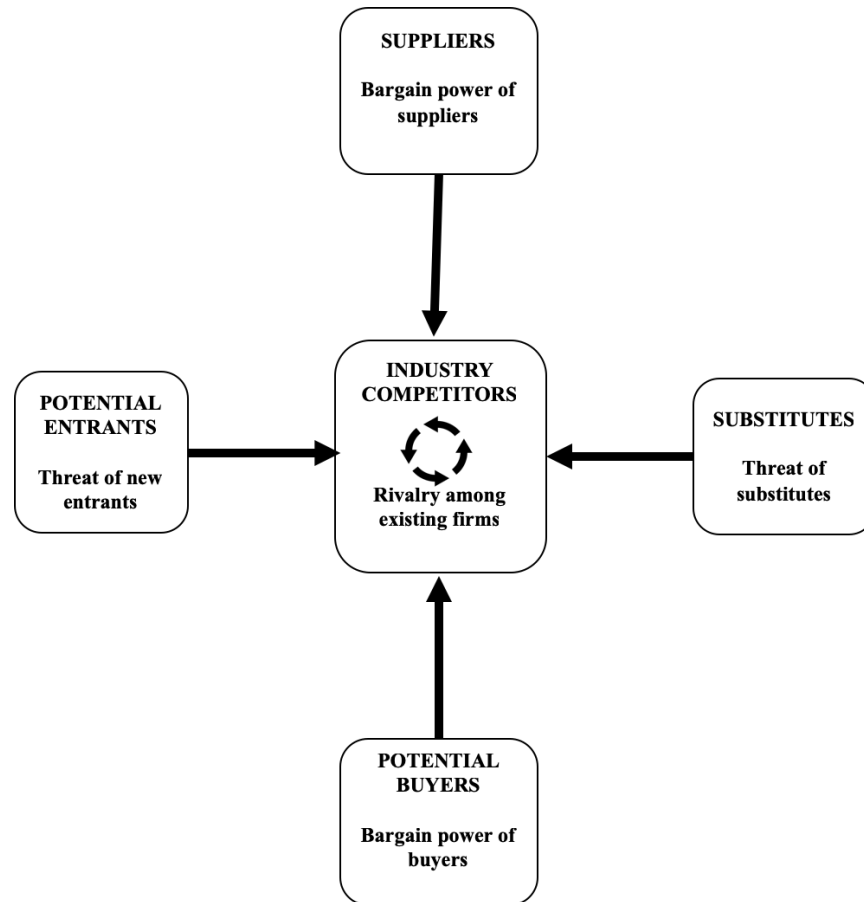
Source: Adapted from PORTER, 2008.

### 2.1.1.1 Threat of new entrants

The easiness of entering an industry is an essential factor to determine industry profitability. This easiness depends mainly on the barriers of entry: if barriers are low and new entrants expect weak retaliation from incumbents, then barriers are low, and one must expect low or moderate profitability. New competitors might put pressure on prices and costs, leverage capabilities from other business and use their access to distribution channels to undermine incumbents' profitability (PORTER, 2008).

According to Grant (2010), the threat of entry rather than actual entry may be sufficient to ensure that established firms constrain their prices to the competitive level. One example of the sufficiency of a threat to keep prices at a competitive level is the airline industries. Although there are some routes that are offered by a single company, usually the monopoly price is not practiced because another airline can easily extend their services to cover this route. In specific

industries, both sunk costs and entering or exiting costs are negligible, making incumbents vulnerable to hit-and-run entry. These markets are called contestable markets.

Porter (2008) states seven main sources of barriers to entry. Supply-side economies of scale arise when incumbents can produce at a lower unit cost due to economies of scale. In this case, established competitors might have a higher production volume, sharing fixed costs among more units; they can have a better negotiation with suppliers given their bargain power; also, they might have access to better technologies. Therefore, in industries that are capital, research or advertising intensive, new entrants need to decide between entering on small scales and supporting higher unit costs and entering on a large scale and dealing with underutilized capacity (GRANT, 2010). Table 2 illustrates the number of vehicles produced by the biggest carmakers in 2016. Given the expressive number of units produced by them, one can infer that to reach an efficient production scale, a new entrant would need to produce a huge number of units, hindering them to enter the industry.

Table 2. Number of units produced by the biggest carmakers in 2017.

| Position | Company | Units produced |
|----------|---------|----------------|
| 1 | Volksvagen | 10.377.478 |
| 2 | Toyota | 10.176.362 |
| 3 | Renault/Nissan | 10.075.185 |
| 4 | Hyundai/Kia | 7.246.003 |
| 5 | GM | 6.861.601 |
| 6 | Ford | 6.243.891 |
| 7 | Honda | 5.323.537 |
| 8 | FCA | 4.791.661 |
| 9 | PSA | 4.106.791 |
| 10 | Suzuki | 3.155.619 |

Source: FOCUS2MOVE, 2018.

Demand-side benefits of scale are observed in industries where the utility of a product is positively correlated with this product's user base size, the so-called network effect

(PORTER, 2008). For instance, instant messaging apps such as WhatsApp, WeChat and Telegram are subject to strong network effects, which means that from a customer point of view, using the market leader product provides them a higher utility level.

Switching costs represent the amount customers need to spend in order to change suppliers. If switching costs are high, the willingness to change decreases, giving incumbents advantages compared to new entrants (GRANT, 2010).

Capital requirement is another factor that can deter new entrants. If the cost of entering a new industry is too large, new entrants might not be capable of raising financial resources to access the industry. Boeing and Airbus duopoly in commercial jets is a typical case of capital-intensive industry with high barrier of entry: because the cost required to perform Research and Development (R&D) and establish an aircraft production line is too high, both companies have been capable to maintain this duopoly for a long period of time (GRANT, 2010).

Incumbency advantages regardless of size might be observed, occasioned by proprietary technology, preemption of the most favorable markets, access to the best raw materials, brand identity and learning economies (PORTER, 2008).

The unequal access to distribution channels plays an important role in deterring entrance. For instance, the dispute of the food industry for shelf space in retailers origins intensive selling efforts. New entrants often bypass traditional distribution channels to enter the market. The offer of hotel tickets online instead of by travel agencies illustrates how new entrants can overcome this disadvantage (GRANT, 2010).

Governmental and legal barriers influence the industry's dynamics both decreasing or increasing barriers of entry. The government might require licenses, restrict foreign investments, support monopolies and give temporary exclusivity to exploit a proprietary technology with patents, increasing barriers of entry. On the other hand, the government can foster new entrants, giving subsides and funding public research (PORTER, 2008).

Lastly, new entrants' expectation about incumbents' retaliation impacts the height of entry barriers. This expectation is shaped by several factors, such as previous responses to new entrants; cash availability of incumbents; low industry growth; disposition to enter a price war and increased advertising (PORTER, 2008).

### 2.1.1.2   Rivalry among established competitors.

The degree of rivalry among existing competitors is an important driver of industry attractiveness. There are several ways in which this rivalry can be manifested, such as discounted prices, investment in advertisement and innovation (PORTER, 2008).

Competition intensity is higher in concentrated markets. If the leading companies dominate the market share, they can exercise considerable discretion over prices. In the case of markets dominated by two companies, for instance, Coke and Pepsi, prices tend to be alike and competition focus on non-price dimensions like an advertisement (GRANT, 2010).

The height of exit barriers also influences the competition among established competitors (GRANT, 2010). In industries with high exit barriers, companies might decide to stay even if their business is not profitable, due to factors such as highly specialized, durable assets and strong employees job protection (BADEN-FULLER, 1990).

Cost structure is another important factor that shapes rivalry among competitors. In industries with high fixed costs, companies are willing to enter in marginal business to cover their variable costs. An example of price-cutting due to high fixed costs and negligible variable costs is the airlines discounted tickets offers: the marginal costs of an additional passenger is insignificant when compared to the fixed costs of a flight (GRANT, 2010).

Product differentiation can change the dimension in which companies compete. When companies offer products that are indistinguishable, price tends to be the most important dimension, and products are seen as commodities. Instead, when companies offer highly differentiated products, their characteristics and performance become decisive dimensions to support customer purchase behavior (PORTER, 1980).

### 2.1.1.3   Threat of substitutes

The price customers are willing to pay for a specific product is influenced by the availability of substitute products (GRANT, 2010). Substitute products fulfill an equivalent need for the customers thought using different means (PORTER, 1979). For instance, trains trips are a substitute for flights and music streaming services are substitutes of traditional radio stations.

If the threat of substitutes is high, profitability might shrink. Industry competitors need to distance themselves from substitutes by improving product performance, marketing, brand strengthening or other means (PORTER, 1979). The absence of close substitutes decreases the

elasticity of demand with respect to price, making customers less sensitives to price, as observed in cigarettes and fuel industry (GRANT, 2010).

Threat of substitutes is higher in case that it offers an attractive price-performance trade-off to the industry product. In addition, low switching costs to substitutes also increases the size of the threat (PORTER, 2008).

### 2.1.1.4 Buyers' bargain power

A transaction creates value for both the buyers and the sellers. How this value is split among them depends on the bargaining power of the players. The two main factors that influence the power distribution are, first, buyers price sensitivity, second, relative bargain power (GRANT, 2010).

Various aspects exert influence on buyers' price sensitivity, such as if the product it purchases represents a significant share of its budget; if customers are income-constrained; if the quality of the acquired product is critical to customers; if industry's product has a huge effect on buyer's other costs. These aspects decrease the elasticity of demand with respect to prices, consequentially undermining the capacity of buyers to force down prices (PORTER, 2008).

With respect to the relative bargain power of buyers, three main characteristics influence the power distribution. Firstly, the size and concentration of buyers relative to sellers (GRANT, 2010). Buyers concentration lowers prices and profits in the supplying industry (LUSTGARTEN, 1975). Second, the buyer's information on price, costs, performance and quality. The more informed buyers are, the better they are able to bargain. Lastly, the ability to vertically integrate. If buyers have as an alternative the option to do it themselves, they increase their bargain power (GRANT, 2010).

### 2.1.1.5 Bargain power of suppliers

The analysis of suppliers' bargain power is symmetrical to the buyers' one. If suppliers offer undifferentiable products, they lack bargain power. If they supply complex and sophisticated materials, they can capture a higher value and influence prices (GRANT, 2010).

Labor unions, for instance, exert a strong influence on profitability, once they increase the supplier bargain power (GRANT, 2010). Figure 2 illustrates the negative correlation

between the percentage of employees unionized and the profitability of companies, measured by Return on Investment (ROI) and Return on Sales (ROS) (GALE, 1987).

Figure 2. Correlation between percentage of employees unionized and profitability.
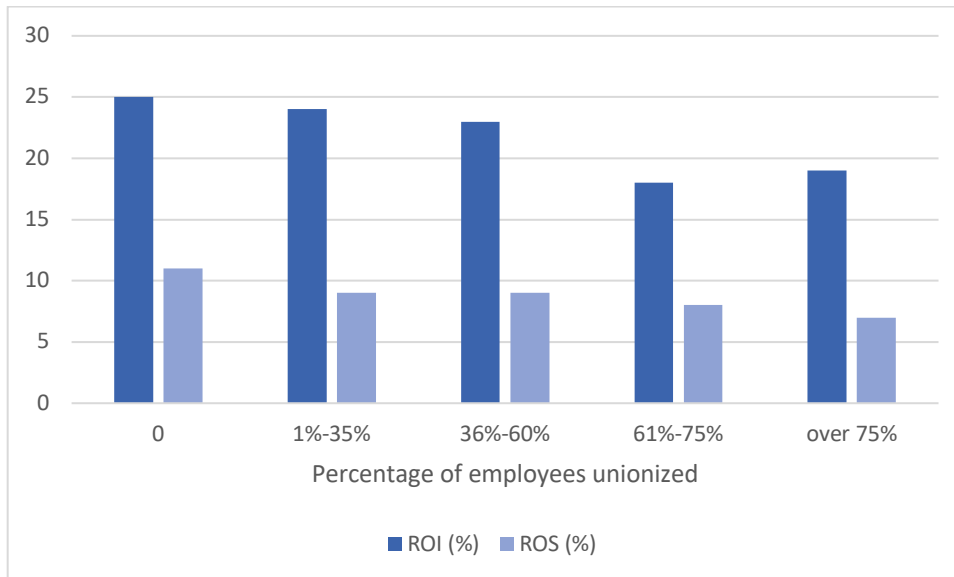


Source: adapted from GALE, 1987.

## 2.1.2    Key Success Factors

Porter's five forces is an important framework to analyze an industry attractiveness, but it does not explain the distribution of profit between firms competing in the same industry. Key success factors, also known as Critical Success Factors, are a tool to identify the main dimensions relevant to the survivor and to the prosperity of a firm in its environment (GRANT, 2010).

In order to survive and thrive in an industry, a company must supply products that customers want to buy, while surviving competition. Therefore, the company needs to answer two questions: what do our customers want? What does the firm need to do to survive the competition? (ANDERSON, 1999). Grant (2010) breaks down these two questions into six, allowing a detailed analysis of the requisites for success, as depicted in Figure 3.

Figure 3. Key success factors framework.
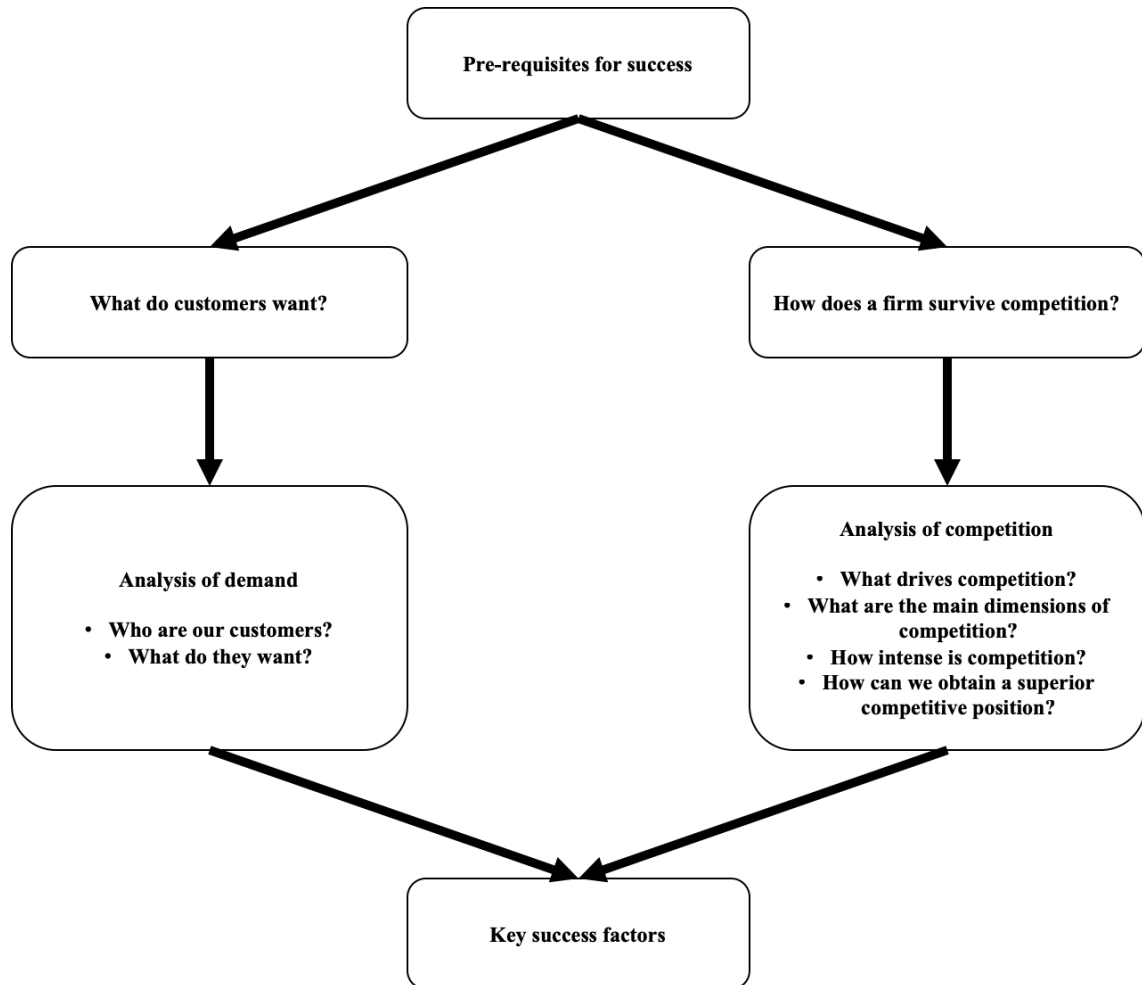


Source: Adapted from GRANT, 2010.

## 2.1.3 Market segmentation

Segmentation is the process of disaggregating an industry into specific markets. This is an important division because competition varies a lot within different submarkets. The purpose of segmentation analysis is to identify attractive segments, to design strategies for different segments and to determine which segment to serve (GRANT, 2010). The author suggests five steps to perform this analysis:

A) **Identify key segment variables.** It relates to the characteristics of customers and the products. The goal is to split the market into the most distinctly in terms of limits to

substitution both by customers and suppliers. Therefore, one must strategically select significant segmentation variables;

B) **Construct a segmentation matrix.** After selecting variables on step one and the categories inside each variable have been determined, segments can be identified in a matrix;

C) **Analyze segment attractiveness.** To assess the profitability of each segment, Porter's Five forces framework is useful;

D) **Identify segment's Key Success Factors (KSF).** Each segment can have different KSF, given the differences of customers preferences;

E) **Select segment scope.** Decide whether to be a segment specialist or a multiple segment competitor;

### 2.1.4    Strategic groups

When companies inside an industry adopt similar strategies along strategic dimensions, it is said that they form a strategic group (KANTER, 1983). This concept is not equivalent to market segments or segmentation strategies, and it can change the configuration of structural analysis within an industry (CARVALHO e LAURINDO, 2010).

Entry barriers vary strongly according to the specific strategic group each new entrant is willing to join, as well as create barriers to alterations of strategic positioning from one group to another. High barriers explain companies' profitability differences (CARVALHO e LAURINDO, 2010).

The existence of several strategic groups influences the rivalry level inside an industry, once it might exist interdependency between groups or target overlapping. The possibility of product differentiation, the number of strategic groups and their relative sizes and strategic differences within groups are other factors that influence the globally rivalry of an industry (CARVALHO e LAURINDO, 2010).

### 2.1.5 SWOT analysis

SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is a list of company's strengths and weaknesses generated by scrutinizing its resources and capabilities, together with a list of threats and opportunities presented by its environment (STACEY, 1993). Therefore, this framework is capable of categorizing environmental factors, both internal and external to the organization (PICKTON e WRIGHT, 1998).

The main objective of this analysis is to identify the limitations of the company, widening its strengths while monitoring threats and opportunities in the competitive environment (PORTER, 1980).

### 2.1.6 Blue Ocean market segments

Blue ocean strategies consist in creating new markets and industries where demand is created rather than fought, where there is less competition if any. Therefore, by applying Blue Ocean strategy, a company is able to invent a new uncontested market from an existing industry by modifying the product or service (KIM WC, 2005).

To succeed in creating a blue ocean strategy, the company must both save in cost, by eliminating and reducing the factors that rivals compete in other segments and increase buyer value by creating and raising benefits that the industry had never offered (KIM WC, 2005). Figure 4 illustrates this framework.

Figure 4. Blue ocean framework.
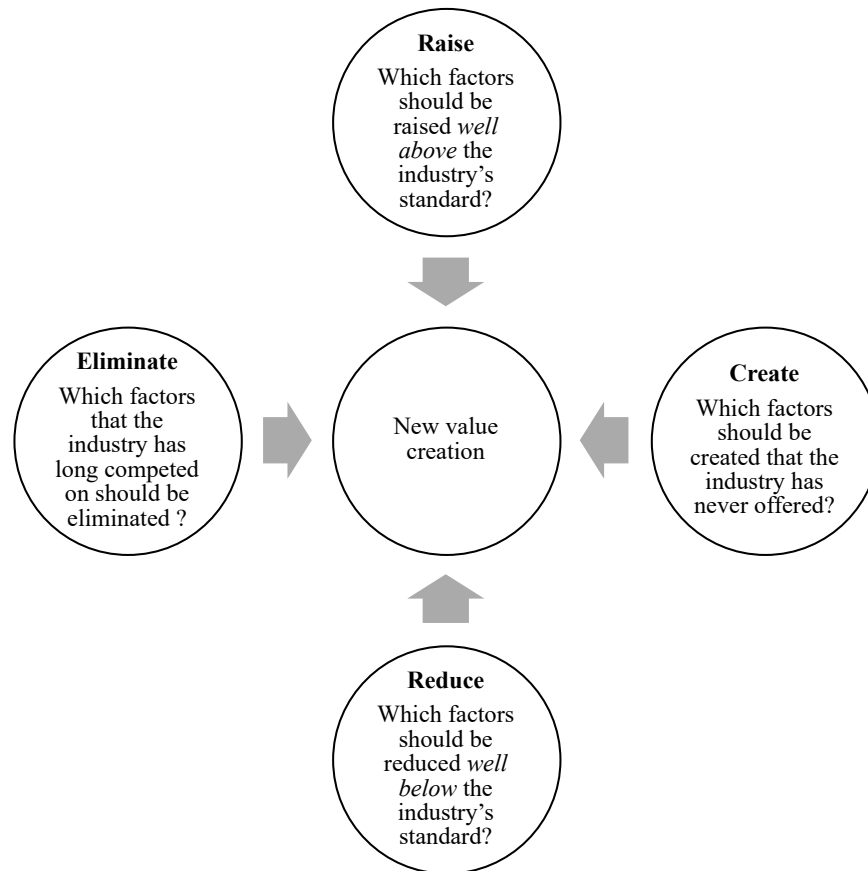


Source: Adapted from KIM WC, 2005.

Red oceans instead represent all the industries existing today, which means that it's a known market space, usually an overcrowded and unattractive market space. (GRANT, 2010). Table 3 summarizes the main differences between blue ocean and red ocean market segments.

Table 3. Comparison between Red Oceans and Blue Oceans.

| Red ocean strategy | Blue ocean strategy |
|---|---|
| Compete in existing market space | Create uncontested market space |
| Beat the competition | Make the competition irrelevant |
| Exploit existing demand | Create and capture new demand |
| Make the value cost trade-off | Break the value cost trade-off |
| Align the whole system of a firm's activities with its strategic choice of differentiation or low-cost | Align the whole system of a firm's activities with its strategic choice of differentiation and low-cost |
| Value creation or addition = added value | Value innovation = innovative value |

Source: Adapted from KIM WC, 2005.

## 2.1.7    Generic competitive strategy

According to Porter (1979), a company's performance in a specific industry can be broken down into two main dimensions, the first one related to the average performance of competitors, the second one related to the comparative performance of the specific company in the industry.

There are two kinds of competitive advantage: cost advantage and benefits advantage. In addition, a company must define if its scope is going to be either broad, serving several segments, or narrow, serving a specific segment (PORTER, 1979). Figure 5 illustrates potential strategic positions derived from this framework. Companies must adopt one of these strategies and failing to do it will result in the "stuck in the middle" scenario. In this last scenario, companies lose their focus and reach neither a cost nor a differentiation leadership (PORTER, 1980).

Figure 5. Generic competitive strategies.
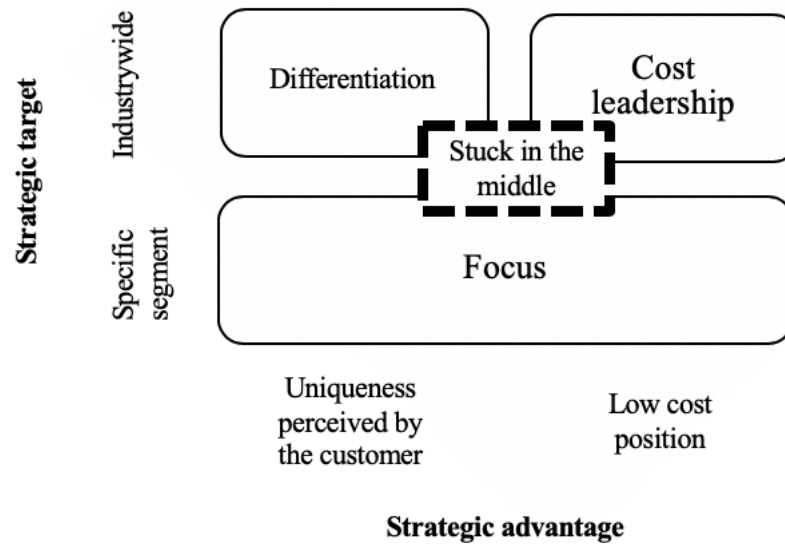


Source: Adapted from PORTER, 1980.

## 2.1.8 CANVAS Business model

According to Osterwalder (2005), a business model is a tool that comprises several elements and its correlation. In addition, it is a description of all the values a company offers to its customer segments and of the stakeholders' network (OSTERWALDER e PIGNEUR, 2010).

The Canvas business model is a simple, relevant and comprehensive tool to describe a business model in a visually pleasing way, facilitating its use to foster new business strategies. It allows the description of a business model by using nine basic components, as described in the following subsections (OSTERWALDER e PIGNEUR, 2010).

### 2.1.8.1 Customer Segment

According to Osterwalder & Pigneur (2010), customer segmentation consists in dividing the customer base into different groups of individuals that have similar needs and behaviors. It is important to define not only which customer segments to serve, but also which of them to ignore. Once this decision is made, the business model can be designed to meet customer needs. Customer groups might represent different segments if:

a) They have different needs and require a different offer;

b) They are reached through different distribution channels;

c) They require different kinds of relationship;

d) They have a substantially different profitability;

e) They are willing to pay for different aspects of an offer;

## 2.1.8.2 Value proposition

It represents the bundle of products and services that creates value for a specific customer segment, being the reason of a customer choosing a company's product instead of its competitors'. Each value proposition is exclusive for a particular customer segment (OSTERWALDER e PIGNEUR, 2010).

A value proposition can be either innovative and represent a completely new and disruptive product offer or be an existing offer with different attributes and features (OSTERWALDER e PIGNEUR, 2010).

Among the elements that can contribute for value creation, Osterwalder & Pigneur (2010) states:

a) Novelty: to offer a product that satisfies needs that were not perceived as latent need before product launch;

b) Customization: to tailor products and services to meet specific needs of a customer segment;

c) Accessibility: to make a product that is accessible to a higher share of the customer base, either by creating a new business model or new technologies, or both;

d) Usability: to increase the product usability, being more convenient to customers to use them;

## 2.1.8.3 Channels

It describes how a company will reach its customer segments, effectively communicating and delivering its value proposition. Channels are classified in terms of the type of channel (particular channels or partnership channels) and the phase of channel, as illustrated in the Figure 6. Each channel can support more than one phase of the customer journey (OSTERWALDER e PIGNEUR, 2010).

Figure 6. Channel types and phases.

| Channel types | | | Channel phases | | | | |
|---|---|---|---|---|---|---|---|
| Own | Direct | Sales force | **1. Awareness** How do we raise awareness about our company's products and services? | **2. Evaluation** How do we help customers to evaluate our organization's Value Proposition? | **3. Purchase** How do we allow customers to puchase specific products and services? | **4. Delivery** How do we deliver a Value proposition to our customers? | **5. After sales** How do we provide post-purchase customer support? |
| Own | Direct | Web sales | | | | | |
| Own | Indirect | Own stores | | | | | |
| Partner | Indirect | Partner stores | | | | | |
| Partner | Indirect | Wholesaler | | | | | |

Source: Adapted from OSTERWALDER & PIGNEUR, 2010.

## 2.1.8.4 Customer relationship

According to Osterwalder & Pigneur (2010), it describes the type of relationship a company establishes with a particular customer segment. The relationships can range from personal to automated and be driven by three main reasons: customer acquisition, customer retention or upselling. The main categories of the customer relationship are personal assistance, dedicated personal assistance, self-service assistance, automated services, communities and co-creation.

## 2.1.8.5 Revenue streams

A company must investigate each segment's willingness to pay, assessing the cash a company can generate from each customer segment. There are two main types of revenue streams: transaction revenues resulting from one-time customer payments and recurring revenues resulting from ongoing payments. To obtain revenue, a company can have different approaches, such as selling resources, usage fee, leasing, licensing, advertising and brokerage fees. Each revenue stream may have different pricing mechanisms, such as fixed price, bargaining, volume dependent, market dependent etc (OSTERWALDER e PIGNEUR, 2010).

## 2.1.8.6 Key resources

It describes the most important assets required to make a business model work. By using these resources, a company is capable of creating and delivering its value proposition, reaching its customer segments, keeping a good customer relationship and earning revenues. Key

resources can be physic, financial, intellectual or human resources. In addition, they can be owned by the company, leased or owned by key partners. Table 4 provides examples of each kind of key resources (OSTERWALDER e PIGNEUR, 2010).

Table 4. Example of key resources.

| | Type of resource | Characteristics | Indicators |
|---|---|---|---|
| Tangible resources | Physical | Plant and equipment, size, location, technology flexibility land and buildings, raw materials | Market value of fixed assets, scale of plants, alternative uses for fixed assets |
| | Financial | Borrowing capacity Internal funds generation | Debt to Equity ratio, credit rating, net cash flow |
| Intangible resources | Intellectual | Trademark, knowledge, patents, database, copyrights, know how, research and development, technical and scientific employees | Number pf patents owned, R&D expenditure R&D staff |
| | Reputation and customer relationship | Brands, customer loyalty, company reputation (with suppliers, customers, government) | Brand equity, Customer retention, Supplier loyalty |
| | Human | Training, experience, adaptability, commitment and loyalty of employees | Employee qualifications, pay rates, turnover |

Source: Adapted from GRANT, 2010.

## 2.1.8.7 Key activities

It represents the most important things a company must do to make its business model work. Like key resources, key activities also help a company in creating and delivering its value proposition, reaching its customer segments, keeping a good customer relationship and earning revenues. It differs depending on the business model, and can be grouped in:

a) Production: developing, manufacturing and delivering products in better quality and/or quantity. This activity is mainly present in the manufacturing business;

b) Problem-solving: offering new solutions to specific clients. This activity is really important, for instance, in hospitals and consulting firms;

c) Platform and network: managing platforms, offering services and promoting the platform;

### 2.1.8.8 Key partners

It describes the network of suppliers and partners that are critical to making the business model work. Alliances can be used for optimizing a company's models, for reducing risks and for resources acquiring (OSTERWALDER e PIGNEUR, 2010). One can group them in four categories:

a) Strategic alliance with non-competing companies;
b) Strategic partnership within competitors, the so-called "coopetition";
c) Joint venture, aiming to develop new business models;
d) Relationship with suppliers to ensure the reliability of the supply chain;

The three drivers for a partnership formation are:

a) Optimization and economies of scale: it's formed to reduce costs, usually by outsourcing or sharing infrastructure;
b) Risk and uncertainty reduction: in a competitive environment with strong degree of uncertainty, partnerships can help to reduce risks;
c) Resource acquiring and particular activities: companies set up partnerships driven by the need to acquire knowledge, licenses or access to clients;

### 2.1.8.9 Cost structure

It describes all the cost incurred to operate the business model. These costs can be calculated easily after defining Key Resources, Key Activities and Key partnerships. Thought, there are some business that are cost-driven, and have to build its business model based mainly on its cost structure first (OSTERWALDER e PIGNEUR, 2010).

Cost structure can have these characteristics:

a) Fixed costs: fixed amount of cost regardless of production volumes, such as wages and rents;
b) Variable costs: varies proportionally to the production volume;
c) Scale economies: cost advantages that a company might have when producing a higher quantity of product;

d)  Scope economies: cost advantages that occur when a company has multiple scopes and there are activities that support several products at the same time;

### 2.1.9.10 The square

The Canvas Square is a practical tool that fosters the understanding of business model, as well as creativity, discussions and analysis. It summarizes the nine critical elements described before, as illustrated in Figure 7 (OSTERWALDER e PIGNEUR, 2010).

Figure 7. Canvas Business Model Square.

| Key partnership | Key activities | Value proposition | Customer relationship | Client segments |
|---|---|---|---|---|
| | Key resources | | Channels | |
| Cost structure | | Revenue streams | | |
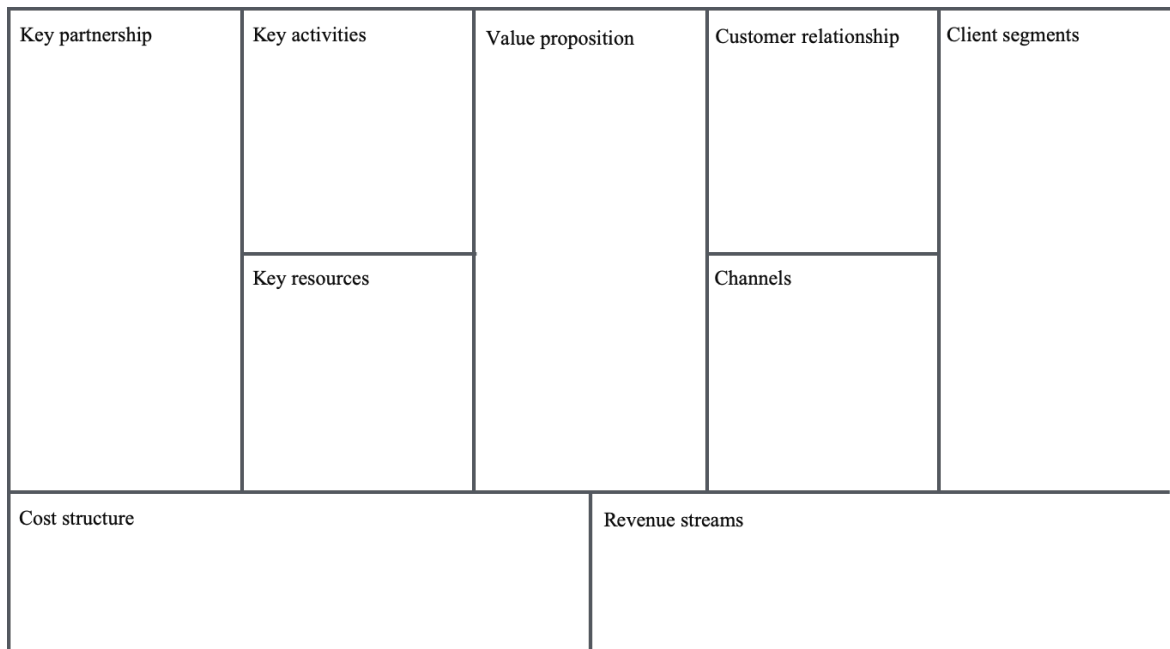
Source: Adapted from OSTERWALDER & PIGNEUR, 2010.

### 2.1.9    BCG Matrix

This useful tool allows companies to have a better understanding of their product portfolio by analyzing two dimensions: market share and industry growth. Putting these two dimensions on a 2x2 matrix, one can find four possibilities of product stage, as depicted in Figure 8 (CARVALHO e LAURINDO, 2010).

Figure 8. BCG Matrix.



Source: Adapted from CARVALHO & LAURINDO, 2010.

Cash cows are low-growth, high-share business or products. Usually are established, competitive products and services that need less financial support to maintain their consolidated market share. In this sense, one might expect that these products and services will generate profits to finance other business of the company (CARVALHO e LAURINDO, 2010).

Stars are high-growth, high-share business or products in a promising market. They require heavy investments to finance their rapid growth. Like cash cows, Starts are competitive products and eventually will become cash cows when the growth rate slows down (CARVALHO e LAURINDO, 2010).

Both dogs and question marks are less competitive products. Question marks are a low-share business in high-growth markets. It is common that question marks require heavy investments to keep following the industry pace. In this context, companies need to decide which one of them should be built into stars and which of them should be terminated. With respect to dogs, they are represented by low-growth, low-share business and products. They usually generate enough cash to sustain themselves, but don't promise to become a large source of revenues (CARVALHO e LAURINDO, 2010).

The position in the portfolio is not static. For instance, a star becomes a cash cow when market growth slows down. Still, it is interesting to analyze not only the company's portfolio composition but also the competitors' portfolio (CARVALHO e LAURINDO, 2010).

BCG matrix has several shortcomings, though. It can be difficult, time-consuming, and costly to implement. Management may find it difficult to define business units and measure

market share and growth. In addition, these approaches focus on classifying current businesses but provide little advice for future planning (KOTLER e ARMSTRONG, 2012).

### 2.1.10 Product/Market expansion grid

For a business to be sustainable in long term, a company should not only assess and manage effectively its current product portfolio but also find new business and products the company should consider entering in the future. Marketing has as main responsibility achieving profitable growth for the company (KOTLER e ARMSTRONG, 2012). A useful tool for identifying growth opportunities is the product/market expansion grid shown in Figure 9. The 2x2 grid depicts four different positionings a company can adopt: market penetration, market development, product development or diversification (ANSOFF, 1957).

Figure 9. Product/Market expansion grid.

|  | **Existing products** | **New products** |
|---|---|---|
| **Existing markets** | Market penetration | Product development |
| **New markets** | Market development | Diversification |

Source: Adapted from KOTLER e ARMSTRONG, 2012.

a) Market penetration: the growth is achieved by increasing sales of current products to current market segments without changing the product;

b) Market development: the growth is achieved by offering the company's current products to new market segments;

c) Product development: company growth by offering modified or new products to current market segments;

d) Diversification: growth through acquiring new business outside company's current product and markets.

It is important to develop strategies both for growth and for downsizing business portfolios. There are several reasons why a company can go for downsizing a business: a company may have grown too fast or entered in areas and business where it lacks experience. In addition, the

macroeconomic scenario may force the company to focus only in the most profitable products. Finally, there are products that become aged and die (KOTLER e ARMSTRONG, 2012).

## 2.1.11 Integrated marketing mix

The marketing mix is composed of the set of tactical marketing devices that firms put together to produce the response it wants in the target market. It consists in everything that a company can do to influence the demand for its products. Kotler & Armstrong (2012) suggests to collect these variables into four groups (the so called 4 P's).

a) Product: goods and services that company effectively provides to its target market;
b) Price: is the amount charged by the company to customers to obtain the good or service;
c) Place: it comprises company activities that make the product available to target customers;
d) Promotion: communicate product characteristics and persuade target customers to buy it.

To provide an effective marketing program, a company must mix each of the marketing mix elements, achieving company's marketing objectives and delivering value to customers. This framework is summarized in Figure 10 (KOTLER e ARMSTRONG, 2012).

Figure 10. Marketing mix.
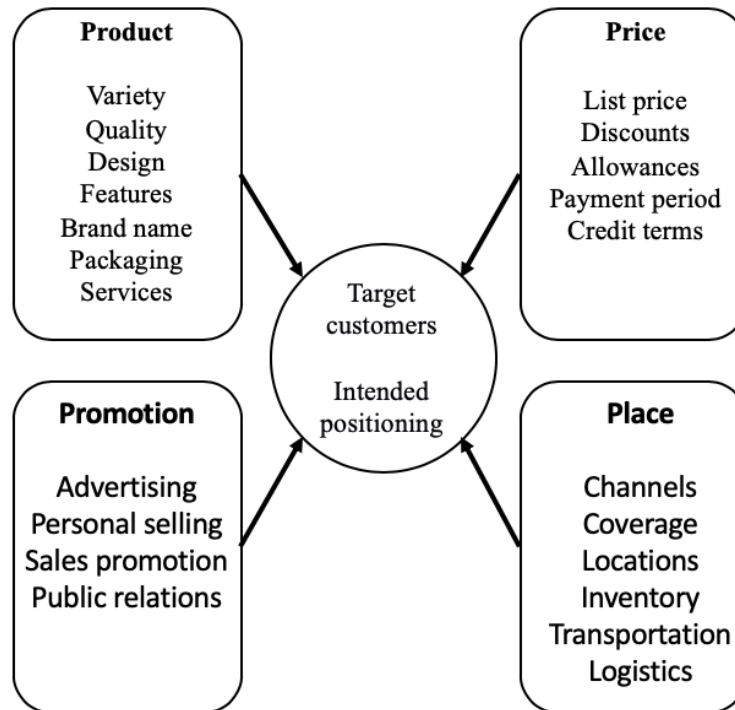


Source: Adapted from KOTLER & ARMSTRONG, 2012.

One of the critics about his model is that is takes into account the seller view of the market, neglecting buyers' view. From the buyers' perspective, the four P are better described as the four C's: Customer solution instead of product, customer cost instead of price, convenience instead of place and finally communication instead of promotion (KOTLER e ARMSTRONG, 2012).

## 2.1.12 Core competencies

According to Prahalad & Hamel (1990), a company success relies on identifying, improving and exploring its core competences. In addition, Carvalho & Laurindo (2010) reinforce that, by nurturing its core competencies, a company manage to share costs without necessarily investing more than the competitors in research and development. In instable environments, a resource-based strategic view is seen as a tool to elaborate a more stable foundation for strategic planning (PRAHALAD e HAMEL, 1990).

Every company has final products, business units, core products and core competencies. The competition in each of these levels is different, and the leadership in final products does not imply leadership in another level. To keep the leadership in the core competences, it is

important to maximize the market share of essential products in a wide variety of external and internal clients, avoiding investment initiatives of competitors. Core products embody one or more core competences, being the liaison between core competences and final products (CARVALHO e LAURINDO, 2010).

According to Prahalad & Hamel (1990), a company seldom has more than five core competencies. Therefore, if a company thinks it has more that this threshold, it can apply three tests to obtain a more reduced list (CARVALHO e LAURINDO, 2010):

a) First test: it provides access to a wide variety of markets;
b) Second test: it contributes significantly to the final product benefits perceived by the customer;
c) Third test: it is difficult to be replicated by competitors;

Carvalho & Laurindo (2010) state that the set of different individual technologies and abilities required to build core competencies cannot be acquired by competitors, once the internal coordination and the organizational learnings will not be replicable easily.

VRIO is useful framework to evaluate the resources and capabilities a company owns. It consists in understanding if a resource is valuable, rare, imitable and embodied by the organization. Table 5 summarizes the main questions a company can ask to evaluate its resources (BARNEY e HESTERLY, 2012).

Table 5. Main questions to apply the VRIO framework.

| Dimension evaluated | Questions |
|---|---|
| Value | Does a resource/capability create a significant economic value in the industry/market segment? Is it exploitable in strategic terms (to neutralize a threat or to seize an opportunity in the environment?) |
| Rarity | Is the resource/capability commonplace or rare among competitors? |
| Imitability | Is it possible for competitors to obtain or develop the resource/capabilities? At what cost? |
| Organization | Do processes, culture, incentives, organizational structure within the firm allow to support the development or the exploitation of valuable/rare and costly-to-imitate resources? |

Source: Adapted from BARNEY & HESTERLY, 2012.

## 2.2        Project Selection Methods

A company usually has several project categories to develop. Deciding which criteria and methods ought to be used to select and prioritize them is a key issue the organization will face. This problem has strong similarities with portfolio selection found in finance, therefore some methods might be borrowed from this latter field. Given the strategic role of project selection to a firm, the decision-support methods should not be "black box" prescriptively methods, otherwise managers tend to reject it. In addition, it is common that managers take decisions considering also tacit and even emotional aspects (CANTAMESSA e MONTAGNA, 2016). This section will propose some methods to support decision making process concerning project selection.

### 2.2.1      Top-Down versus Bottom-Up Selection

In the Bottom-Up approach, corporate functions propose projects that are selected according to their inherent viability and compliance to strategy. In the Top-Down approach instead, budget allocation decisions depict the strategic direction, with assigning resources to project categories and objectives and then to individual projects proposed by corporate functions. The former approach leaves more creativity freedom to lower levels of the organizational structure, which are closer to the business operation and the market. A shortcoming is that it makes more difficult to implement a centralized business strategy. The former approach grants less freedom to the organization but enforce the implementation of a strategy defined in the corporate level (CANTAMESSA e MONTAGNA, 2016).

Firms usually adopts a hybrid strategy, blending both approaches. The degree with which either should prevail and the way it should be managed depends on corporate culture and the type of innovation a company is pursuing (CANTAMESSA e MONTAGNA, 2016).

### 2.2.2      Net Present Value (NPV) and Payback Time (PBT)

A key indicator that is widely used to assess a project attractivity is Net Present Value (NPV) of future marginal cash flows. To calculate it, one should compute the cash flow of a project (commonly negative in the investment and developing phases and positive after project delivery) and compare them with the cash flow obtained if the project is not initiated. The cash

flow must be discounted by a suitable interest rate. Figure 11 shows the formulation in algebraic terms (CANTAMESSA e MONTAGNA, 2016).

Figure 11. NPV calculation formula.

$$\text{NPV} = \sum_{t=0}^{T} \frac{\text{CF}_t}{(1+i)^t}$$

Source: Elaborated by the author.

Several firms neglect the use of NPV and use the simpler Payback Time (PBT) as a criterion to project selection. This method is flawed since first it neglects discount ratios, second because it neglects what happens after the breakeven time. PBT has a bias towards incremental innovation, once it usually exhibits short breakeven times (CANTAMESSA e MONTAGNA, 2016).

When calculating NPV, one should not take into account sunk costs (costs that have already been incurred and would not be recovered either way). For instance, a company might kill a project due to the use of highly specialized physical assets cost derived from amortization and end up with underused resources and lower revenues. This situation is called "sunk costs trap" (CANTAMESSA e MONTAGNA, 2016).

Another attention point when using NPV is the design of the "do nothing option". Assuming that if a project is not initiated, "nothing" would happen is a misleading assumption. By not initiating a project, a company might face a deterioration of its competitive position, a loss in its market share and a decrease in its cash flow, instead of a stability (CANTAMESSA e MONTAGNA, 2016).

Finally, a company should select a discount rate to apply in the model. The most common rate represents the average interest rate that is required by the company's shareholders and debtholders, the Weighted Average Cost of Capital (WACC). The main problem of using WACC is that it is a companywide rate, not a project-specific rate, which means that WACC is the same regardless of a project risk. Therefore, the company should be aware of the bias towards riskier projects caused by the use of WACC (CANTAMESSA e MONTAGNA, 2016).

### 2.2.3 Multicriteria Method

The Analytic Hierarchy Process (AHP) is a very famous multicriteria method framework that organizes perceptions, feelings and judgments into a hierarchy of forces that influence decision results. It performs weighting of criteria and evaluates alternatives by using pairwise comparisons, followed by a validation of coherence in the final result. The process is based on ranking activities in terms of relative ratio scales (SAATY, 1980).

To understand which alternative is more suitable in a given decision process, it is necessary to evaluate the alternatives according to a set of criteria. Each pair of criteria will be pairwise compared to define a scale of importance among them.

To define the weight of each criterion, one should perform the pairwise comparison between the set of criteria according to the following procedure. When comparing two criteria $c_1$ and $c_2$, one must attribute a score representing the relative importance of $c_1$ with respect to $c_2$ $(c_1; c_2)$. If $c_1$ is unquestionably more important than $c_2$, it will have a score 9 (the maximum score). If $c_1$ are narrowly more important than $c_2$, it will receive 2. If both have the same importance, it will receive a score 1. Once defined the $(c_1; c_2)$ score, the $(c_2; c_1)$ score will be automatically calculated as the inverse of $(c_1; c_2)$. For instance, if $(c_1; c_2)$, that represents the relative importance of $c_1$ with respect to $c_2$, received a score 9, $(c_2; c_1)$ will receive a score 1/9. Therefore, the scores range from 1/9 to 9 (SAATY, 1980). Table 6 summarizes the comparison scale.

Table 6. Comparison scale.

| Intensity of Importance | Definition | Explanation |
|---|---|---|
| 1 | Equal importance | Two activities contribute equally to the objective |
| 3 | Weak importance of one over another | Experience and judgment slightly favor one activity over another |
| 5 | Essential or strong importance | Experience and judgment strongly favor one activity over another |
| 7 | Demonstrated importance | An activity is strongly favored and its dominance demonstrated in practice |
| 9 | Absolute importance | The evidence favoring one activity over another is of the highest possible order of affirmation |
| 2,4,6,8 | Intermediate values between the two adjacent judgments | When compromise is needed |
| Reciprocals of above nonzero | If activity i has one of the above nonzero numbers assigned to it when compared with activity j, then j has the reciprocal value when compared with i. | |

Source: Adapted from SAATY, 2008.

These judgments are converted into priorities by calculating the eigenvector associated with the largest eigenvalue of the criteria matrix, as depicted in Formula 1. Crawford and Williams (1985) suggest the use of a Geometric Mean Matrix (GMM), obtained calculating the geometric average of each line, to obtain the eigenvalue of each criterion. Once calculated, these weights are successively normalized to facilitate interpretation (CRAWFORD e WILLIAMS, 1985).

$$v_i = (\prod_{j=1}^{n}(c_i; c_n))^{\frac{1}{n}} \tag{1}$$

The next step consists of the validation of the data obtained using the method described before. To check the internal consistency of the judgment that has been given, one must calculate the Consistency Index (C.I.) as illustrated in Formula 2 and the Consistency Ratio (C.R.) as illustrated in Formula 3.

$$C.I. = \frac{\lambda_{MAX} - n}{n - 1} \tag{2}$$

Where $\lambda_{MAX}$ is the largest eigenvalue of the matrix considered and n is the dimension of the square matrix analyzed. Also, C.R. is calculated as:

$$C.R. = \frac{C.I.}{R.I.} \tag{3}$$

Where Random Index (R.I.) is a tabulated random index that depends on n, as illustrated in Table 7.

Table 7. Random Index according to the size of the matrix.

| n | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|
| RI | 0.58 | 0.90 | 1.12 | 1.24 | 1.32 | 1.41 | 1.45 | 1.49 |

Source: Adapted from STAAY, 1980.

According to Staay (1980), the inconsistency should be one order of magnitude smaller than the judgment itself. Therefore, on a scale from zero to one, the overall inconsistency should be around 10%.

Once the weights for the criteria are obtained, one must perform the same procedure to compare pairwise each alternative according to each criterion. Therefore, if we have M alternatives being evaluated according to N criteria, one will build N tables of dimension M x M. To each of these tables, one must carry out all the validations procedures described above to ensure the consistency of the results. After that, it will be possible to evaluate the alternatives using the criteria defined previously (SAATY, 1980).

# 3 MARKET AND COMPANY OVERVIEW

This chapter presents a global panorama about the insurance market. Later, it analyzes more deeply the Brazilian market, firstly discussing the macroeconomic environment characteristics that influence the insurance market situation, and secondly analyzing the insurance market properly, taking into account several factors such as industry maturity, market concentration, the profitability of insurance companies, investment portfolio and regulation.

Lastly, Company X is presented, giving an overview of its size, valuation, value proposition and current products.

## 3.1 Global context

The insurance market has reached U$3.7 trillion in Gross Written Premiums (GWP) in 2017 according to the consulting firm Ernest Young. This value reinforces the importance of insurance in the global economy, representing in 2017 5.5% of Global Gross Domestic Product (GDP) composition.

When analyzing the insurance penetration, measured by the ratio between GWP and GDP, one can notice a shrinking tendency. In 2016, global insurance penetration was 6.3%, significantly lower than the 7.5% ratio presented in 2007. This measure shows that despite living in a world with really strong and growing uncertainty, people, companies and governments are using fewer insurance devices to protect themselves from it.

Among the main threats to growth and profitability of insurance industry that can explain this penetration decrease, one can point out a strong inflationary pressure that has a negative impact on demand and may cause policy cancellations and increasing costs. Another important point that may have influenced this shrinking tendency was the sharp reaction to regulatory changes in key markets, such as in UK in 2015 (Pension Freedoms) and in India in 2010 (complete product overhaul). Furthermore, political instability, surprises in key markets and increased protectionism might have obstructed trade and consequentially the global economic activity, impacting commercial insurance volumes (EY, 2018).

Ernest Young (2018) listed the four main impediments to the insurance industry growth in the next years:

a) **Trade wars and growing protectionism** may hinder trade and decrease demand for insurance;

b) **Greater market volatility** may affect investment decisions and value proposition offered;

c) **Talent constraints** may limit the ability to manage changes;

d) **Rapidly shifting customer expectations** pose a threat to less agile insurers.

Profitability was a huge challenge in 2017 due to interest rates staying low globally. Also, several natural disasters led to the largest insured losses ever in 2017, reaching U$135 billions of claims from Natural Catastrophes, 3.9 times the 30-years average.

Table 8 shows the GWP breakdown into regions. It is clear that developed regions represent the biggest markets in the world, with Western Europe and North America being accountable for more than 60% of global GWP. This scenario is going to change significantly in the next years, with a drop in Western Europe and North America global participation to 46%, according to Ernest Young projections. These composition changes are highlighted in Figure 11.

Table 8. Volume of GWP by region, in billion euros.

| Region | 2007 | 2016 | 2027 |
|---|---|---|---|
| Western Europe | 991 | 994 | 1356 |
| North America | 996 | 1180 | 1767 |
| Japan | 297 | 368 | 468 |
| China | 90 | 366 | 1539 |
| Asia (ex Japan and China) | 215 | 420 | 1011 |
| Eastern europe | 32 | 54 | 117 |
| Latin America | 32 | 107 | 332 |
| Rest of the world | 79 | 118 | 214 |

Source: EY, 2018.

Figure 11. Participation of each region in GWP composition.
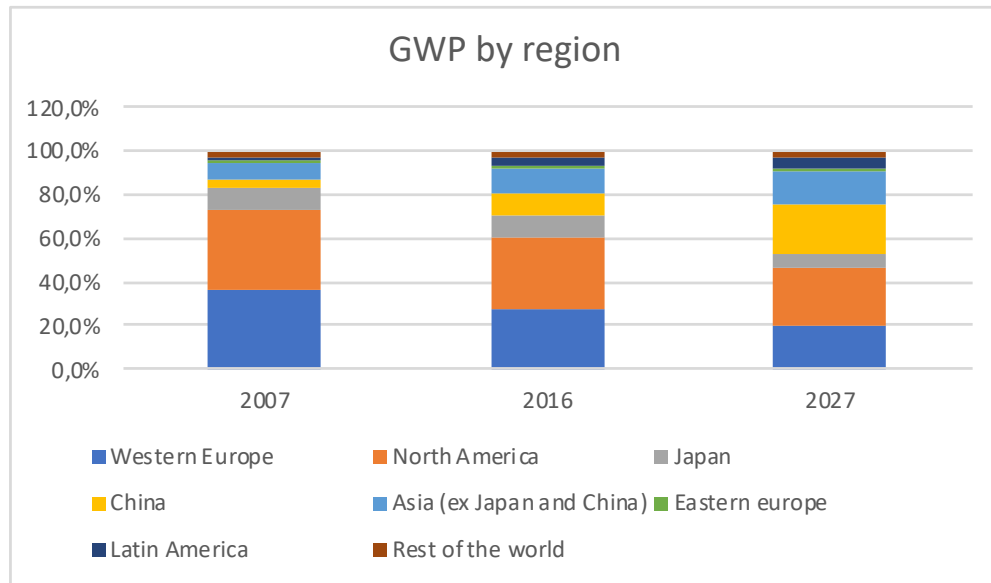


Source: Adapted from ERNEST YOUNG, 2018.

Emerging markets were accountable for 80% of global GWP growth in 2017, which reinforces the widening relevance of these markets in the global scenario. In addition, China was the main driver of emerging markets' volume growth, being responsible for 2/3 of it.

Latin America still a small market in global scale, but it has shown a consistent growth pattern in the past 10 years, with an average 14.4% yearly GWP growth rate. According to the projections, in the following 10 years the region will present a yearly growth rate of 10.8% in GWP, only lagging behind China, that might have a 13.9% yearly growth rate in the period.

The Insurance Penetration Gap (IGP) is an important dimension to be analyzed when studying an insurance market. It represents the difference between the insurance coverage that is economically necessary and beneficial to society and the actual amount of coverage required. IGP is not a static concept and will change over time, considering both quantitative factors, such as penetration index increase, and qualitative factors, like sustained economic growth, controlled inflation, increases in personal disposable income, the general development of the financial system and efficient regulatory framework. The two main outcomes of this index are, first, to help to determine the gap in terms of societal under-insurance, and second, to assess the potential market size (FUNDACIÓN MAPFRE, 2018).

Figure 12 shows the relative size of IGP when compared to the total market size of each country in Latin America. The total IGP in Latin America is estimated at U$256 billion in 2017, 5.2% higher than the previous year. Almost all countries have an index higher than one, except

for Puerto Rico (0,2) and Chile (0,6), indicating that there is a huge market opportunity in Latin America for insurance companies.

Figure 12. IGP in Latin America countries.
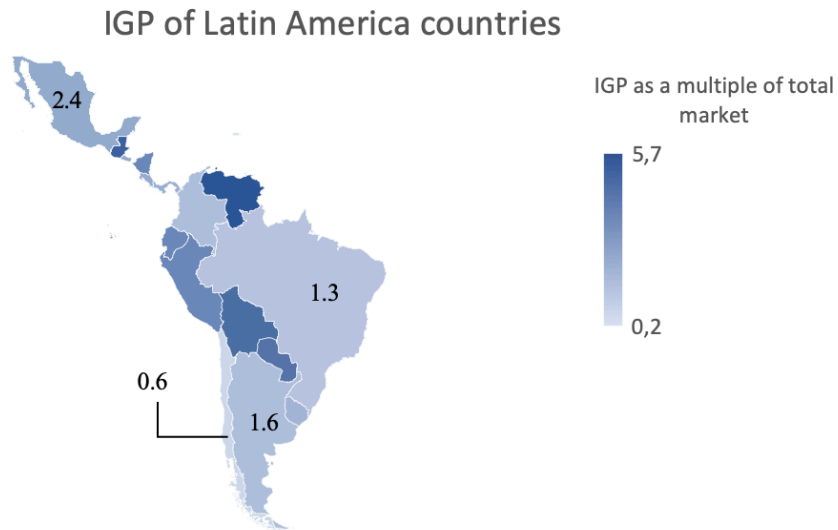


Source: FUNDACIÓN MAPFRE, 2018.

## 3.2 Brazilian context

### 3.2.1 Macroeconomic environment

Brazil has faced a severe economic downturn in 2015 and 2016, with a shrinking GDP, as illustrated by Figure 13. In the last two years, the economy is showing slow-paced recovering signs, driven by an improvement in exports of basic and agricultural products. Regarding fiscal deficit, Brazilian public debt peaked 78% in 2019, meaning that government still needs to reduce its expenses and should consider pursuing structural reforms to balance out public accounts. These reforms are important to return to an economic growth scenario, what would influence in a positive way the economy in general and on this account also the insurance industry.

Figure 13. Evolution of Brazilian GDP.



Source: IBGE, access in May/2019.

The unemployment rate reached 13.7% in the first quarter of 2017 according to IBGE, and still an important issue to be addressed by the government. The unemployment rate has a direct impact on the insurance penetration for several reasons. First, because unemployed people usually don't have money to buy an insurance policy, affecting directly the demand. Second, since Health and Life insurance are usually provided as benefits from employers, an increase in employment rate would lead to an increase in the premiums of these segments as well. For instance, 67% of the Health insurance plans in Brazil are paid at least partially by the employer according to National Health Agency (ANS).

Inflation rate is currently under control, after spiking 10.67% in 2015. According to Brazilian National Statistic and Geography Institute (IBGE), in 2018 the rate stood in 3.75%, very close to the government central goal. Despite this positive scenario in terms of inflation, one must be aware that Brazil has had several issues with inflation in its recent history. Figure 14 illustrates the evolution of inflation rate in Brazil in the last 20 years.

Figure 14. Evolution of Brazilian inflation rate.
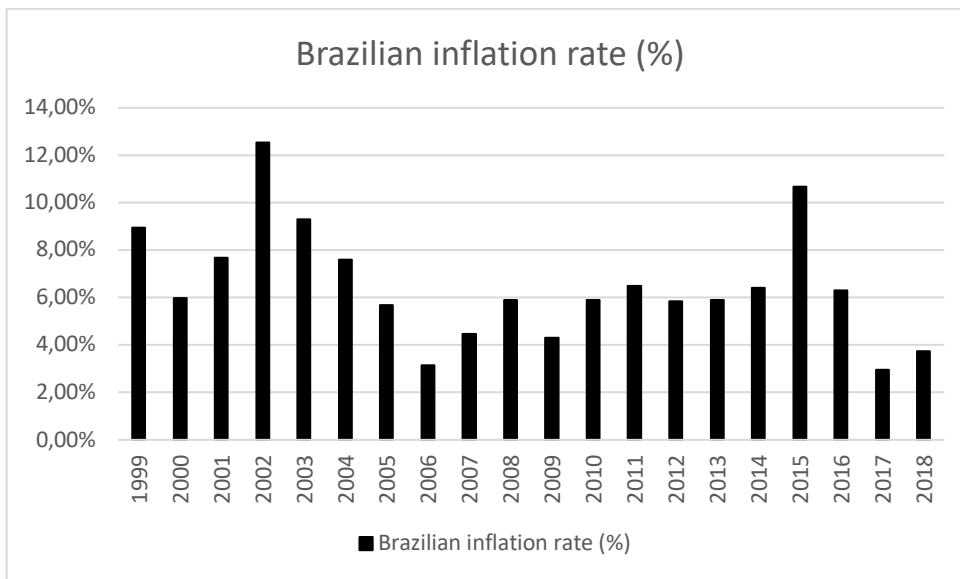


Source: IBGE, access in May/2019.

Another important macroeconomic indicator that influences directly the insurance market is Brazil's national benchmarking interest rate (SELIC). After peaking 14.25% p.a. in 2016, SELIC has been kept in 6.5% p.a. in past months, as depicts Figure 15. This all-time low interest rate has a strong impact in insurers profitability, given that the major part of their investments is made in public bonds with yields related to SELIC. Therefore, in the current scenario of lower interest rates, companies usually increase prices to offset lower financial results.

Figure 15. SELIC evolution.
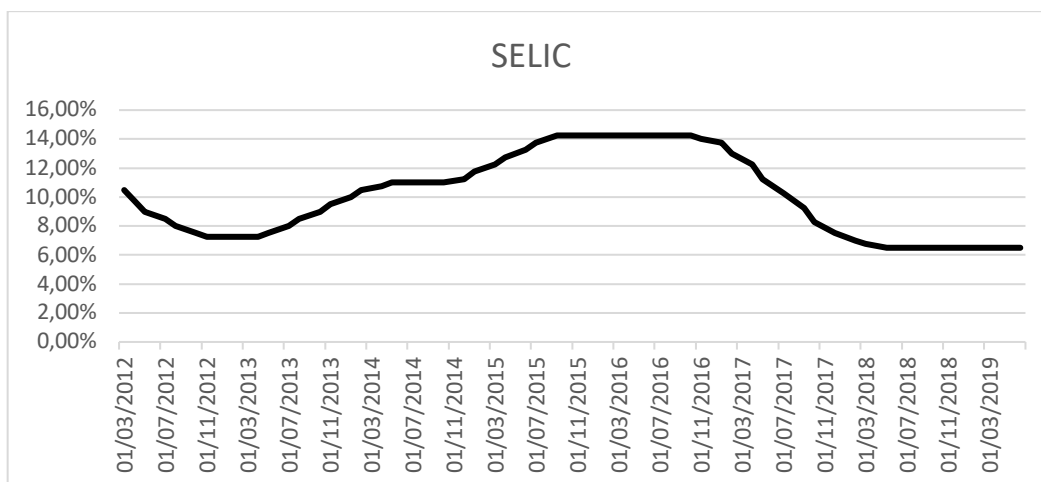


Source: Brazilian Central Bank (2019).

### 3.2.2 Brazilian insurance market

Brazilian insurance market had R$429 billion (approximately U$107 billions) of GWP in 2017. The growth rate in past years was constantly high even during the economic downturn that Brazil has faced in 2015 and 2016, which means that this industry in Brazil might present consistent results even in a scenario of economic and political instability. In 2017, though, the result was weaker, and it reflects that the crises probably affected market growth with some delay. Table 9 shows the growth rate of the insurance industry in Brazil from 2013 to 2017 in nominal terms.

Table 9. Annual growth rate of insurance industry in Brazil.

| Year | Annual growth rate |
|------|--------------------|
| 2013 | 13,4% |
| 2014 | 12,1% |
| 2015 | 11,5% |
| 2016 | 10,4% |
| 2017 | 6,3% |

Source: CNSeg, 2018.

Regarding insurance penetration, Brazil has a low ratio when compared with global 5.5% average, reaching 3.2% in 2017 according to Mapfre. When compared to Latin America developing countries, though, Brazil has the third higher penetration, falling behind Puerto Rico (12.9%) and Chile (4.6%), and being closely followed by Argentina (2.9%), Colombia (2.9%) and Uruguay (2.7%). Figure 16 illustrates the average penetration in Latin America countries in 2017.

Figure 16. Insurance penetration by country in 2017.
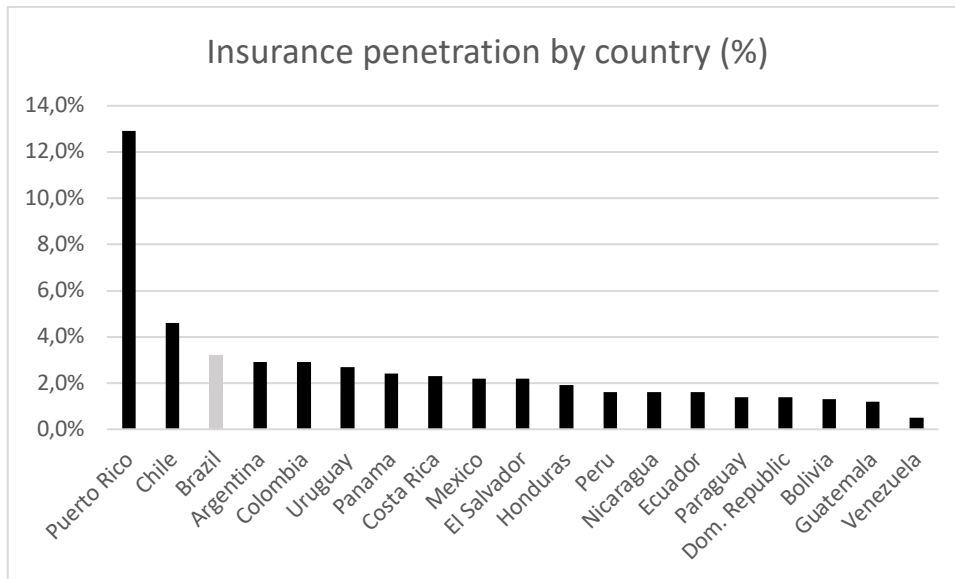


Source: Adapted from FUNDACIÓN MAPFRE, 2018.

Despite being the 15 largest insurance market in the world, Brazil presents an average premium per capita of U$315, lagging behind several developing countries such as Chile (U$700), Uruguay (U$457), Argentina (U$414) and Panamá (U$363). Figure 17 depicts the average premiums per capita in the region.

Figure 17. Premium per capita in Latin America in 2017.
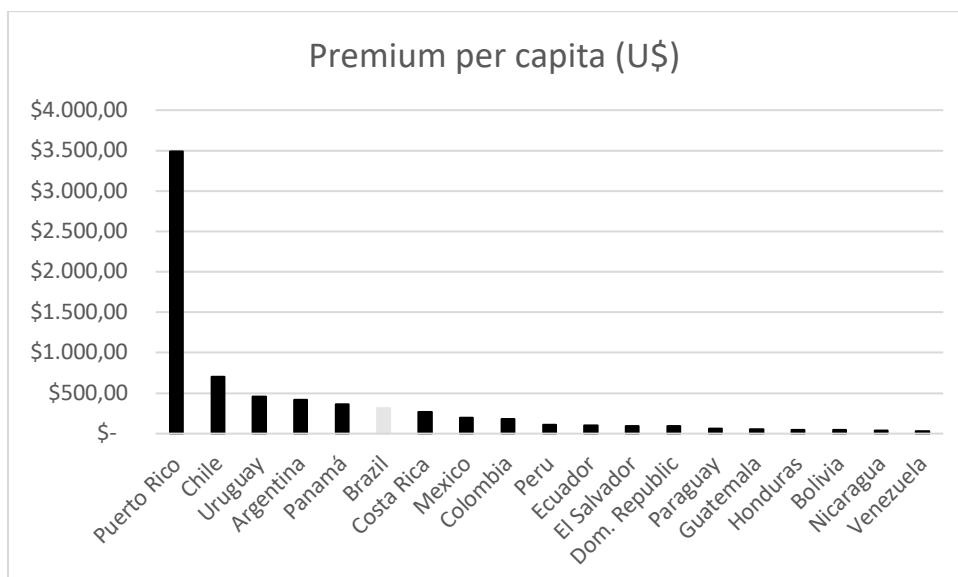


Source: Adapted from FUNDACIÓN MAPFRE, 2018.

In Brazil, Life segment represents 48% of IGP, while Non-Life segment represents 52%, which means that the gap is almost equally shared among them, while in Latin America the Life insurance accounts for 60% of the IGP.

Nominal Life premiums grew by 3.8% in 2017, significantly lower than in previous years (17.7% in 2016). This slow pace of growth was driven mainly by the cut of interest rates that diminishes the attractivity of VGBL (Free Benefit Guarantor Life, in literal translation) products (accountable for 78.6% of all life insurance premiums).

Non-Life products presented a nominal increase of 2.3% in 2017, with a growth rate similar to 2016 (2.2%). The main cause of this steadiness is the decline (-5% in real terms) in premiums of the Automobile segment, that represents 51.9% of all Non-Life premiums.

Figure 18 illustrates the distribution of GWP in each segment of Brazilian market in 2017. Excluding VGBL, the most important ones are automobile, property, people and health. VGBL and PGBL (Free Benefit Guarantor Plan, in literal translation) are modalities of private pension adopted in Brazil.

Figure 18. Segments of insurance in Brazil.
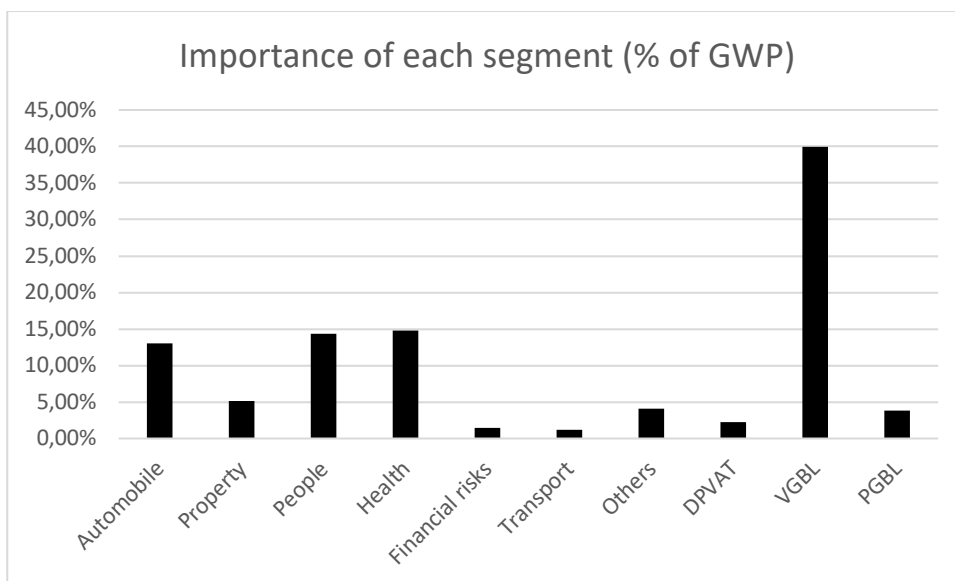


Source: SINCOR, 2018.

An important factor in the insurance industry is the investment portfolio that companies adopt in order to apply the money of premiums. Data provided by SUSEP (Superintendency of Private Insurance) are shown in Figure 19, depicting the aggregate investment portfolio evolution of Brazilian insurance companies. The investments were mainly concentrated in fixed income (94.4% in 2017). This kind of investment has been growing in recent years both in

absolute and relative terms, as illustrated in Figure 19. At the same time, Equity has decreased in relative terms, losing more than 50% of share when compared to 2007.

Figure 19. Aggregate investment portfolio of Brazilian insurance companies.
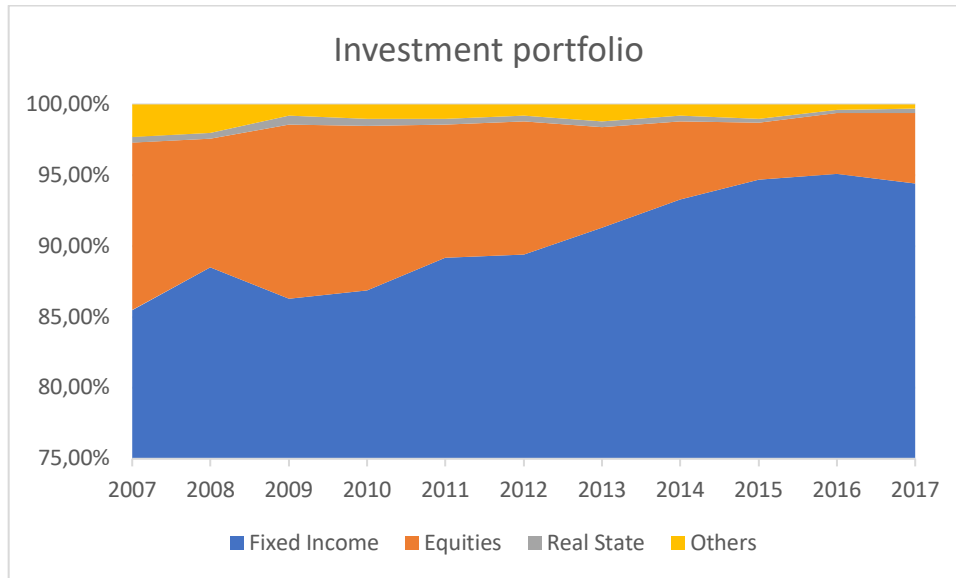


Source: FUNDACIÓN MAPFRE, 2018.

The combined ratio measures the operational profitability of an insurance company. It is calculated as the sum of claim-related losses and general business costs divided by the sum of earned premiums over the period. If the ratio is lower than 100%, then companies are profitable. In the Brazilian scenario, the combined ratio was improved by 1.5% in 2017 when compared to 2016, reaching 93.7%. This increase was led by a reduction of 2.6% in loss expenses and an increase of 1.04% in operating expenses. When analyzing the period from 2008 to 2017, the combined ratio was improved by 9.0%. Figure 20 summarizes this evolution.

Figure 20. Evolution of combined ratio.
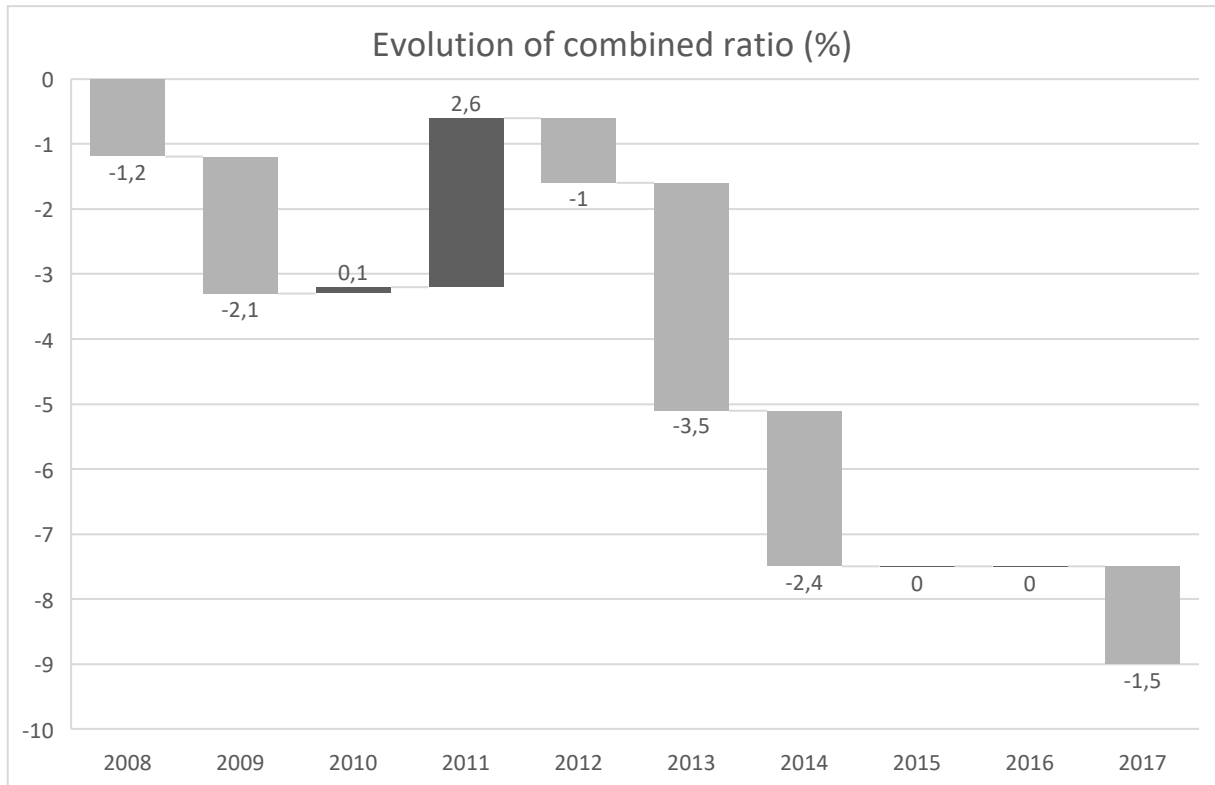


Source: SUSEP, 2018.

In terms of profitability, Brazilian companies presented a net result of U$5.42 billion, a decrease of 3% from the previous year. The main driver of this result was the reduction of the Return on Investment (ROI), that was balanced by a solid technical performance (measured by the combined ratio), as mentioned previously.

The IGP estimated to Brazil is of 88.26 billion dollars, equivalent to 1.3 times the size of its current market size, according to Mapfre. In the period from 2007 to 2017, the total IGP fell from 2.8 to 1.3 times. Life segment IGP has dropped from 3.5 to 1.0 times, while Non-Life segment IGP fell from 2.1 to 1.9 times. This means that Life insurance segment has experienced a significative improvement in the period, while the Non-Life segment posted just a slight improvement.

The Herfindahl Index (HHI) is a very common indicator of market concentration and is calculated as the sum of square of each company's market share. In this sense, this index indicates the chance of two random people belonging to the same population (in this case, being clients of the same company). Table 10 displays the main groups of companies in the insurance market and its respective market shares in 2017. In addition, it shows the HHI in 2017. Later,

Figure 21 shows the evolution of this index over the past 10 years. One can infer that market concentration is increasing in Brazil, though a slight decrease in the index in 2017.

Table 10. Market share of the main Brazilian companies and HHI calculation.

| Group | Market share (MS) | MS^2 |
|---|---|---|
| Bradesco | 24,31% | 5,91% |
| Sulamérica | 12,16% | 1,48% |
| Banco do Brasil & Mapfre | 10,84% | 1,18% |
| Porto Seguro | 9,49% | 0,90% |
| Zurich | 5,65% | 0,32% |
| Caixa Seguros | 4,45% | 0,20% |
| Tokio Marine | 3,26% | 0,11% |
| Itaú | 2,91% | 0,08% |
| Allianz | 2,48% | 0,06% |
| HDI | 2,44% | 0,06% |
| Sompo | 2,30% | 0,05% |
| Liberty | 2,21% | 0,05% |
| Unimed | 1,90% | 0,04% |
| Chubb | 1,44% | 0,02% |
| Prudential | 1,43% | 0,02% |
| Cardif-Luiza | 1,42% | 0,02% |
| Icatu | 0,80% | 0,01% |
| Mongeral | 0,77% | 0,01% |
| Axa | 0,66% | 0,00% |
| Metlife | 0,66% | 0,00% |
| Panamericana | 0,46% | 0,00% |
| Generali | 0,41% | 0,00% |
| Sura | 0,41% | 0,00% |
| Swiss Re | 0,41% | 0,00% |
| AIG | 0,39% | 0,00% |
| BrasilPrev | 0,36% | 0,00% |
| Assurant | 0,33% | 0,00% |
| Pottencial | 0,33% | 0,00% |
| Mitsui | 0,32% | 0,00% |
| J. Malucelli | 0,31% | 0,00% |
| Total | | 10,53% |

Source: SINCOR, 2018.

Figure 21. Evolution of HHI in Brazil.
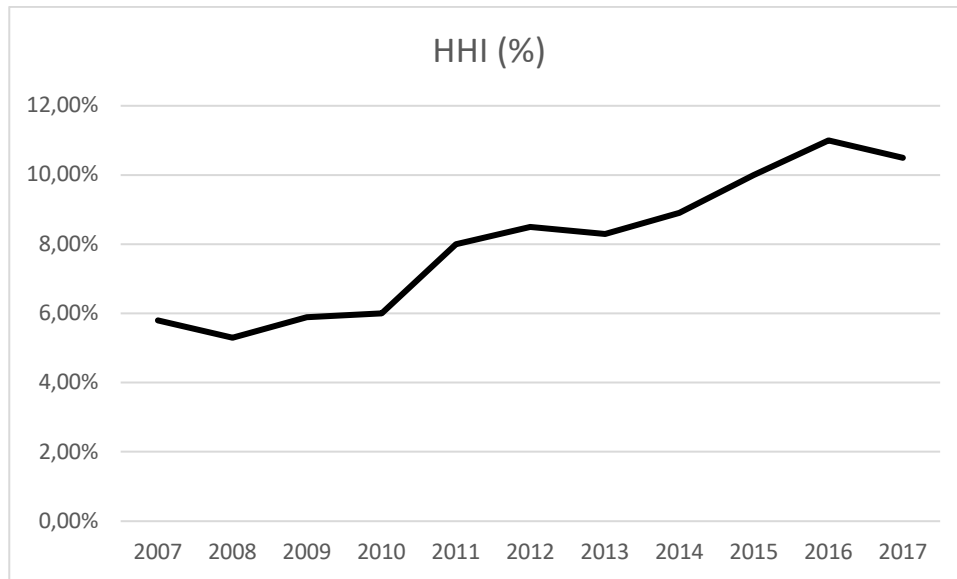


Source: SUSEP, 2018.

In terms of regulation, the private insurance national system is composed by:

- **Superintendence of Private Insurance (SUSEP):** is an autarchy responsible for the supervision and control of the insurance, open private pension funds and capitalization markets in Brazil. It is managed by a Managing Council formed by a Superintendent appointed by the Minister of Finance, and four directors. They are responsible for all insurance types but health and closed pension funds;

- **National Agency of Supplementary Health (ANS):** is a semi-autonomous government agency with administrative and financial autonomy. Its goal is to protect the public interest in terms of supplementary health insurance, regulating insurers in this sector - including their relationships with providers and consumers - and contributing to the development of health-related actions in Brazil.

- **National Council of Private Insurance (CNSP):** is the system's deliberative body and it's responsible for setting the guidelines and norms of government policy for the Private Insurance and Capitalization segments. All rules issued by CNSP are elaborated by SUSEP and have its prior approval;

## 3.3 The Company X

Company X was founded in 2013 offering a credit card with no annual fees. The main differentials of the company were a fully digital experience, a humanized customer care and transparency. Company X goal is to fight complexity to empower people, becoming the most influential financial company in the world.

From 2013 to 2017, credit card remained the only product of the business. Then, a new feature was released: an opt-in paid fidelity program that allowed people to accumulate points as they spend in the credit card. To each R$1 spent, the customer earns 1 point with no expiration date. The points balance can be used to erase purchases from the bill, in a ratio of 100 points to erase R$1. The practical meaning is that by subscribing to the points program, the customers earn 1% cashback on every purchase they made. The cost of subscribing the program is R$19 monthly or R$190 yearly, which means that the program cost is only offset by the cashback earned if customers spend more than R$1600 monthly.

The next product released was a bank account with no annual fees as well. This account awarded the customers with an automatic daily yield proportional to the amount of money deposited in the account. Customers could also transfer money unlimited times to other banks with no additional cost. Another feature that was new to the market was the deposit by paying *"boletos"* (a bill payment). Cash withdraws are available, but not for free. Lastly, the account also has "saving buckets", where customers can deposit their savings and prevent needless expenses.

In 2018, the company released the debt payment option, together with a card equipped with the contactless function, that allows customers to pay just tapping the card in a Point Of Sale (POS) terminal.

In 2019, Company X announced that it would offer to its clients personal loans with affordable interest rates. Once again, the process of hiring the lending was fully digital.

In May, Company X announced its expansion to Mexico, starting its internationalization process. In June it also made public the opening of a new office in Argentina, keeping its international expansion plans.

Company X has become the fourth largest credit card issuer in Brazil, overcoming consolidated players such as Caixa Econômica Federal. Nowadays, it has more than 13 million customers considering all the products, and more than 30 million unique customers already applied for at least one of its products.

Company X has around 1900 employees from 25 nationalities. It's organized in multifunctional, diverse teams that have a lot of autonomy to make fast decisions and to build innovative products that will delight customers. These multifunctional, autonomous teams are called squads. The main office is based in São Paulo, but there are offices also in Berlin (Germany), in Buenos Aires (Argentina) and in México City (México).

The organizational culture is really strong, and it fosters values such as customer-centric thinking, action-driven behavior, diversity celebration and pursuit of efficient processes. The four main pillars of the company are technology, design, data science and customer experience.

The brand is one of the strongest differentials in the company. It has fanatical customers that promote the brand in social media and that indicates its products to friends and family. The company's Net Promoter Score (NPS) is as high as 89%, the absolute leader in the industry. More than 80% of its customers came to the company by organic referral, showing that satisfied customers were extremely important in building its strong customer base. Moreover, the company has a powerful appeal with young people, with an average customer age of 32 years.

Company X has become a unicorn (companies that are valued in more than U$1 billion) in 2018. The first investment round (the so-called "seed money") happened in 2013 when it has raised U$2 million dollars from Sequoia Capital and Kaskez Ventures. Then, the following investment rounds took place:

- **Series A:** U$15 million in August 2014. Investors: Sequoia Capital and Kaszek Ventures;
- **Series B:** U$30 million in May 2015. Investors: Tiger Global Management, Sequoia Capital, Kaszek Ventures, QED Investors;
- **Series C:** U$52 million in January 2016. Investors: Founders Fund, Tiger Global Management, Sequoia Capital, Kaszek Ventures;
- **Series D:** U$80 million in December 2016. Investors: DST Global, Sequoia Capital, Founders Fund, Tiger Global Management;
- **Series E:** U$150 million in February 2018. Investors: DST Global, QED Investors, Redpoint Ventures, Ribbit Capital, Dragoneer Investment Group, Thrive Capital;
- **Series F:** U$180 million in October 2018;
- **Series G:** U$400 million in August 2019, valued at U$10.4 billions.

The investment from Tencent was important not only from a financial perspective but also from a strategic perspective: Tencent has strong capabilities on financial services products and transaction platforms, given that it owns WeChat, the biggest payment app in China. The synergies between these two companies can be extremely positive for both of them.

After this last investment, the company's valuation reached U$10.4 billion. The company is not traded in the stock market yet, and there are no plans for an Initial Public Offering (IPO) in the foreseeable future.

# 4        DEVELOPMENT

Up to now, this thesis has analyzed the insurance market from a wide perspective, not focusing on any specific insurance product. However, inside the insurance industry, there are several distinct products, and investigating all of them together would be neither effective nor accurate.

In this chapter, a multicriteria selection method will be applied to decide which insurance product is more suitable for Company X to adopt when entering this industry. After discussing with the main leaderships inside the company, a list of criteria will be raised, as well as a comparison of importance between them. Then, each insurance product will be evaluated according to these criteria, allowing the selection of a specific product to be deeply analyzed, by applying the AHP method.

Following the product selection, this work presents the selected product competitive landscape, considering the main competitors, types of products, regulatory and tax issues, as well as customer insights about it. Taking it all into consideration, the new insurance product that Company X will launch - hereafter called Product Y - will be designed. Later, a detailed analysis of this specific insurance product will be carried out, supported by the tools described in the literature review section.

## 4.1        Product selection

Company X is considering entering the insurance business and there are five possible products being analyzed by the company: People (life and disability insurance), Vehicle, Property, Health and Financial risk.

The first step to select an initial insurance product by which Company X should start is to choose relevant criteria to classify and to prioritize possible products. It is important to highlight that the developing of the whole multicriteria matrix was an iterative process with Company X leaderships. In this sense, the author, alongside Company X leaderships, has selected a list of seven criteria to be used when evaluating possible insurance products. The final criteria are:

a) **Market revenue:** it is an important measure of a product attractivity. Entering a market that is too small in terms of revenue may not worth it. On the other hand, entering a very large market may be positive, given that even reaching just a small

market share, Company X already would reach a significant improvement in its revenues. Therefore, the higher the insurance product market revenue, the better.

b) **Sinistrality:** it is calculated as the ratio between the amount spent with customers' claim and the amount of premiums paid by customers, representing what percentage of the premiums is spent with claims. It is an important driver of a segment profitability and usually is the higher cost an insurance company bears. A segment with high average sinistrality is less attractive to Company X, therefore the lower this indicator, the better;

c) **Sinistrality variation:** Company X is not currently in the insurance business. So, it will initially lag behind incumbents in terms of data availability. Entering in a segment with a huge sinistrality variation would be risky in economic terms, given the lack of expertise in analyzing and building intelligence about risk profiles. In addition, it would make difficult to define a competitive price to the product. Therefore, the lower the sinistrality standard deviation, the better;

d) **HHI index:** this index depicts the market concentration by calculating the sum of the market share squares of each company. The practical meaning is that the index represents the probability that two random customers are using the same company as an insurance provider. To enter in concentrated markets is usually more difficult, as discussed during the literature review, therefore the lower this indicator, the better;

e) **Supply chain complexity:** Company X is a digital company with no physical branches. In this sense, the need to stablish a complex supply chain all over the country to solve claims efficiently would require the development of new capabilities that Company X currently doesn't have. Also, setting up a national wide supply chain would require an additional amount of investments. Therefore, the lower the complexity, the better. There is not a quantitative indicator that allows the comparison between all insurance products, therefore the leaderships will evaluate the insurance products with scores ranging from 1 to 5, with 1 representing very low supply chain complexity and 5 representing very high supply chain complexity;

f) **Customer service requirement:** Company X is obsessive about customer satisfaction. Every contact is seen as an opportunity to delight customers and increase their engagement with Company X. Despite this importance, a segment with several contact need during the customer journey would require more hiring than a segment with few contacts, increasing the complexity and the costs of product

implementation. Therefore, the number of contacts per customer expected in a year will be used to evaluate the products. In the absence of an industrywide indicator of number of contacts per customer, this criterion will be evaluated using a qualitative score that ranges from 1 to 5, with 1 representing very low number of customer contacts and 5 representing very high number of customers contact. Company X leaderships will be responsible for giving these scores;

g) **Fraud level:** measured as the percentage of the claims' spending that was unduly paid, fraud level is an important measure to assess a segment risk to Company X. As discussed before, Company X is not in the insurance market yet, hence initially it will have less resources to prevent fraud than its competitors. This being the case, the lower the fraud level, the better.

Table 11 summarizes the criteria and the indicators of each criterion.

Table 11. Criteria to be used when evaluating the products.

| Criteira | Unity of measurement | Description |
| --- | --- | --- |
| Market Revenue | R$ MM | Market Revenue in millions of reais in 2017 |
| Sinistrality | % | Percentage of Gross Written Premiuns spent solving customers' claim |
| Sinistrality variation | % | Standard deviation of sinistrality in the period of 2014-2017 |
| HHI | % | Sum of the square of each company market share |
| Supply chain complexity | Quantitative | Score ranging from 1 (few customer interaction) to 5 (several customer interaction) |
| Customer service requirement | Quantitative | Score ranging from 1 (less complex supply chain) to 5 (very complex supply chain) |
| Fraud level | % | Percentage of amount spent solving claims that were false |

Source: Elaborated by the author.

After listing these criteria, it was defined a score representing the relative importance of each of them. Each criterion was compared with all the others, receiving a score ranging from 9 to 1/9. If criterion 1 is more important than criterion 2, criteria 1 will receive a score N from 2 to 9 and criteria 2 will receive a score 1/N. Instead if criterion 2 is more important than criterion 1, criteria 2 will receive a score N ranging from 2 to 9 and criterion 1 will receive a score 1/N. If criteria are equally important, both will get a score 1. The weight of each criterion will be calculated as the normalized eigenvector obtained as the geometric mean of each line, as suggested in the literature review.

The final table is a result of a constant interaction with Company X leaderships. The author initially sent the table of criteria with empty scores to avoid bias and asked four leaderships to fill it according to their judgment of relative importance among the criteria. After receiving the tables filled, the author interviewed the leaderships in order to understand the main divergences between them and consequentially to ensure a final result with a reasonable

level of inconsistency. Table 12 illustrates the final result of this process, where the weight of each criterion is represented by the normalized eigenvector in the last column.

Table 12. Criteria prioritization.

| Criteria | Market Revenue | Sinistrality | Sinistrality variation | HHI | Supply chain complexity | Customer service requirement | Fraud level | EigenVector | Normalized Eigenvector |
|---|---|---|---|---|---|---|---|---|---|
| Market Revenue | 1,00 | 0,50 | 3,00 | 0,25 | 2,00 | 8,00 | 0,50 | 1,17 | 0,132 |
| Sinistrality | 2,00 | 1,00 | 2,00 | 0,33 | 0,33 | 3,00 | 0,33 | 0,891 | 0,100 |
| Sinistrality variation | 0,33 | 0,50 | 1,00 | 0,33 | 0,50 | 4,00 | 0,33 | 0,624 | 0,070 |
| HHI | 4,00 | 3,00 | 3,00 | 1,00 | 3,00 | 6,00 | 2,00 | 2,784 | 0,314 |
| Supply chain complexity | 0,50 | 2,00 | 2,00 | 0,33 | 1,00 | 6,00 | 0,50 | 1,104 | 0,124 |
| Customer service requirement | 0,13 | 0,33 | 0,25 | 0,17 | 0,17 | 1,00 | 0,11 | 0,228 | 0,026 |
| Fraud level | 2,00 | 3,00 | 3,00 | 0,50 | 2,00 | 9,00 | 1,00 | 2,068 | 0,233 |
| **Sum** | **9,96** | **10,33** | **14,25** | **2,91** | **9,00** | **37,00** | **4,77** | **-** | **1,000** |

Source: Elaborated by the author.

In order to validate the significance level of the criteria prioritization, it was calculated the C.R. and the C.I, obtaining the results in Table 13. The C.R. is below the 0.10 threshold, ensuring the consistency of the prioritization output.

Table 13. Consistency indicators.

| C.I. | 0,07601 |
|---|---|
| C.R. | 0,05758 |

Source: Elaborated by the author.

The next steps consist in replicating this same procedure applied to criteria prioritization to each of the alternatives, comparing them pairwise according to each of these criteria. Therefore, given that there are seven criteria and five possible insurance products to be chosen, there will be seven matrix of dimension 5x5. The consistency validations will be applied to each of this matrix individually. The final output expected is a performance vector of the products in each criterion.

To guide the comparison of products in qualitative criteria, the author gathered data from several sources, as described in the following paragraphs. At the same time, to evaluate qualitative criteria, the author once again iterated with company leaderships to obtain their vision about the products performance.

Regarding sinistrality, the evolution of the indicators is shown in Figure 22.

Figure 22. Sinistrality evolution by type of product.
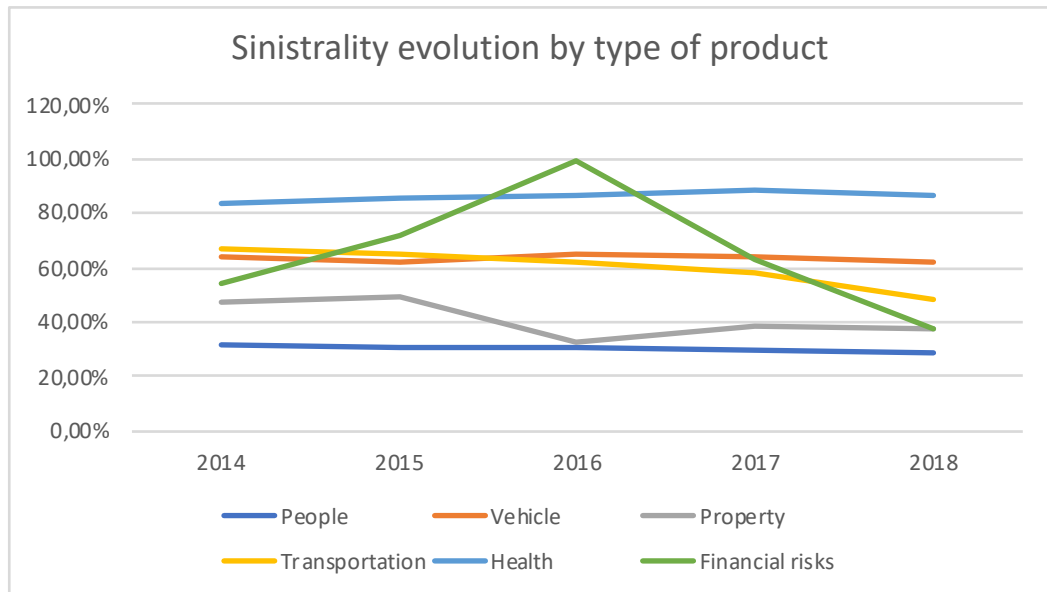


Source: Elaborated by the author using multiple sources.

In addition, Table 14 depicts the average sinistrality and standard deviation. The average sinistrality and sinistrality standard deviation were calculated considering the period of 2014-2017 due to two main reasons: first, the method to calculate the sinistrality was changed by the regulatory agency in December 2013 and considering this change could overestimate standard deviation; second there is no official data concerning 2018 yet.

Table 14. Sinistrality average and standard deviation by type of product.

| Year | 2014 | 2015 | 2016 | 2017 | 2018 | Average | Standard deviation |
|---|---|---|---|---|---|---|---|
| People | 32% | 31% | 31% | 30% | 29% | 30,36% | 1,0% |
| Vehicle | 64% | 62% | 65% | 64% | 62% | 63,40% | 1,3% |
| Property | 47% | 49% | 33% | 39% | 38% | 41,20% | 6,6% |
| Transportation | 67% | 65% | 62% | 58% | 48% | 60,00% | 7,5% |
| Health | 84% | 86% | 87% | 89% | 87% | 86,60% | 1,8% |
| Financial risks | 54% | 72% | 99% | 63% | 38% | 65,20% | 22,7% |

Source: Elaborated by the author using multiple sources.

Supply chain complexity and customer service requirement are qualitative indicators, hence the author collected the input from Company X leaderships, as described previously.

To measure the complexity of supply chain, a qualitative measured was adopted due to the lack of an aggregate measure that would allow the quantitative comparison between the

different products. Either way, the main points that led to the scores in the comparison table are described next.

In case of offering vehicle insurance, the company must be able to provide a nationwide 24/7 set of services such as:

a) Recover the car from the accident place and transport it either to a repairer or to a garage;

b) Order or keep stored the parts necessary to repair the vehicle as soon as possible;

c) Provide a substitute car to the customer while repairing the car and analyzing the claim;

d) Clean the vehicle after repairs, what can be hindered in case of floods;

A similar level of complexity is shown in case of health insurance, given that the company must be able to provide a nationwide 24/7 network of medical assistance, including:

a) Negotiating with a huge number of hospitals, doctors, therapists, diagnosis centers etc. to ensure a reasonable coverage to the insured customer;

b) Approve medical procedures quickly;

c) Provide ambulance transportation when necessary;

In case of offering Financial Risk, Property and People insurance, the level of complexity is much lower, given that there is less need to stablish a nationwide chain of services. For example, in case of an insured person passing away, the family would need only to provide a death certificate in order to receive the financial reparation. Similarly, in case of an insured person being fired, the client only would need to provide a document proving his situation to receive the financial reparation. Lastly, in case of a smartphone being stolen for example, the client would need to prove the crime and Company X must deposit the financial reparation. In all these cases the process of reparation is mainly in the digital world, making the restitution process simpler.

Table 15 summarizes the performance of each insurance product in the quantitative criteria. This information will drive the next steps of AHP process. The qualitative criteria will be discussed as well, but in comparative terms.

Table 15. Performance of each product in the criteria.

| Criterion | People | Vehicle | Health | Financial risk | Property |
|---|---|---|---|---|---|
| Market revenue (R$ MM) | R$ 41.670 | R$ 35.804 | R$ 42.503 | R$ 4.272 | R$ 14.721 |
| Sinistrality | 30,36% | 63,40% | 86,60% | 65,20% | 41,20% |
| Sinistrality variation | 0,99% | 1,34% | 1,82% | 22,69% | 6,65% |
| HHI | 1036,46 | 1390,57 | 2491,00 | 579,38 | 850,9662 |
| Supply chain complexity | - | - | - | - | - |
| Customer service requirement | - | - | - | - | - |
| Fraud level | 18,9% | 11,88% | 18% | 3,30% | 9,78% |

Source: Elaborated by the author.

Table 16 summarizes the final performance of each insurance product in the Market Revenue criterion. The relative performance of a product with respect to a second one is calculated as the division between the respective market revenues. For illustration, People segment has a market revenue of R$41.670 billions, while Vehicle segment has a market revenue of R$35.804. Therefore, the relative performance of People with respect to Vehicle in this criterion is R$41.670/R$35.804=1.164, which means that the first is 1.164 times better than the second in terms of market revenue.

Table 16. Market revenue AHP table.

| | Market revenue | | | | | | |
|---|---|---|---|---|---|---|---|
| | People | Vehicle | Health | Financial risk | Property | Eigenvector | Normalized Eigenvector |
| People | 1,000 | 1,164 | 0,980 | 9,754 | 2,831 | 1,994 | 0,300 |
| Vehicle | 0,859 | 1,000 | 0,842 | 8,381 | 2,432 | 1,713 | 0,258 |
| Health | 1,020 | 1,187 | 1,000 | 9,949 | 2,887 | 2,034 | 0,306 |
| Financial risk | 0,103 | 0,119 | 0,101 | 1,000 | 0,290 | 0,204 | 0,031 |
| Property | 0,353 | 0,411 | 0,346 | 3,446 | 1,000 | 0,704 | 0,106 |
| Sum | 3,335 | 3,881 | 3,270 | 32,530 | 9,440 | | |
| | lambda | 5,000 | | C.I. | 0,000 | | |
| | | | | C.R. | 0,000 | | |

Source: Elaborated by the author.

As expected, the consistency is perfectly met, given that there is a quantitative indicator of this criterion. Therefore, the Consistency Ratio is equal to zero and the lambda is equal to the dimension of the square matrix. The normalized Eigenvector represents the score of each insurance product in the analyzed criterion, as discussed in the theory. All the criteria with quantitative measures will have a Consistency Ratio equal to zero, for the same reason explained before. Tables 17, 18, 19 and 20 show the final scores of each product in each quantitative criterion.

Table 17. Sinistrality AHP table.

| | People | Vehicle | Health | Financial risk | Property | | |
|---|---|---|---|---|---|---|---|
| | | | | **Sinistrality** | | | |
| People | 1,000 | 2,088 | 2,852 | 2,148 | 1,357 | 1,770 | 0,330 |
| Vehicle | 0,479 | 1,000 | 1,366 | 1,028 | 0,650 | 0,847 | 0,158 |
| Health | 0,351 | 0,732 | 1,000 | 0,753 | 0,476 | 0,620 | 0,116 |
| Financial risk | 0,466 | 0,972 | 1,328 | 1,000 | 0,632 | 0,824 | 0,154 |
| Property | 0,737 | 1,539 | 2,102 | 1,583 | 1,000 | 1,304 | 0,243 |
| Sum | 3,032 | 6,332 | 8,649 | 6,511 | 4,115 | | |
| | lambda | 5,000 | | C.I. | 0,000 | | |
| | | | | C.R. | 0,000 | | |

Source: Elaborated by the author.

Table 18. Sinistrality variation AHP table.

| | People | Vehicle | Health | Financial risk | Property | | |
|---|---|---|---|---|---|---|---|
| | | | | **Sinistrality variation** | | | |
| People | 1,000 | 1,360 | 1,842 | 23,000 | 6,740 | 3,295 | 0,405 |
| Vehicle | 0,735 | 1,000 | 1,354 | 16,910 | 4,955 | 2,422 | 0,298 |
| Health | 0,543 | 0,739 | 1,000 | 12,489 | 3,660 | 1,789 | 0,220 |
| Financial risk | 0,043 | 0,059 | 0,080 | 1,000 | 0,293 | 0,143 | 0,018 |
| Property | 0,148 | 0,202 | 0,273 | 3,412 | 1,000 | 0,489 | 0,060 |
| Sum | 2,470 | 3,360 | 4,549 | 56,811 | 16,648 | | |
| | lambda | 5,000 | | C.I. | 0,000 | | |
| | | | | C.R. | 0,000 | | |

Source: Elaborated by the author.

Table 19. HHI AHP table.

| | People | Vehicle | Health | Financial risk | Property | | |
|---|---|---|---|---|---|---|---|
| | | | | **HHI** | | | |
| People | 1,000 | 1,342 | 2,403 | 0,559 | 0,821 | 1,082 | 0,193 |
| Vehicle | 0,745 | 1,000 | 1,791 | 0,417 | 0,612 | 0,806 | 0,144 |
| Health | 0,416 | 0,558 | 1,000 | 0,233 | 0,342 | 0,450 | 0,081 |
| Financial risk | 1,789 | 2,400 | 4,299 | 1,000 | 1,469 | 1,935 | 0,346 |
| Property | 1,218 | 1,634 | 2,927 | 0,681 | 1,000 | 1,317 | 0,236 |
| | 5,168 | 6,934 | 12,421 | 2,889 | 4,243 | | |
| | lambda | 5,000 | | C.I. | 0,000 | | |
| | | | | C.R. | 0,000 | | |

Source: Elaborated by the author.

Table 20. Fraud level AHP table.

| | People | Vehicle | Health | Financial risk | Property | | |
|---|---|---|---|---|---|---|---|
| | | | | **Fraud level** | | | |
| People | 1,000 | 0,629 | 0,952 | 0,175 | 0,517 | 0,558 | 0,088 |
| Vehicle | 1,591 | 1,000 | 1,515 | 0,278 | 0,823 | 0,888 | 0,141 |
| Health | 1,050 | 0,660 | 1,000 | 0,183 | 0,543 | 0,586 | 0,093 |
| Financial risk | 5,727 | 3,600 | 5,455 | 1,000 | 2,964 | 3,196 | 0,507 |
| Property | 1,933 | 1,215 | 1,840 | 0,337 | 1,000 | 1,078 | 0,171 |
| Sum | 11,301 | 7,103 | 10,763 | 1,973 | 5,848 | | |
| | lambda | 5,000 | | C.I. | 0,000 | | |
| | | | | C.R. | 0,000 | | |

Source: Elaborated by the author.

To evaluate the performance of the insurance products in the two quantitative criteria, a procedure similar to the criteria prioritization was done: four Company X leaderships attributed comparative scores to each insurance product when compared to the other ones. After their evaluation, the author discussed with them the main differences to reduce inconsistency. The final result is illustrated in Table 21 and Table 22. Note that the Consistency Ratio is below the 10% threshold, as required by the theory.

Table 21. Supply Chain Complexity AHP table.

| | People | Vehicle | Health | Financial risk | Property | | |
|---|---|---|---|---|---|---|---|
| | | | | **Supply Chain Complexity** | | | |
| People | 1,000 | 5,000 | 5,000 | 0,333 | 3,000 | 1,904 | 0,247 |
| Vehicle | 0,200 | 1,000 | 1,000 | 0,125 | 0,167 | 0,334 | 0,043 |
| Health | 0,200 | 1,000 | 1,000 | 0,125 | 0,167 | 0,334 | 0,043 |
| Financial risk | 3,000 | 8,000 | 8,000 | 1,000 | 5,000 | 3,949 | 0,512 |
| Property | 0,333 | 6,000 | 6,000 | 0,200 | 1,000 | 1,191 | 0,154 |
| Sum | 4,733 | 21,000 | 21,000 | 1,783 | 9,333 | | |
| | lambda | 5,343 | | C.I. | 0,086 | | |
| | | | | C.R. | 0,077 | | |

Source: Elaborated by the author.

Table 22. Customer service requirement AHP table.

| | People | Vehicle | Health | Financial risk | Property | | |
|---|---|---|---|---|---|---|---|
| | | | | **Customer service requirement** | | | |
| People | 1,000 | 4,000 | 5,000 | 0,500 | 0,500 | 1,380 | 0,204 |
| Vehicle | 0,250 | 1,000 | 0,500 | 0,200 | 0,167 | 0,334 | 0,050 |
| Health | 0,200 | 2,000 | 1,000 | 0,200 | 0,167 | 0,422 | 0,062 |
| Financial risk | 2,000 | 5,000 | 5,000 | 1,000 | 3,000 | 2,724 | 0,404 |
| Property | 2,000 | 6,000 | 6,000 | 0,333 | 1,000 | 1,888 | 0,280 |
| Sum | 5,450 | 18,000 | 17,500 | 2,233 | 4,833 | | |
| | lambda | 5,353 | | C.I. | 0,088 | | |
| | | | | C.R. | 0,079 | | |

Source: Elaborated by the author.

The final score was calculated as the product of each insurance product performance in each criterion multiplied by the respective criterion weight. Table 23 illustrates the final result, outlining the scores and the ranking of products.

Table 23. Final outcome of the multicriteria selection method.

| | Market revenue | Sinistrality | Sinistrality variation | HHI | Supply chain complexity | Customer service requirement | Fraud level | Final score | Position |
|---|---|---|---|---|---|---|---|---|---|
| Weight | 0,346 | 0,064 | 0,092 | 0,209 | 0,155 | 0,024 | 0,111 | - | - |
| People | 0,300 | 0,330 | 0,405 | 0,193 | 0,247 | 0,204 | 0,088 | 0,255 | 1 |
| Vehicle | 0,258 | 0,158 | 0,298 | 0,144 | 0,043 | 0,050 | 0,141 | 0,180 | 3 |
| Health | 0,306 | 0,116 | 0,220 | 0,081 | 0,043 | 0,062 | 0,093 | 0,169 | 4 |
| Financial risk | 0,031 | 0,154 | 0,018 | 0,346 | 0,512 | 0,404 | 0,507 | 0,240 | 2 |
| Property | 0,106 | 0,243 | 0,060 | 0,236 | 0,154 | 0,280 | 0,171 | 0,156 | 5 |

Source: Elaborated by the author.

People insurance is the product that has reached the highest score after the AHP method application, and it will be carefully analyzed in the following sections by using the strategy frameworks presented in the literature review. It's important to highlight that there are others very attractive insurance products, such as Financial Risks, but as a matter of focus, Company X is willing to start by launching one single insurance product and then make a new assessment about next possible products.

## 4.2    Life insurance competitive scenario in Brazil

By applying AHP, life insurance was selected as the best product for Company X to enter the insurance business. This section takes a dive into the economic landscape in Brazil and its effects in life insurance demand. Also, it details the competitive scenario in Brazil, identifying the main players in the market, the consumer profile, the main regulations and the main pain points customers face when hiring and managing a life insurance product.

### 4.2.3    Economic landscape

In the past, Brazil has faced inflationary crises, with inflation rates reaching 5.000% yearly in 1994. The memory of these days might influence, even partially, the insurance and the investment sector in Brazil. The confidence in the economy is crucial in order to foster long-term investments and insurance products.

Brazil is recovering from one of the most severe economic downturns of its history. Although the economy is growing in a pace that is lower than expected, macroeconomic

indicators such as GDP growth, unemployment rate and interest rates are getting better. This scenario influences positively the insurance market as whole, considering that the demand for this kind of product increases when income increases. The confidence in the economic stability is especially important in life insurance products, because it consists in long-term applications.

Yet in the macroeconomic scenario, Brazil is discussing a reform in the pension system, and once it is approved, the demand for long-term products like life insurance and private pension will increase. Also, population is getting older and living longer, and population aged more than 60 in Brazil is expected to jump from 10% to 22% in 2040 (GENEVA ASSOCIATION, 2012).

Regulation is another important factor that influences the insurance market. Having a stable regulatory environment helps in the market development and attracts investments.

### 4.2.4 Types of products

Life insurance can be divided into two types of products: individual and group insurance. In the first case, there is a direct relationship between the insured person and the insurance company, and it refers to the life insurance of a single person. In the second case, a group of people is protected by the policy that is usually hired and paid by a third party (for instance, the company where these people work).

Individual life insurance can be divided into three main products:

1) for survival: if the insured survives the period stipulated in the policy will be entitled to receive compensation in the form of single payment or rent;

2) for invalidity: if the insured becomes invalid during the coverage period stipulated in the policy, will be entitled to receive compensation in the form of single payment or rent;

3) by death: if the insured person dies during the period of coverage stipulated in the policy, his beneficiaries will be entitled to receive compensation in the form of single payment or rent;

### 4.2.5    Tax incentives

Tax incentives is one of the mechanisms a government can adopt in order to develop a specific market. Long term savings (both investments and insurance products) are important in the development of a country, therefore the government usually foster it by offering tax advantages.

For instance, there is no income tax on financial gains from life insurance reserves and social security until withdrawal occurs. Also, the amount paid in life insurance indemnity are exempt of income tax payment.

One more benefit of holding a life insurance product is that the indemnity paid does not enter into the inventory, accelerating the payment of the compensation in case of policyholder death.

### 4.2.6    Market landscape

According to SUSEP, people insurance segment, that includes, among others, life, serious illness and personal accidents insurance, has reached R$41,7 billions in revenues in 2018, 10% more than in 2017. Individual life insurance represents 20% of this revenue. CNSeg estimates that the people insurance segment will grow 8,4% in 2019.

Despite this growth, only 19% of Brazilian people have life insurance coverage. In addition, 72% of the population interviewed in a survey declared that they would not be able to survive more than six months without their income. Figure 23 depicts the average savings to cover expenses in case of income loss. Considering those that do not have income protection, 56% said they would consider buying it depending on prices (ZURICH INSURANCE, 2016).

Figure 23. Period that people would survive without their income.
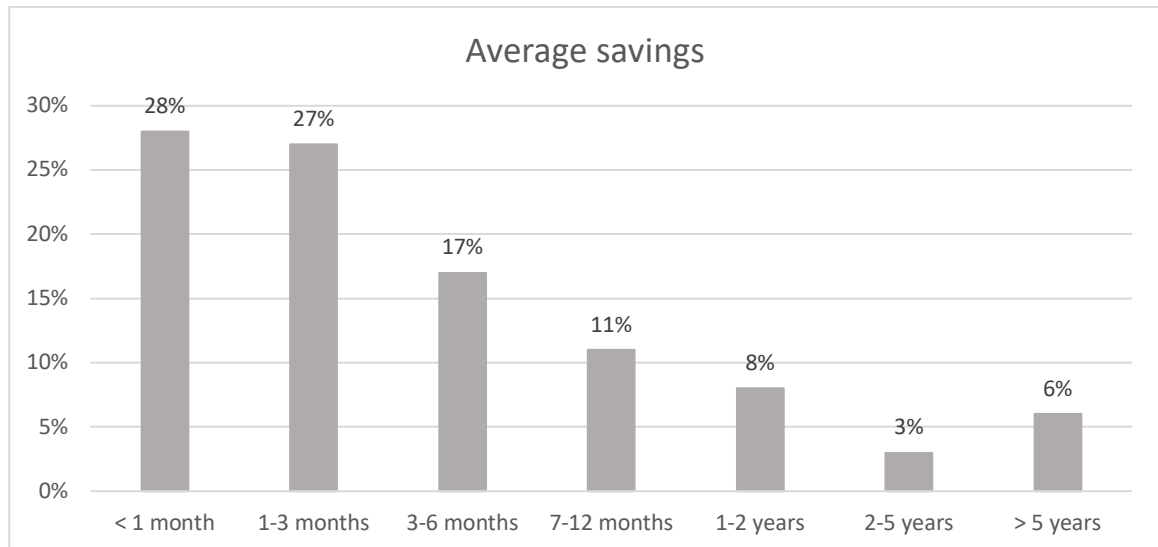


Source: Adapted from ZURICH INSURANCE, 2016.

Also, the majority of people are willing to spend no more than 5% of their income in order to protect their income, as shown in Figure 24.

Figure 24. Percentage of monthly income people are willing to spend in order to protect their income.
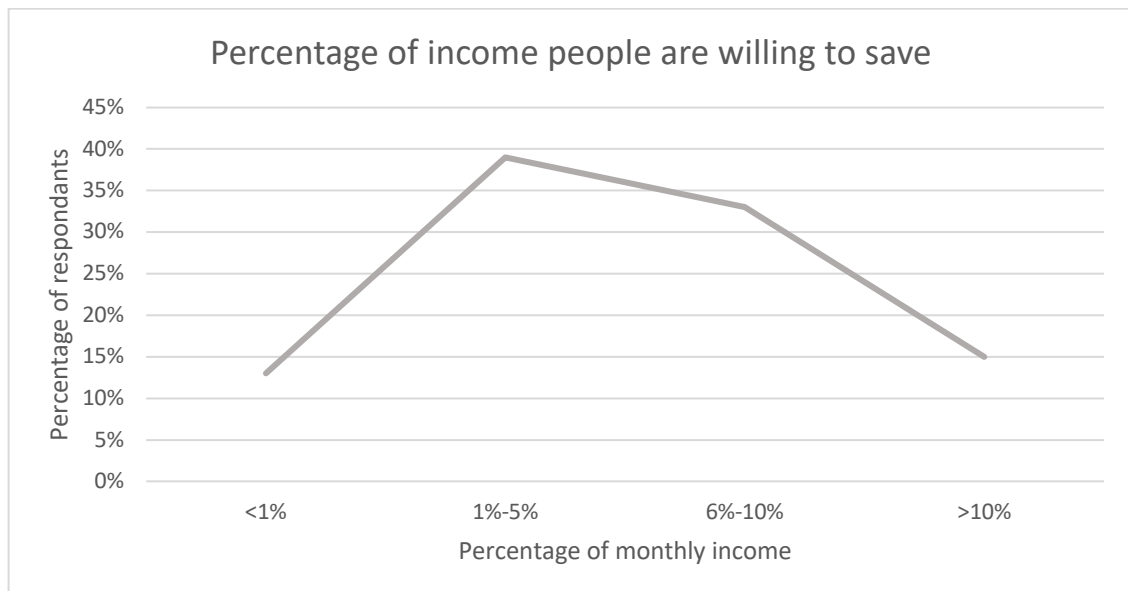


Source: Adapted from ZURICH INSURANCE, 2016.

The distribution of premiums in Brazil is geographically very unequal. Considering the distribution of premiums by region in 2018, Southeast is the first one, representing 61% of premiums, followed by the South (18%), Midwest (11%), Northeast (8%) and North. (2%), according to data from the Private Insurance Superintendence (SUSEP).

In terms of market concentration, Bradesco, BB Mapfre and Zurich own 49% of the market. The HHI index is high in this market, indicating that market is concentrated. Figure 25 shows the revenue of the 30 main people insurance companies in 2018.

Figure 25. Revenue of the main insurance companies in people segment.
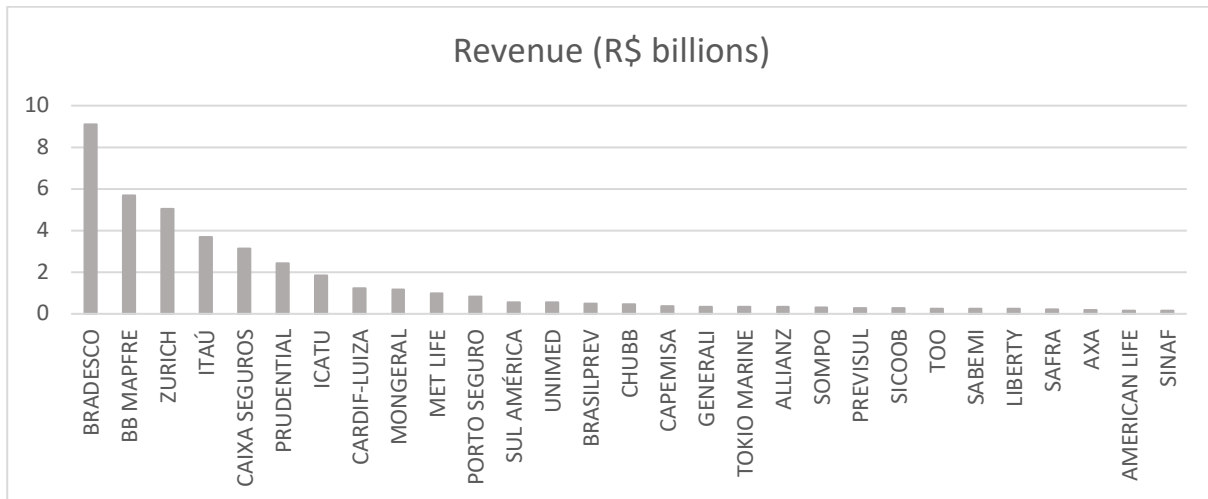


Source: Adapted from SINCOR - SP, 2018.

In terms of profitability, individual life insurance has the greatest operational margin among life insurance products. According to Funenseg (2014), the ratio between Retained Claims (RC) and Earned Premiums (EP) was 11% in 2013, while the ratio between Commercialization Expenses (CE) and Earned Premiums (EP) reached 21%. The operational margin, calculated as 1-RC/EP-CE/EP, was 68%, considerably higher than life insurance in groups (30% margin) and personal accidents (50% margin). Table 24 summarizes the differences in profitability among different life insurance products.

Table 24. Differences of profitability among different life insurance products.

|  | RC/EP | CE/EP | Margin |
|---|---|---|---|
| Life - Group | 45% | 25% | 30% |
| Life - Individual | 11% | 21% | 68% |
| Personal accidents | 17% | 34% | 50% |

Source: FUNENSEG, 2014.

Another important point that reinforces the attractivity of Brazilian life insurance market is that it is situated in a point where the elasticity of demand with respect to GDP is expected to be greater than one, which means that an increase in GDP will lead to an increase more than

proportional in insurance penetration (SWISS REINUSRANCE COMPANY, 2007). Figure 26 illustrates the s-curve that is usually observed when comparing the log of the GDP and insurance penetration.

Figure 26. Insurance penetration vs GDP per capita (log).
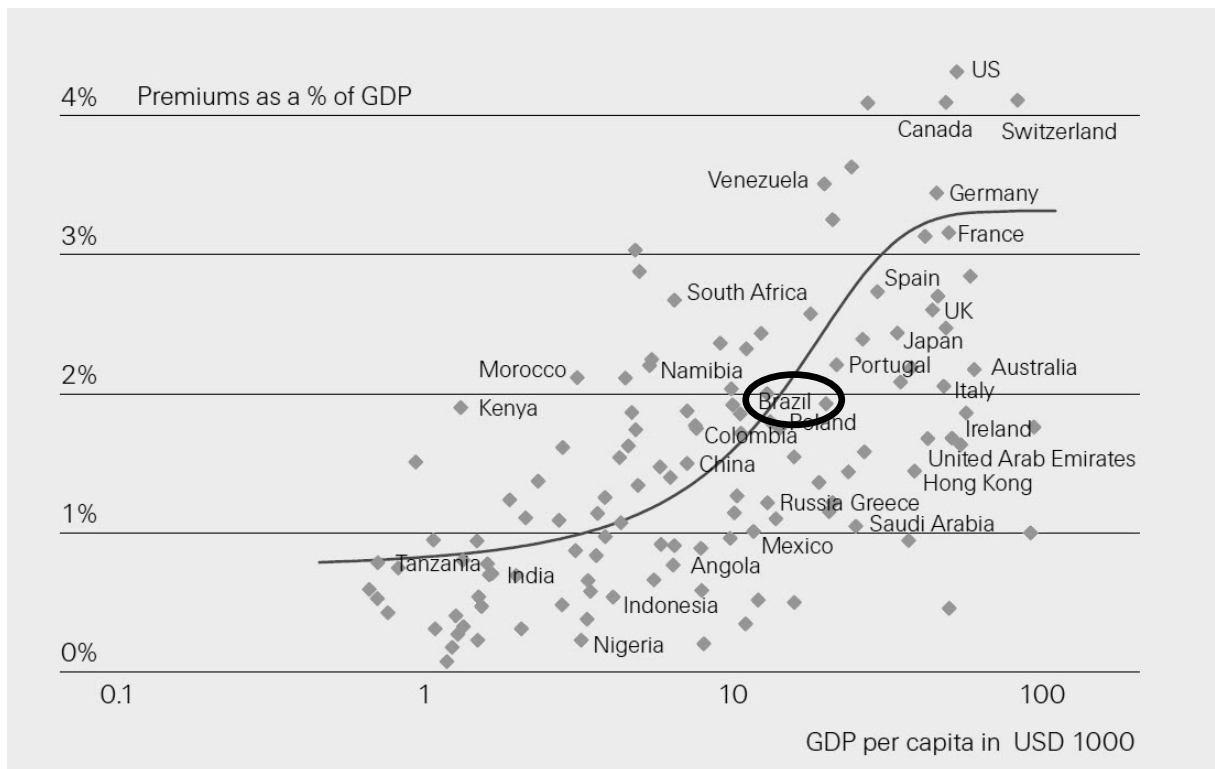


Source: Adapted from SWISS REINSURANCE COMPANY, 2007.

### 4.2.7    Customer insights

The number of complaints about insurance in Brazil has grown in past years. In São Paulo, according to Consumer Protection Foundation São Paulo (PROCON - SP), the number of complains went from 4.449 in 2014 to 6.677 in 2017. When analyzed by type of product, life insurance is the only one that has grown during this period - vehicle, residential, microinsurance and others presented a decrease in the number of complaints.

The main complaints are the lack of transparency when hiring a life insurance product and payment delays and refusals. PROCON - SP accused some companies like Zurich of evading information at the time of hiring, "misleading consumers, and at the time of use of 'insurance' use language and legal subterfuge for denial of coverage".

Another important point when analyzing the customer relationship with insurance is their perception about the cost of holding a policy. According to Insurance Barometer Study (2015), 80% of customers overestimate the price of life insurance, with Millennials (people born between 1980 and 1994) overestimating by 213% and Gen Xers (people born between1960 and 1979) overestimating by 119%. It indicates that having a good communication to generate awareness about the price of a life insurance policy can lead to an increase in the demand for this type of product (DURHAM, 2015).

Bain & Company (2017) states that the greater the number of ecosystem services offered together with insurance products, the higher the Net Promoter Score (NPS) of the company. In life insurance, the NPS goes from -5% in case of companies that don't offer ecosystem services to 15% in case of offering 3 or more ecosystem services. As examples of ecosystem services for life insurance, Bain suggests rewards for healthy living, access to digital health records, diagnosis and advices, remote consultation, emergency support etc.

Also, customers that interact more with the insurer are more likely to be loyal. There is a significantly difference of NPS between customers that had at least one interaction with their insurers and those who didn't. In Brazil, the difference of NPS between the first and the second group was as high as 24% in 2017. The quality of this interaction has an important role in customer satisfaction, given that annoyed customers presented a lower NPS when compared to delighted customers (BAIN AND COMPANY, 2017).

## 4.3     Product Y

In the previous section, the AHP selection method was applied to define which insurance product Company X might use to enter the insurance market. After that, the competitive landscape was analyzed, showing a huge market concentration in the life insurance segment. Also, the indicators show a high profit margin with this product, and a low awareness about the cost of holding a life insurance policy. Then, this work presented the customer perception about life insurance products in Brazil, regarding both satisfaction with current products and price recognition.

The conclusion was that market is concentrated, customers are not satisfied and perceive insurance products as expensive. In addition, customers usually are not prepared to lose their income, considering that more than 50% of Brazilian people don't have more than three salaries saved to be used in case of missing this income. All these indicators reinforce that the insurance market is very attractive for Company X.

In the macroeconomic scenario, Brazilian economy is growing in a slow pace, but an increase in GDP per capita would lead to an increase in the demand of insurance products. In addition, the approval of pension reform in Brazil is very likely in 2019, helping to increase the demand for life insurance and private pension products.

In this context, Product Y - the insurance product to be launched by Company X - aims to be the most transparent life insurance in the market. It will provide instant access to all the current hired coverages, and will allow customers to upgrade, downgrade and cancel the policies whenever they want. It will be possible to consult payment status, open claims and get assistance 24h a day. All the hiring process will be made digitally, with the assistance of a digital broker that will help customers in hiring the most suitable products to them. The quality of this contact with the brokerage is crucial to ensure that customers are hiring the product they really want and paying a fair price.

The customer care service is another extremely important dimension to Product Y success. Company X NPS is currently at 89%, the highest among all financial services companies in Brazil. Keeping this indicator high after the addition of this new product to Company X portfolio will be challenging, considering that this product is quite different from the ones Company X offers nowadays.

A further important dimension to Product Y is pricing. As discussed before, pricing is a key characteristic to customers when deciding which insurance product to hire. At the same time, customers overestimate the price of life insurance policies. For these reasons, Product Y should both pursue an affordable price and communicate it effectively to its target customers.

In terms of how to offer the insurance properly, Company X has two alternatives: either to become an insurer or to distribute insurance products from other insurers. As Company X is not in the insurance business yet, it lacks expertise in terms of assessing the risk of customers. In addition, the legal and financial requirements to become an insurer are more complex than the ones to become an insurer distributor. Also, partnering with an insurance company would decrease the time to market. On the other hand, it is more difficult to ensure that the policies will be clear and cover what customers really want. Pricing will depend on the insurer provider, therefore Company X will need to use its bargain power to ensure that it will be competitive on prices even if it is not issuing the policies by itself. Further, it requires an integration effort between Company X and the insurer. Lastly, adding an intermediary in the process can decreases Product Y margins.

Considering all these points, the best option to Company X in this first moment is to partner with a reliable life insurance company in order to distribute its policies instead of

becoming an insurer properly. It is critical to control the quality of the policies and Company X needs to make sure that it will be able to tailor the policies according to the customer demands. Besides that, partnering will allow Company X to focus on the development of the ecosystem of services that will compose Product Y.

The partner will be responsible for the initial risk assessment of each customer, but Company X still needing to build intelligence from customers usage profile in order to increase the accuracy of risk assessment and to enrich the data before sending it to the partner. This means that although partnering with an insurance provider, Company X still needing to develop risk assessment capabilities in this specific segment.

In terms of coverage, Product Y will offer the most demanded life insurance products: death by natural and accidental causes, permanent disability, funeral aid and severe illness diagnosis. Customer will be able to decide which of these coverages to hire, and the amount to be paid will depend on the amount of indemnity offered in each coverage hired. They will be able to increase and decrease the amount of indemnity, hiring new coverages and cancelling the existing ones according to their demand, by using the app, whenever they want.

The set of ecosystem services will be an essential characteristic of Product Y. It will be responsible for increasing the satisfaction and the retention of customers. Also, it is expected that, with these services, customers will feel that they are using their insurance product, even if nothing bad happens to them. In order to foster the usage of these services, customers will be eligible to discounts in the premiums if they adopt a healthy lifestyle.

Customer will be able to register workouts, control calories burn and consumption, check its weight evolution, set activity goals, receive fitness and nutritional assistance by the app. Another benefit offered by Product Y will be that customers will have access to discounts network in selected partners, like sporting goods retailers and running events.

Considering these set of features, Product Y mission statement is: To be the smartest choice of individual life insurance in Brazil, offering an affordable, transparent product that you will use even if nothing bad happens.

## 4.4    Porter's Five forces

### 4.4.1    Threat of substitutes

A customer that buys a life insurance product is looking for providing financial support to his/her family in case of an unexpected life-threatening incident occurs. For instance, when a person suddenly passes away, his/her family need to cover burial expenses, pay off eventual debts, replace the lost income or readjust the living standard etc. To ensure that all these needs will be met in case of a fatality without an insurance police, a person would need to save a significant amount of money during the early years of his life, what might be really difficult.

An alternative replacement for complete life-insurance police in Brazil could be to hire specific insurances to each case listed before: for instance, there are products that covers only burial expenses, only debts pay off in case of passing away etc. Either way, these insurance products cannot be considered as perfect substitutes of a life-insurance product.

For these reasons, the threat of substitutes is very low in the life insurance business.

### 4.4.2    Threat of new entrants

To assess the threat of new entrants, it is important to understand how high the barriers of entry are. First of all, to start an insurance operation in Brazil, a company must get an authorization from the government (according to the article 192 of the Brazilian constitution). In addition, the company must follow the regulatory requirements defined by SUSEP. Among SUSEP requirements, insurance companies must keep a Minimum Capital Requirement (CMR) and also follow solvency rules, that aims to ensure that the companies are able to pay its financial obligations. CMR is calculated as the maximum value between the base capital and the risk capital. Base capital takes into account the segment and the regions in which the company offers its products, while the risk capital is calculated as the maximum value between 20% of last year premiums and 33% of the last three years sinistrality average.

Furthermore, to enter the life-insurance market, the company must build risk models to define how much to charge each customer. Although sinistrality is low and quite constant in this product, the lack of information about a customer behavior and risk profile is another relevant barrier of entry.

Additionally, insurance products are usually cross sold with other products in huge banks. For instance, if a customer has several investments, debts, credit card etc. from one single provider, he/she might get a better deal than negotiating each product with a different provider. Given that banks still having a relevant penetration in Brazil, customer might be locked-in, increasing switching barriers from a customer point of view.

On the other hand, new entrants can bring innovation in terms of distribution channels, pricing models and cost structure. By using digital distribution channels, new customers might be reached with a lower cost. Also, by using Artificial Intelligence (AI) and blockchain, costs might be significantly reduced, and pricing might be more accurate (MCKINSEY&COMPANY, 2018). Therefore, digital born companies should pursue efficiency and leverage technology to deliver competitive prices by setting up efficient cost structures.

Considering all these factors listed before, the threat of new entrants was considered medium.

### 4.4.3    Bargain power of suppliers

The first main supplier is the reinsurers. A reinsurer is a company that charges a fee from insurance companies in order to assume their risk in specific contracts. In Brazil, there was a monopoly of Brazilian Reinsurance Institute (IBR) up to 2007, when a new law ending up this monopoly was published. This new market structure with several reinsurers improved the capacity of Brazilian insurance companies to offer better and cheaper polices all over Brazil. Also, private investigators in specific claims may be hired.

Another supplier for an insurance company is the cloud platform provider such as Amazon Web Services (AWS). This kind of company power infrastructure, storage and keep safe important data from customers by owning several data centers spread globally.

There are several reinsurance companies offering a product that is quite standardized, therefore their bargain power is limited. On the other hand, infrastructure providers such as Amazon has a high bargain power. Either way, data storage cost does not represent a significative share of the industry costs. Therefore, the bargain power of suppliers is deemed low.

### 4.4.4    Bargain power of customers

There are two main kind of customers in this life-insurance: companies and individuals. Companies usually hire life-insurance to offer it as a benefit to its employees. The focus of this analysis is on the individual client, given that Company X does not sell products to companies, only for individuals.

When compared to companies, individuals have a weaker bargain power, given that the first negotiate several polices for its employees at the same time, while the second negotiate a single one (or just a few for its family).

Individuals have several life insurances options, and today it's easy to compare prices and coverages in the internet, increasing the knowledge and consequentially the bargain power of customers. Conversely, a customer that hired a life-insurance in the past cannot migrate to other insurance provider without losing value invested. In this sense, there is a medium/high switching barrier.

Considering all these factors, the bargain power of customer is low/medium.

### 4.4.5    Rivalry among competitors

One of the main drivers of competition is market concentration. Life-insurance had an intermediate HHI when compared to other insurance business.

Another important factor to assess the level of rivalry is the cost structure. In life-insurance business, there is a high fixed cost represented by the capital requirements that must be deposited to get an insurer license. In addition, especially in life-insurance business, if a company decide to exit the market it must pay a compensation to its customers. It means that the exit barrier is high, and companies can decide to stay in an unprofitable market for the short and medium term to cover variable costs.

A further factor that increases the rivalry among competitors is the customer access to information. Information asymmetry is an important driver of price distortion, and with the huge penetration of internet in Brazil, customers can compare prices from different insurance providers and coverages to decide which insurance to hire.

Lastly, the perception that life-insurance products are indistinguishable and differentiated only by the premiums/indemnity relationship strengthen the importance of price when deciding which product to hire, increasing the propensity to price wars.

Therefore, the rivalry among competitors is medium/high.

Table 25 summarizes the Porter's Five Forces analysis.

Table 25. Final outcome of Porter's Five Forces Analysis.

| Threat of substitutes | Threat of new entrants | Bargain power of suppliers | Bargain power of customers | Rivalry among competitors |
|---|---|---|---|---|
| Low | Medium | Low | Low/medium | Medium/high |

Source: Elaborated by the author.

## 4.5    Key Success Factors

In order to identify the Key Success Factors, it is important to understand what customers want and how to beat competition.

From a client point of view, customers want a tailored product according to their need. As reported by Accenture (2019), 64% of customers are interested in insurance premiums that are tied to their behavior, such as having a healthy lifestyle or driving safely. Accordingly, customers are willing to share data with their providers in return of better deals, such as fast-track insurance claims settlement.

Another important point is that customers are each day more connected and using an increasing number of devices, such as smart watches. The percentage of customers that wants to use different ways to interact with insurers and banks, such as wearable devices, can be as high as 73% among young, tech-savvy people (ACCENTURE, 2019). This is, in fact, an important indicator of what Company X customers would think about this subject, given that they are mostly young, tech-savvy people.

On the other side, in order to beat competition, Company X must pursue efficient and innovative ways to assess customer risks, implying in an accurate pricing model. In addition, Company X should save in distribution costs, considering that the underwriting process will be completely digital.

Lastly, attracting and retaining the best people – from interns to executives – is decisive to beat competition. Company X should keep a good work environment, give people autonomy, respect diversity and pay a coherent salary to its employees.

Taking into account all the points shown below, the Key Success Factors are:

1) To offer a tailored product to customers;
2) To assess accurately each customer level of risk;

3) To have operational efficiency, saving in costs;

4) To attract and retain good employees.

## 4.6  Market segmentation

In order to design a useful market segmentation, one must define key variables that describe groups of customers with similar behavior and needs.

Company X defines itself as a data driven company, using data to support its decisions. Aiming to define customer segments with similar behaviors and needs, the company frequently uses income and age as the main variables to split customers into clusters. There are several other important characteristics that can help describing customers, but this work will use these as the main dimensions for two main reasons: first, they are clearly measurable and data about age and income are easy to obtain; second because several other characteristics are strongly correlated to either age or income - for instance, engagement with new technologies is an important characteristic to Product Y targeting and it is strongly correlated with age: the younger, the more engaged. As a matter of illustration, Company X data shows that younger people use a greater number of the app features, access the app more frequently and have a better NPS than older people.

The first important dimension to be analyzed is the age of customers. Usually young people are more tech-savvy and hungry for innovation, while older people are more tech-wary and more reluctant to adopt new technologies. Also, young people usually are willing to share their data in exchange for better and more tailored deals, while older people don't trust as much as young people in their insurance providers to share data with them. The level of satisfaction with their financial and insurance services provider also varies according to the age, being young people more dissatisfied and older people more satisfied with their products and services (ACCENTURE, 2019).

The second dimension to be analyzed is the average income level of the segments. Insurance is a normal good, which means that insurance products experience an increase in its demand in case of a rise in customers income. This makes high income segments more attractive to insurance providers than lower income segments.

Figure 27 summarizes the two dimensions that will be used to propose a market segmentation to insurance market.

Figure 27. Age and income used as dimensions to define customer segments.
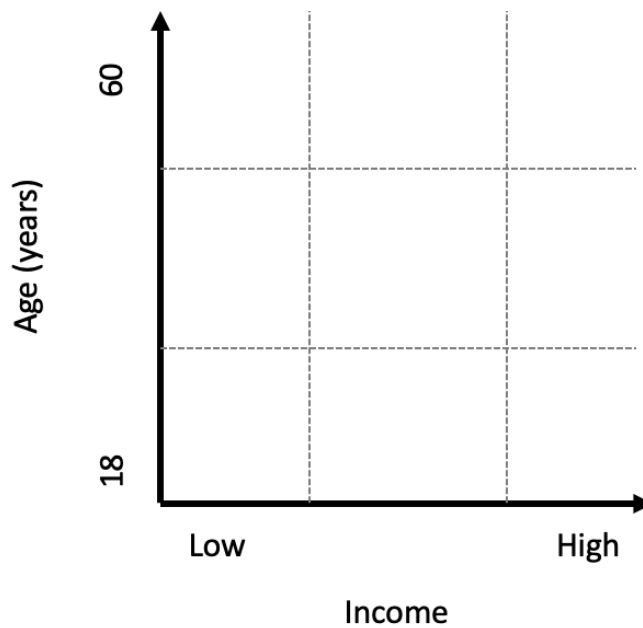


Source: Elaborated by the author.

By using these two dimensions, four main customer segments were identified:

1) **Early adopters and tech enthusiasts:** young people (18 to 30 years) that have really strong familiarity with technologies. They are hungry for innovation and willing to assume risks in order to test new products and services that can make their life easier. Additionally, smartphones and wearable devices has a massive penetration in this segment. They are also identified by a high-income level, what allows them to pay for products such as insurance.

2) **Early majority:** people aged 30 to 50 years that have familiarity with technologies, but in a lower level when compared to the first segment. They have a high-income level and have access to premium financial and insurance providers (such as Itaú Personnalitè and Banco do Brasil Estilo). Consequentially, they are satisfied with their financial and insurance providers, and they see the account manager as a trustable agent to advise him/her in their insurance decisions. They are less willing to share their data with insurance providers, though interested in personalization as well;

3) **Doubtful:** this group has the largest age range among all the four segments, with both young and old people, though the majority of the Doubtful people is

concentrated in the second bucket. They are not satisfied with the current level of service they experience with their insurance providers, lacking trust and feeling frustrated with the customer support they receive. They are also profiled as low-income people that have not familiarity with technology, and they usually use traditional channels to interact with their service providers.

4) **Conservative:** this segment is the oldest one, usually Conservative people are older than 50 years. They appraise human contact, therefore, they see a lot of value in account managers and advisors. Conservatives are not familiar with tech and they are not interested in digital channels, once they mistrust technology. They either retired or close to it, so their income is medium.

Figure 28 illustrates the customer segments identified.

Figure 28. Customer segments according to the two dimensions defined.
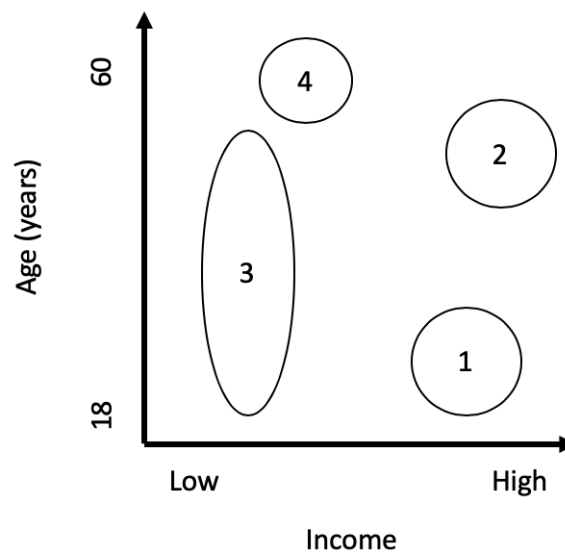


Source: Elaborated by the author.

Considering that Company X is a digital bank with no physical branches and its customers are mainly tech-savvies, young people, the first segment - the so-called Early adopters and tech enthusiasts - is the most similar to its current customer base. In addition, this segment has good wages, reinforcing its attractiveness. Hence, it is recommended to start the product implementation focusing on this customer profile.

## 4.7    Strategic groups

Two dimensions were analyzed in order to identify the main strategic groups in the Brazilian insurance market.

The first one is reputation. There is a statistically significant difference of performance on critical indicators such as expense ratio and loss ratio among insurance business with different reputation levels. Therefore, consolidated companies might have a competitive advantage caused by brand reputation when compared to new entrants in the insurance business (FERGUSON, 2000).

The second dimension is the focus of the companies. For instance, companies that focus on selling personal insurance (Business to Customer) differ from companies that sell insurance to other companies (Business to Business).

Three strategic groups were identified in the Brazilian insurance market by using the dimensions proposed previously: traditional insurance companies, insurtech companies and reinsurer companies.

Traditional insurers usually have a really strong brand reputation. As a matter of illustration, *Porto Seguro* and *Bradesco Seguros*, two of the biggest insurance Brazilian companies, have received in 2017 and 2018 the Top of Mind award, a prize that recognize the brands that are most recognized by customers, organized by *Folha de São Paulo* and *Datafolha.* Also, their product portfolio is very diversified, with several options of products. As discussed before, this portfolio diversification allows cross selling and increase switching barriers to customers. Lastly, considering the B2C model with traditional distribution channels, these companies have to set up a robust network of brokerages in order to achieve capillarity.

Insurtechs usually are new entrants that are challenging the *status quo*. Therefore, its brands have not been consolidated yet, causing some skepticisms in more conservative people. In addition, insurtech companies choose a niche segment to start, in order to deliver value to specific market segment while gaining scale to expand its business. Its focus is on personal insurance by leveraging digital distribution channels to reach capillarity at a lower cost than traditional companies.

The last strategic group identified is the reinsurer group. Reinsurance market was a government monopoly until 2007, and the distortions caused by this market configuration still reflecting in today's market structure. Instituto de Resseguros do Brasil (IRB) owns 37% of the reinsurance market, being six times larger than the second player. The brand reputation of these

companies is very consolidated. Lastly, reinsurance companies' core business is to sell insurance to insurance companies, therefore its focus is mainly on commercial clients (B2B).

Figure 29 depicts the three strategic groups according to the performance in each dimension.

Figure 29. Three identified strategic groups.
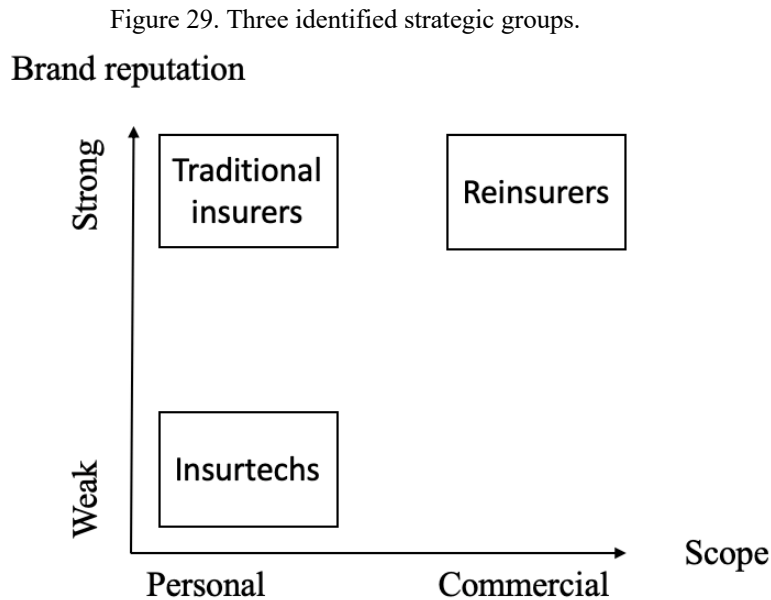


Source: Elaborated by the author.

## 4.8 SWOT analysis

In order to evaluate the entry of Company X in the life insurance market, it is important to identify the strengths and weaknesses of the organization, as well as the threats and the opportunities in the competitive marketing. Therefore, SWOT framework proposed by Porter (1986) will be used.

### 4.8.1 Strengths

- The strong brand that Company X has built in Brazil. For instance, Company X has reached the first place among Brazilian institutions in World's Best Banks rank by Forbes in 2019, also it has been recognized as the preferred credit card of Brazilians according to a research from National Research of Credit Cards in 2019. Therefore, Company X's brand will be an important asset to attract customers to this new product;

- Company X has kept an unparalleled level of Net Promoter Score (NPS) in the financial services industry. Since its foundation, NPS has always been above 85, reaching 89% in 2019. For the sake of comparison, the three largest banks in Brazil present NPS as low as 31% (Santander), 24% (Banco do Brasil) and 23% (Itaú);

- Company X is the largest digital bank in the world, and in Brazil it has more than 13 million customers. Though Company X still lagging behind traditional banks competitors in terms of number of products offered, it still owning the fifth largest customer base among credit card providers in Brazil, so it has a valuable cross-sell channel;

- Company X customer base was very young in the beginning, but today it became more diversified. This diversification increases the potential of a life insurance product, once the demand for this type of product tend to be low among very young people;

- Company X has no physical branches. All its interactions with customers are made digitally and all its customers own digital devices, once it is only possible to access theirs account by the smartphone. Hence, the acceptance of a fully digital life insurance product is expected to be high, considering the familiarity of its customers with technology devices;

- Almost 80% of Company X customer base became a customer by invitation of another Company X customer. The company does not give customers financial incentive to refer, what makes this percentage even more impressive. Hence, it is reasonable to assume that Company X marketing and distribution costs will be lower than its competitors'.

- Company X restructured its app to offer a multi-product interface. Thus, the launch of a new product is expected to go smoothly in terms of stability and user experience;

- Company X has a strong capacity of offering easy and unbureaucratic processes. For instance, one can open a bank account in less than three minutes by the app. Therefore, it is capable to provide a very simple and lean life insurance product;

- Company X raised U$400 million in the last investment round (July/2019), valued at U$10.4 billion. It has increased the already high investment capacity and consequentially, meeting capital requirements would not be a huge drawback to the company;

- Company X have consistently been recognized as a great place to work, receiving several awards. Talent attraction and retention is critical for the company success, and Company X currently has a really low turnover ratio. Also, a part of the compensation is composed by stock options, fostering its employees to act to maximize the company long term value.

## 4.8.2    Weaknesses

- Company X is facing a shortage of software engineering hires. The demand for this type of professional is extremely high in Brazil, and the headcount of engineers is not growing as fast as the company's needs;
- Company X time to market is usually higher than the market average, both for the shortage mentioned in the previous topic and the desire to launch close to zero defect products;
- As a new entry, Company X has less data and less know how than its competitors to evaluate customers profile risks to life insurance product. This weakness is similar to the one the company faced when started its credit card business: due to the lack of data, it provided low initial credit lines to customers. Therefore, the initial risk and price model probably will not be as accurate as its competitors'. The partnership with an insurance provider can minimize this weakness;
- Company X has less products than its competitors to cross sell. For instance, it's very common in the industry to offer discounts for bundled products, making difficult to compare each product cost-benefit separately and increasing customers switching barriers;
- A lot of initiatives are being developed by Company X so there are several prioritization discussions taking place. It is almost impossible to make sure that the resources allocation is the ideal, and there is the risk that a project that has already started having to work with less engineering resources than initially planned;

### 4.8.3    Opportunities

- Traditional insurance companies are not offering tailored products. For instance, it is very common to get house protection included in the price of a life or a car insurance product. Therefore, offering a tailor-made product can both increase customer satisfaction and help in offering competitive prices;

- Though a very significant share of Company X customer base is young, it will become older with the time, increasing the appeal for a life insurance product among its current customer base;

- The preference for nontraditional distribution channels is an irreversible change. Digital acquisition of products is becoming a very appealing thing;

- Neither of the other relevant digital banks has launched an innovative type of insurance in the market. All the initiatives of different insurance business models have come from small insurtech companies. Hence, being the first huge bank to launch an appealing digital product would provide Company X first mover advantages;

- Offering a product with dynamic price according to the customer lifestyle, using gamification to drive the usage of life insurance, could increase awareness about the product and foster the usage for young people. For instance, if a customer goes frequently to the gym and make blood exams at least once a year, he would get a discount in the life insurance premium;

- In Brazil, neither of the relevant players is offering more than off the shelf products. In other countries such as Germany, insurance products based on customer behavior and usage are becoming very popular. Offering behavior-based life insurance can help to attract customer unsatisfied with their current providers. Also, given that there would be advantages to customers with good behavior, it will foster low risk customers to hire the product, what is very important to a company that is entering the insurance business;

### 4.8.4    Threats

- Traditional banks still very rich and powerful players in the Brazilian market. They could start a price war or develop a similar product. As illustration, after Company

X became popular with a credit card with no annual fees, all the four largest traditional banks started offering a similar product;

- Brazil still recovering from one of the most severe economic crises of its history, and a poor economic performance can decrease the demand for insurance products in general, considering that it is a normal good;

- Norms about data privacy are under development in Brazil. New regulations could threat behavior-based products, making difficult to gather data from external partners or to share data with them;

- Interest rate is in an all-time low level in Brazil. Considering that investment is an important revenue stream for insurers, if interest rates continue to decrease, prices will be pressured;

## 4.9    Blue Ocean strategy

The behavior-based insurance market can be considered as a blue ocean that derives from the red ocean of traditional insurance markets. In Brazil, it still not very explored, giving space to new entrants to challenge the *status quo*.

As discussed in the literature review section, to succeed in creating a blue ocean strategy, Company X must both save in cost, by eliminating and reducing the factors that rivals in other segments compete on and increase buyer value by creating and raising benefits that the industry had never offered.

Company X will eliminate the need of a physical insurer broker, allowing the hiring to be completed by the app. Also, it will reduce distribution and marketing costs for two main reasons: first, once the underwriting process can be done digitally, there is no need to set up a nationwide network of insurance brokers like its competitors, second because users usually invite their peers to use Company X products, being the Member-Get-Member (MGM) the main acquisition driver to all the company products launched so far.

Regarding benefits, Company X will provide tailored life insurance products to its customers. In this sense, customers will be able to hire only the coverages they want, not a list of bundled coverages like its competitors do. Also, this new product will raise benefits in managing the policy, allowing customers to both upgrade and cancel their policies online whenever they want. In case of a fatal incident, the indemnity beneficiary can claim its compensation online. It is important to highlight that, in this latter case, the person is passing

through a very hard time in his personal life, therefore the customer care service must be extremely careful and efficient. Another important benefit is the transparency: customer will be capable of checking his insurance coverage instantly in the app.

Lastly, Company X will create a new benefit that is not offered today in the Brazilian life-insurance market. Customers will be stimulated to have a healthier lifestyle, receiving discounts in the premiums for practicing exercises, going to doctors and taking exams, for example. In addition, the app will be able to give customers advices for having a healthier lifestyle and it will allow record customer habits, like water and food consumption.

## 4.10    Generic competitive strategy

Inside the insurance market, Company X life insurance product that rewards customers based on their behavior presents a focus strategy, standing out for the proposal of not being only an of the shelf insurance product, but a differentiated life insurance product that fosters people to have a healthier lifestyle, rewarding them for using Company X app to keep track of activities.

When analyzing the strategic target, Product Y will focus on the Early adopters and tech enthusiasts segment. Though the product can meet the needs from other segments as well, Early adopters and tech enthusiasts are more prone to take risks and to adopt new, innovative products, have more acquaintance with digital devices and are the segment with higher willingness to share data in exchange for discounts and tailored offers.

## 4.11    CANVAS

Aiming to describe Product Y business model, one can use the CANVAS model proposed by Ostewalder & Pigneur (2011). The framework consists in breaking down the business model into nine basic components and analyzing each of them more deeply, allowing a better understanding and alignment of Product Y business model with all the company. Figure 30 depicts the final outcome of CANVAS.

### 4.11.1   Customer segment

Company X initially had a very young customer base, reaching an average of less than 30 years during the early years of operations. Nowadays, with more than 13 million customers, this customer base has been diversified, but the appeal among young people still very high.

Considering that Product Y will be an innovative insurance product, with all processes - from hiring to claiming - made digitally, it is expected to attract the tech-savvies customers that are willing to assume risks in order to test new products. Also, they have strong familiarity with digital devices, and they are inclined to share their data in exchange for better deals and tailored products.

Therefore, the main segment Product Y is expecting to attract is the one made of young people with high income level, that are hungry for innovation and willing to assume risks in order to test new products and services that can make their life easier.

### 4.11.2   Value proposition

Product Y value proposition is to be the best life insurance option to digitally engaged people. It will be an insurance that customers will use even if no incidents occur, by providing a whole ecosystem of ancillary services related to lifestyle, like keeping track their physical exercises, weight, sleeping quality, eating habits etc. Also, customer will have access to discounts network in selected partners, like sporting goods retailers and running events.

By using the app constantly to manage their lifestyle, customer will see value in having an insurance policy even if they are not using it in the traditional way (claiming compensations for incidents). Offering a complete ecosystem of services instead of an of the shelf insurance product also helps in NPS and customer retention (BAIN AND COMPANY, 2017).

Considering all these product characteristics, the value proposition can be expressed as: To be the smartest choice of individual life insurance in Brazil, offering an affordable, transparent product that you will use even if nothing bad happens.

### 4.11.3   Channels

The main channel used by the company is the mobile App. All the Product Y processes will be ideally made by app: hiring the insurance, managing the policy, cancelling, claiming

indemnity, using the ancillary features etc. Also, Company X uses social media to both advertise its products and to give support to customers.

### 4.11.4 Customer relationship

Customers will have support in case its necessary by email, chat and phone. Chat is the preferred communication channel of Company X because it is possible to identify the contact reason and redirect automatically the customer to the specialist in this specific subject. In addition, for easy-to-solve tickets, it is possible to give an efficient automatic reply to customers. On the other hand, when a customer calls, it is impossible to identify the contact reason, increasing the response time once the customer needs to be redirected after explaining the contact reason to the agent.

In the beginning of Product Y operations, Company X will not use Business Process Outsourcing (BPO) agents, in order to gather closely the feedbacks from this new product.

### 4.11.5 Revenue Streams

The main revenue stream will come from the revenue share Company X will receive from the insurance partner. Both companies will share the revenues and losses, if any.

Another secondary revenue stream will come from potential partners that want to join the network of discounts offered by customers. Currently Company X has several partners that pay for offering discounts inside the points program of credit card, and a similar sponsoring model will be developed for this new product.

Lastly, Company X can organize its own sportive events, like a street running, to both create awareness about this new product, increasing enrollments, and to earn revenues from subscriptions. This is, though, a much smaller revenue stream when compared to the revenue share from policies underwriting.

### 4.11.6 Key Resources

A really important resource Company X has is its brand - both for customers and for employees. From a customer perspective, the company is seen as a trustable and innovative

brand, facilitating the entry of Company X in new products. Employees also evaluate Company X as a good employer, increasing retention rate and motivation.

Human capital is other important resource to the company. As discussed previously, Brazil is facing a severe shortage of software engineers, and attract and retaining them is critical to any tech company.

Also, Company X has a robust technological infrastructure, a valuable resource that provides a reliable expansion of its product portfolio while keeping stability of its existing systems.

### 4.11.7　Key activities

The first key activity is the analysis of a customer risk, allowing an accurate pricing proposal that will be attractive to him. Company X has developed this expertise in credit analysis from scratch, and tough it will have the support of an insurance partner in this first moment, gathering data and building intelligence around it is very critical to offer accurate prices and to become less dependent on an insurance partner.

The second one is the customer service. Company X has built a solid reputation by giving its customers an amazing customer support, and keep this service level is mandatory in order to attract customers to Product Y. Besides that, offering a poor customer experience with Product Y will surely harm the whole Company X brand.

### 4.11.8　Key partners

Company X will partner with an insurance provider, acting as an insurance distributor of this company.

Also, the relationship with regulatory entities is very critical to Product Y implementation, considering that this is a regulated market.

The partners that will offer benefits (like discounts) to customers are important as well, because they are a secondary revenue stream and also, they help to increase Product Y utility.

### 4.11.9 Cost structure

The main cost Product Y will bear is the payment of compensations to customers that faced an incident.

Cost of employees' salaries is an expressive cost as well, considering that Company X pays above the market average compensation and that it will need to hire more employees in order to keep the service level currently offered.

Lastly, the infrastructure setup and maintenance play a role in terms of cost.

### 4.11.10 The square

Figure 30 summarizes the final outcome of the CANVAS framework applied to Product Y.

Figure 30. CANVAS framework applied to Product Y.
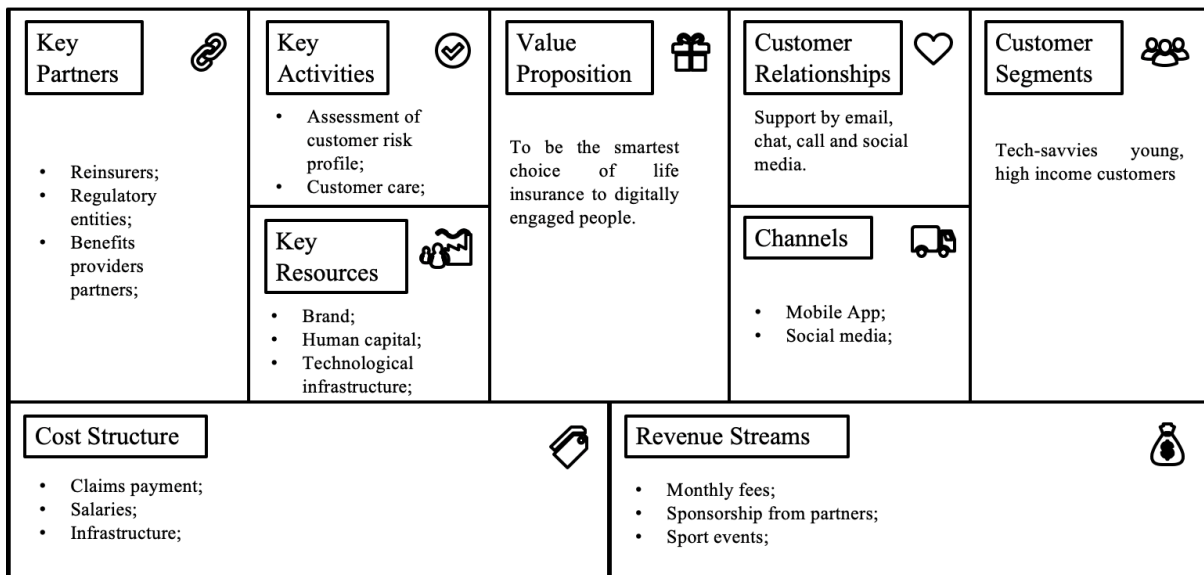


Source: Elaborated by the author.

## 4.12 BCG Matrix

BCG matrix is a useful framework to support companies in managing their product portfolio, considering both market share and industry growth.

Nowadays Company X has four products in Brazil: a credit card without annual fees, a loyalty program, a free bank account and personal lending. Figure 31 summarizes the BCG

matrix framework applied to the current portfolio of Company X. The assessment of each product performance according to BCG matrix is the following:

1) **Credit card:** Company X is the fifth largest credit card issuer in Brazil, with more than 9 million active users. Despite having reached this position in the market, the number of credit card issued by Company X and the volume of transactions processed still growing in a fast pace, and Company X expect to become the fourth largest issuer before the end of the year. In addition, Company X is expanding its credit card business to other Latin America countries. Therefore, the market share growth is expected to keep in high levels. On top of this, credit card industry is expected to keep growing. Credit card penetration has reached all time high levels in Brazil and the growth of payments made by credit card is expected to be as high as 15% yearly up to 2022. Consequentially, Credit Card can be considered as a Star in the company portfolio - it is an important revenue stream, but it still consuming cash to support its growth;

2) **Bank account:** Company X has seen an exponential growth in its bank accounts applications in 2019 due to a modification in its acquisition flow. Before the modification, a customer applied either for credit card or for the bank account. If a customer were not accepted as a credit card customer, the bank account was not offered. In March, Company X decided to automatically create a bank account to all the customers that applied for the credit card, both in case of acceptance or refusal, increasing exponentially the number of opened bank accounts. The main challenge now is how to foster the account usability, that still lower than expected. Market growth is not as high as the credit card growth rate and it has reached 4.9% in 2018. Therefore, the number of opened bank accounts is expected to keep growing, but this growth will be organic, not requiring massive investments from the company. Bank account is considered a Cash Cow in the product portfolio.

3) **Loyalty program:** The loyalty program of Company X has a low penetration among its customers. The program worth in economic terms only to customers that spend more than R$1600 monthly, so it is natural that it reaches only a share of credit card customers. However, even among heavy spender customers that spend above that threshold, the penetration is not high. In the meantime, the loyalty market has grown

fast in Brazil, reaching a 20.8% of customer base growth in 2018 (OLIVEIRA, 2018). The loyalty program is not growing anymore but still consuming a lot of cash in order to subsidy the awards given to customers, therefore it is a Dog in Company X portfolio.

4) **Personal lending:** Company X started the lending business but still looking for the best product to gain scale and market penetration. The amount of money that have been borrowed by Company X is very low and market share is close to zero. Today a person can hire a loan by using the app, but products like consigned credit and guaranteed credit are not available yet. In a scenario where the lending industry in Brazil is expected to grow 7% in 2019 (GOEKING, 2019), Company X personal lending product is seen as a Question Mark: it does not generate cash but it is not consuming massive financial resources as well.

Figure 31. Product portfolio of Company X analyzed by using BCG Matrix.



Source: Elaborated by the author.

## 4.13    Product/Market expansion grid

When Company X started as a single-product credit card company, it focused on entering the existing market of credit card with a new product: the first fully digital managed credit card product in Brazil.

Now Company X will launch a fully digital managed life insurance product with a complete ecosystem of services that can be used on daily basis, aiming to serve a market of tech-savvies young people that nowadays don't see life insurance as a latent need. Therefore,

the focus of Product Y is on a market segment that is strongly represented in Company X current customer base.

Product Y will be an innovative product that is not comparable with any other product in Brazilian market. The offer of life insurance today is standardized and there is almost no differentiation among existing products. For that reason, it is possible to affirm that Product Y is a New Product.

Analyzing simultaneously the two dimensions proposed by Kotler & Armstrong (2012), it is possible to infer that Company X is offering a new product to its current market segment. Hence, Product Y fits the Product development cell in the grid.

## 4.14    Integrated marketing mix

As suggested by Kotler & Armstrong (2012), there are four key dimensions that a company must define in order to influence the demand for its products: Product, Price, Place and Promotion. Each of these variables will be carefully analyzed in order to increase the demand of Product Y.

1) **Product:** Product Y consists in a life insurance that can be managed through the app. Customers can buy Product Y, consult and change its coverages, cancel the policy, confer payments status, get customer support and claim compensations using the app. The coverages offered initially will be death by natural and accidental causes, permanent disability, funeral aid and severe illness diagnosis. In addition, a whole ecosystem of services will be offered to customers aiming to be a complete health management app. For instance, a customer will be able to register workouts, control calories burn and consumption, check its weight evolution, set activity goals, receive fitness and nutritional assistance etc. For customers that have a healthy lifestyle and use the app to control activities frequently, there will be a discount in the insurance premium. By offering this services ecosystem, Product Y aims to be an insurance product that people will use even if nothing bad happens. Bain and Company (2017) states that companies that offer an ecosystem of services besides the insurance policy observe a higher retention rate and a better NPS than companies that offer off-the-shelf insurance policies.

2) **Price:** Product Y will be competitive on prices, though it can be difficult to catch up competitor's ability to assess customer risk in the beginning of the business. Prices will vary according to the customer profile and app usability; hence it is not possible to define a standard price. There will be a share of the price that can be waived according to the usability of the additional features discussed in the product section. In this sense, customers will be stimulated to use the app, increasing engagement, retention and satisfaction. As a possible side effect, giving discounts according to the lifestyle can stimulate customers to cheat and pretend they are working out when they are not. For that reason, the discount must be significant to foster the usability of the features, but not as high to undermine product profitability;

3) **Place:** Company X is a native digital company. It has been using its digital channels to acquire customer since its foundation, and it will be kept for Product Y. All the interactions during the customer journey will be made without physical interactions. Due to this digital structure, the accessibility of this product can be easily extended nationwide. In addition, Company X historically has seen an amazing organic referral from its customers - the so-called Member Get Member (MGM). This also will be an important acquisition driver.

4) **Promotion:** Company X has an influential social account on Instagram and Facebook. For instance, the organic reach of a post on its Instagram ranges from 300.000 to 500.000 people, with more than 1 million followers. Public relations are another important awareness generator to Company X - its recent launches have received a massive press coverage that leveraged the reach of the news. Also, Company X advertises on street clocks in the main Brazilian cities like São Paulo and Rio de Janeiro. Lastly, Company X can adopt a cross-selling strategy aiming to increase sales: for example, earn a discount in Product Y if you sign into the fidelity program. TV advertisement has not been used by Company X yet, but it still as a possibility in the next months.

## 4.15    Core competencies

Identifying and improving the core competencies of a company is crucial in order to keep a long-term competitive advantage. This work identified four core competencies Company

X holds: engineering and software development; customer relationship; brand management and data analysis.

Engineering and software development are an important core competence Company X presents. As a bank, Company X needs to ensure that all data processed by it is protected and accurate. In the banking industry, services availability must be extremely high. Also, Company X must be able to quickly develop new features and products to meet customer needs. Consequentially, the ability to scale the solutions and to develop new products while keeping a stable and efficient system working is mandatory to the success of the company in its current business.

Customer relationship is another important core competence of the company. Company X wants customers to love them fanatically, and to achieve this goal it offers a humanized customer care available 24/7 by email, chat, telephone and social media. Also, Company X allows its customer service agents to proactively send gifts to the customers in specific situations. These initiatives - so-called WOW moments - happen when there is a notable and distinct connection between the customer and the support agent, and these histories usually have a viral potential. The NPS of Company X has always been higher than 85% since its foundation, what indicates that the company is succeeding in keeping a high value service despite its fast-paced growth.

Brand management plays an important role as a core competence. Company X has built a very strong brand that is known transparent, efficient, customer-centered and innovative. Brand awareness is very high, and consideration - the share of non-clients that considers Company X as an option - have been growing consistently in all customer segments, according to quantitative researches carried out by Company X.

Lastly, data analysis is a very important core competence to Company X. Both in insurance and in financial services, being capable of assessing the risk profile of each customer is a core activity to the success of the businesses. On top of that, Company X also relies on data analysis to prevent fraud and money laundry, to prioritize new business entry, to optimize advertisement investments, to segment customers etc. Therefore, being capable of transforming data into information is decisive to the success of the business.

# 5    IMPLEMENTETION SCHEDULE

So far, this work has presented Company X and its competitive environment. Then, the global and local insurance landscape have been analyzed, together with economic factors that might influence the demand for this kind of product. Then, a multicriteria selection method was applied in order to decide which was the best product to Company X adopt when entering the insurance business. In the following sections, Product Y was described, aiming to solve the main pains customers face today with insurance products. After that, this work applied some strategy frameworks to obtain a better assessment of Company X competitive position.

In the previous sections, this work brings forward strong evidences that Company X should go for launching Product Y as its new product. The present section proposes an implementation schedule to be followed by Company X when implementing Product Y.

The action plan will be divided into five Phases:

1) **Phase 1 - Business case development and presentation to the management team:** the starting point to product implementation consists in convincing the management team about the relevance of this business opportunity. Once the management team agrees with the product implementation, the following phases can start;

2) **Phase 2 - Insurance partner selection:** after the approval by the management team, Company X is able to start this phase, that will be responsible for defining criteria to evaluate potential partners, validating requirements and reaching out to partners;

3) **Phase 3 - Engineering and software development:** this team will be responsible for developing the app and the integration with the insurance company. This is one of the most critical tasks of Product Y implementation because engineers are an extremely scarce resource inside Company X, and if the implementation proves to be more complex than expected, it will not be possible to allocate more engineers to the project, delaying the launching;

4) **Phase 4 - Marketing and brand strategy:** this phase will be responsible for understanding the customer needs, making market research and researches with customers, as well as for designing all marketing strategy;

5) **Phase 5 - Hiring and training:** this phase will be responsible for defining the number of employees that will be hired to work with Product Y, as well as for caring out the hiring process, for defining the training, for setting up metrics to be analyzed and for quality control.

6) **Phase 6 - Benefits strategy:** this phase will be responsible for designing a benefits strategy to Product Y customers. The goal is to offer a list of discounts and benefits in selected partners like retailers, gyms and sportive events.

As Company X is organized in a matrix organizational structure, all the people involved in this project will work together in a single squad called Insurance, though in different phases. The team will be composed by Business Developers, Product Managers, Designers, Brand Managers, Business Analysts, Engineers, Business Architects, Customer Experience Analysts, Legal and Compliance Analysts and Recruiters.

In the following sections, the main activities of each phase will be detailed, as well as the people involved and the expected duration of activities.

## 5.1 Business case development and presentation to the management team

In this Phase, the final goal is to convince the management team about the relevance of this business opportunity. A good part of the research needed has already been presented in this work, therefore it is possible to leverage this material to accelerate the preparation process. As a possible outcome of this phase, it is expected a presentation that touches on:

a) The Brazilian insurance scenario, highlighting the insurance gap that Brazilian market shows, the potential growth caused by the economic growth, the positive regulatory environment and the high margins this business has;

b) The rationale supporting the decision of which insurance product to choose when entering the Brazilian market, stressing that this decision was data-driven and took into account the most important criteria, like market revenue, market concentration, sinistrality, product complexity etc;

c) The size and the profitability of the life insurance market specifically, as well as the competitive landscape in this market;

d) Market researches with customers aiming to understand the main customer needs. The team will perform both qualitative researches (Focus group) and quantitative researches with the target segment;

e) The main bets about Product Y features, highlighting that it will be an innovative product that will leverage Company X brand to offset a possible lack of trust in this new product;

f) The customer journey, from acquisition to product usage;

g) The partnership model where Company X will be a distributor of another insurance company in this first moment in order to accelerate the implementation of Product Y;

h) The main investments required, the man-hour effort, the implementation schedule and the revenue estimative for the initial years of Product Y;

i) Risk analysis and possible mitigations;

j) Legal validation;

Table 26 shows other labor costs Company X bears according to the Brazilian laws and to the benefits package the company offers. Table 27 shows the average gross salary of each function in Company X according to the website Glass Door, and the total cost to Company X considering the obligations shown in Table 26. Also, the schedule for these activities, as well as the people involved in each of them and the duration of each activity in weeks, are shown in Table 28. Phase 1 is expected to last for 6 weeks.

Table 26. Labor costs as percentage of the gross salary.

| Labor cost | Fixed or variable | Value | |
|---|---|---|---|
| A: 13º salary | Variable | 8,33% | |
| B: Vacation | Variable | 11,11% | |
| C: INSS | Variable | 20,00% | |
| D: FGTS | Variable | 8,00% | |
| E: Prediction to contract termination | Variable | 4,00% | |
| F: Meal allowance | Fixed | R$ | 660,00 |
| G: Medical assistance | Fixed | R$ | 350,00 |
| H: Transportation assistance | Fixed | R$ | 193,60 |
| **Total cost** | - | **Salary*(A+B+C+D+E)+F+G+H** | |

Source: Elaborated by the author.

Table 27. Average salaries in Company X.

| Function | Abbreviation | Average gross salary | | Cost considering benefits and labor costs | | Effective cost per hour | |
|---|---|---|---|---|---|---|---|
| Brand Manager | BM | R$ | 9.567,00 | R$ | 15.692,29 | R$ | 89,16 |
| Business Analyst | BA | R$ | 6.646,00 | R$ | 11.268,60 | R$ | 64,03 |
| Business Architect | Barch | R$ | 11.058,00 | R$ | 17.950,33 | R$ | 101,99 |
| Business Development | BD | R$ | 10.000,00 | R$ | 16.348,04 | R$ | 92,89 |
| Customer Experience Analyst | CE | R$ | 2.700,00 | R$ | 5.292,60 | R$ | 30,07 |
| Designer | D | R$ | 10.000,00 | R$ | 16.348,04 | R$ | 92,89 |
| Engineer | E | R$ | 10.296,00 | R$ | 16.796,32 | R$ | 95,43 |
| Product Manager | PM | R$ | 11.086,00 | R$ | 17.992,73 | R$ | 102,23 |
| Legal/Compliance Analyst | L | R$ | 7.500,00 | R$ | 12.561,93 | R$ | 71,37 |
| Recruiting Analyst | RA | R$ | 5.074,00 | R$ | 8.887,89 | R$ | 50,50 |

Source: GlassDoor website.

Table 28. Implementation schedule and estimated cost of Phase 1.

| Activity | People involved | Cost (Salary) | M1 | | | | M2 | |
|---|---|---|---|---|---|---|---|---|
| **Phase 1 - Presentation to the management team** | | R$ 99.945,00 | | | | | | |
| Analyze Brazilian insurance scenario | 2 BD | R$ 14.861,86 | | | | | | |
| Rational supporting entry decision | 2 BD, 2 BA | R$ 25.106,04 | | | | | | |
| Estimate the size and profitability of life insurance market | 2 BD, 2 BA | R$ 25.106,04 | | | | | | |
| Market research | 1 BM | R$ 7.132,86 | | | | | | |
| Defining main bets for Product Y | 2 BD, 1 PM, 2 BA | R$ 33.284,55 | | | | | | |
| Designing the customer journey | 1 Barch | R$ 8.159,24 | | | | | | |
| Select and reach out insurance partner | 2 BD | R$ 14.861,86 | | | | | | |
| Define investments required, man-hour effort, implementation schedule | 2 BD, 2 BA | R$ 25.106,04 | | | | | | |
| Risk analysis | 1 L | R$ 5.709,97 | | | | | | |
| Legal validation | 1 L | R$ 5.709,97 | | | | | | |

Source: Elaborated by the author.

## 5.2 Insurance partner selection

Once the project is approved by the management team and the team has received the budget to implement Product Y, the next phase will consist in selecting an insurance company that will be accountable for issuing the policy properly. As discussed before, this alternative will reduce the time to market and reduce risks.

The selection of this partner is critical to Product Y success. The Business Development team will be responsible for choosing the potential partners that will be evaluated in this phase. Also, they will be accountable for reaching out the potential partners and requesting information to support the decisions to be made. Some engineers will participate in the conversations with third parties in case of assessing the technical capacity of partners and Application Programming Interface (API) integration complexity. The main dimensions that will be analyzed when selecting a partner will be:

a) Robustness of the partner. The selected company must have a solid financial position, a consolidated reputation and a proven performance in life insurance business;

b) Technologic capacity. The company must have a reliable, safe and stable system that will provide real time pricing, allow hiring, cancellation and managing of policies 24 hours a day through an API and that will keep customers data safe;

c) Complexity of API integration. The complexity of API integration is an important criterion considering the scenario of a scarce engineering workforce;

d) Competitive prices. Company X is the biggest digital bank in the world, which increases its bargain power. The selected partner must provide competitive prices to Company X, allowing it to share the discounts with customers;

e) Variety of product portfolio. Product Y will be the first insurance product of Company X, but after rolling out this product, the company will study new insurance products, and having a partner that is able to offer these other products is desirable;

After the first task of pre-selecting potential partners, all the following tasks listed above will be performed simultaneously, though by different people. Then, the commercial agreement will be discussed, followed by Non-Disclosure-Agreement and contract signing. Table 29 illustrates Phase 2 schedule, as well as people involved and estimated duration and salary expenses.

Table 29. Implementation schedule up to Phase 2.

| Activity | People involved | Cost (Salary) | M1 | M2 | M3 | M4 |
|---|---|---|---|---|---|---|
| **Phase 2 - Insurance partner selection** | | R$ 70.998,85 | | | | |
| Partners pre-selection | 2 BD | R$ 7.430,93 | | | | |
| Partners evaluation | 2 BD, 3 BA, 3 E | R$ 24.145,23 | | | | |
| Assess partners rubustness | | | | | | |
| Evaluate technologic capacity | | | | | | |
| Check complexity of API integration | | | | | | |
| Receive commercial proposals and compare prices | | | | | | |
| Compute the variety of partners' product portfolio | | | | | | |
| Settling the commercial agreement | 2 BD, 2 L | R$ 26.281,80 | | | | |
| NDA and contract signing | 2 BD, 2 L | R$ 13.140,90 | | | | |

Source: Elaborated by the author.

## 5.3 Engineering and software development

As discussed in previous sections, engineering is a very scarce resource in Company X. During the partner selection, the complexity of integrating with the potential partner was one of the key decision drivers, therefore it is expected that the engineering effort when integrating with the partner to be as low as possible. It is important to keep the engineers that were involved in the partner selection in the software development phase.

The first step in product development will be to break down the features to be developed and prioritize them in order of importance. There will be features that are core to the Minimum

Viable Product launch, while others can be postponed for the second iteration of product development.

Then, the engineering team, together with the Product Manager responsible for the project, will estimate the implementation effort of each task and allocate engineers according to their specialization. Company X engineering team has the philosophy that quality is more important than deadlines, therefore these estimated durations can be extended in order to ensure the quality of Product Y. For that reason, a two weeks buffer will be added on top of the estimative made by the team.

The back-end team will start developing the infrastructure necessary to Product Y implementation, building the integration with the partner's API and creating the infrastructure necessary to support the operation of the product.

After that, the designer will work closely to the front-end team to build the app interface and website landing page, ensuring the customers will have a fluid and intuitive experience when hiring and using Product Y.

One of the final steps in the app development will be the test with final customers. Also, Company X employees will be able to test the product before the market launch, reducing the probability of a serious bug affecting the final clients. With these two tests, the engineering team expects to spot and to correct the most significative bugs that Product Y might present, as well as understanding if the usability is clear to customers.

Table 30 depicts the implementation schedule of Phase 3.

Table 30. Implementation schedule up to Phase 3.

| Activity | People involved | Cost (Salary) | M1 | M2 | M3 | M4 | M5 | M6 | M7 |
|---|---|---|---|---|---|---|---|---|---|
| Phase 3- Engineering and software development | | R$ 255.140,28 | | | | ■ | ■ | ■ | ■ |
| Breaking down features to be developed and prioritize them | 5 E, 1 PM | R$ 23.175,98 | | | | ▪ | | | |
| Estimate implementation effort | 5 E, 1 PM | R$ 23.175,98 | | | | ▪ | | | |
| Back-end development | 3E, 1 PM | R$ 93.247,76 | | | | | ▪ | | |
| Front-end development and design | 2E, 1 PM, 1 D | R$ 46.318,24 | | | | | | ▪ | |
| Usability test with customers | 1E, 0,5 PM, 0,5 D | R$ 7.719,71 | | | | | | ▪ | |
| Test with employees | 1E, 0,5 PM, 0,5 D | R$ 7.719,71 | | | | | | | ▪ |
| Final adjustments | 5E, 1 PM | R$ 53.782,90 | | | | | | | ▪ |
| Two weeks buffer | | | | | | | | | ▪ |

Source: Elaborated by the author.

## 5.4 Marketing and brand strategy

The marketing team will be responsible for analyzing the results of both quantitative and qualitative research performed in Phase 1. After identifying the main pain points customers have today, the Brand Manager will be able to elaborate a marketing plan, defining the goals of the marketing campaign, creating the marketing strategy, defining the main channels to advertise the new product. Also, Brand Manager will be accountable for proposing a marketing budget to be spent on each communication channel.

The marketing campaign creation will be outsourced to a creative lab that has produced several groundbreaking campaigns to Company X. After the creation, the market campaign will need to be approved by the management team and by the Public Relations team. Then, if approved, the campaign is ready to be launched together with Product Y. Therefore, this phase of the project can end up simultaneously to the previous phase.

The total implementation duration is not changed with Phase 4 addition, given that its activities were performed simultaneously to Phase 3. Table 31 summarizes this information. The gray cells represent the activity that will be outsourced. This activity will cost R$80.000.

Table 31. Phase 4 implementation.

| Activity | People involved | Cost (Salary) | M1 | M2 | M3 | M4 | M5 | M6 | M7 |
|---|---|---|---|---|---|---|---|---|---|
| **Phase 4 - Marketing and brand strategy** | | R$ 78.461,45 | | | | | | | |
| Analyze quatitative and qualitative customer research | 2 BM | R$ 14.265,72 | | | | | | | |
| Elaborate marketing plan | 2 BM | R$ 21.398,58 | | | | | | | |
| Define the main channels to be used in advertisement | 2 BM | R$ 7.132,86 | | | | | | | |
| Set up marketing budget | 2 BM | R$ 7.132,86 | | | | | | | |
| Briefing creative lab about the marketing campaing | 2 BM | R$ 14.265,72 | | | | | | | |
| Outsourced activity - Creative lab | | | | | | | | | |
| Present campaing to management team | 2 BM | R$ 7.132,86 | | | | | | | |
| Launching | 2 BM | R$ 7.132,86 | | | | | | | |

Source: Elaborated by the author.

## 5.5 Hiring and training

In this phase of the project, the operation of Product Y will be structured. A Business Architect will be responsible for dimensioning the number of customer support analyst that will be necessary in order to ensure a good average service level.

Then, the Recruiting analysts will be responsible for writing the job descriptions, designing the recruiting processes, divulging the open positions to the right audience,

interviewing the candidates and making the final offers. This process of hiring people might be long and last for months, therefore it is recommended that the beginning of the recruiting process to start at least 3 months before the project deadline.

In parallel, the training of these new employees must be designed. This is a very critical activity because the quality of training influence directly the quality of customer care. Customer support analysts must be able to provide an effective and fast resolution for claims.

Lastly, the Business Architect needs to define the main indicators to be monitored in order to ensure customer care quality. The daily monitoring of these indicators, as well as improvement suggestions, will be in charge of the Business Architect. Nowadays, Company X uses indicators such as First Response Time, Average Response Time, Customer Satisfaction Rate, number of tickets per customer, number of tickets that were reopened etc. and all of them can be used also when analyzing the performance of Product Y operations. It is recommended to analyze NPS specifically for Product Y, which will allow spotting possible dissatisfaction with the product. Table 32 summarizes the main activities of this phase.

Table 32. Phase 5 implementation schedule.

| Activity | Cost (Salary) | M1 | M2 | M3 | M4 | M5 | M6 | M7 |
|---|---|---|---|---|---|---|---|---|
| **Phase 5 - Hiring and training** | **R$ 171.219,99** | | | | | | | |
| Dimensioning of customer support team | R$ 16.318,48 | | | | | | | |
| Recruiting Customer Support Analysts | R$ 116.204,63 | | | | | | | |
| Defining job descriptions | | | | | | | | |
| Designing the recruiting process | | | | | | | | |
| Advertising the open positions | | | | | | | | |
| Interviewing the candidates | | | | | | | | |
| Making offers | | | | | | | | |
| Designing training process | R$ 16.318,48 | | | | | | | |
| Training the team | R$ 6.059,93 | | | | | | | |
| Define quality of indicators | R$ 16.318,48 | | | | | | | |

Source: Elaborated by the author.

## 5.6 Benefits strategy

Today, Company X has several partners in its loyalty programs offering discounts and other benefits to the customers. The goal here is to define which partners are more appealing to Product Y customers, reaching them out showing the value of being part of Product Y benefits club. After achieving a commercial agreement, companies must sign an NDA and a partnership contract.

It is critical to partner with companies that have good customer care and a suitable brand image. If a company doesn't have good customer care, it will cause an additional number of complaints with Company X, as occurred in the past with the loyalty program.

Table 33 depicts Phase 6 Product Y implementation.

Table 33. Phase 6 implementation schedule.

| Activity | People involved | Cost (Salary) | M1 | M2 | M3 | M4 | M5 | M6 | M7 |
|---|---|---|---|---|---|---|---|---|---|
| **Phase 6 - Benefits strategy** | 2 BD | R$ 104.033,01 | | | | ■ | ■ | ■ | ■ |
| Defining a partnership guideline | | | | | | ■ | | | |
| Selecting potential partners aligned with the guideline | | | | | | | ■ | | |
| Reaching partners out | | | | | | | ■ | | |
| Signing NDA and Contract | | | | | | | | | ■ |

Source: Elaborated by the author.

Table 34 shows the detailed implementation schedule proposed to Product Y. The final duration is of 28 weeks, with a total salary cost of R$ 779.798,58. When considering the marketing outsourced activity, the cost goes to R$ 859.798,58. As expected, the engineering phase is on the critical path, and a delay in the software development would delay the launch of Product Y.

Table 34. Summarized implementation schedule and final salaries cost.

| Activity | Cost (Salary) | M1 | M2 | M3 | M4 | M5 | M6 | M7 |
|---|---|---|---|---|---|---|---|---|
| Phase 1 - Presentation to the management team | R$ 99.945,00 | ■ | | | | | | |
| Phase 2 - Insurance partner selection | R$ 70.998,85 | | ■ | ■ | | | | |
| Phase 3- Engineering and software development | R$ 255.140,28 | | | | ■ | ■ | ■ | ■ |
| Phase 4 - Marketing and brand strategy | R$ 78.461,45 | | | | ■ | ■ | ■ | ■ |
| Phase 5 - Hiring and training | R$ 171.219,99 | | | | ■ | ■ | ■ | |
| Phase 6 - Benefits strategy | R$ 104.033,01 | | | | ■ | ■ | ■ | ■ |
| Total salary cost | R$ 779.798,58 | | | | | | | |

Source: Elaborated by the author.

## 5.7     Revenue estimative

In order to estimate the size of Product Y opportunity, this work will model the economics of the product, adopting some assumptions related to revenue streams, cost structure and product penetration.

With respect to costs, in the previous section, the implementation cost represented by the salaries of the employees involved were calculated. After product implementation, an insurance squad will be kept, being composed by both support teams (Customer Experience Analysts) and by business and technical teams (6 engineers, 1 Business Development, 1 Brand

Manager, 1 Product Manager, 6 Business Analysts). The size of the support team will vary according to the number of customers that adopt the product. Initially, a team of six Customer Experience Analysts will be set, and after the first six months of product launch, it will be proportional to the number of customers, following the 1: 7.500 ratio. This ratio was set considering internal benchmarking from other complex products, such as lending. Marketing will have a monthly budget of R$50.000,00 to advertise the product. Lastly, a setup cost charged by the insurance partner will be charged, and it was estimated by the technical team in R$500.000,00.

In terms of revenues, a few assumptions were adopted. First, it was assumed that the average ticket in the base scenario will be similar to the one offered by the most competitive insurtech competitors, considering as average profile the target customer segment. Second, the partnership scheme will consist in a revenue share between the insurance partner and Company X, with the base scenario set in 35% for Company X, 65% for the partner. Third, market average margin in the individual life insurance business is 68%, and as a conservative projection, the base scenario will use half of this profitability - 34% margin.

Lastly, in terms of number of customers using the new product, the base scenario estimates the penetration of Product Y in Company X customer base. It takes into account the growth projection of Company X, that estimates a customer base of 25 million customers in 2024. To model the size of the opportunity, linear growth of the customer base is projected, considering the current customer base of 12 million and the projected customer base of 25 million in five years. Also, it estimates the penetration of Product Y considering a Product Y final penetration of 5% in Company X customer base.

A discount rate will be applied to calculate the NPV of the project, considering a time horizon of 60 months (5 years). The discount rate used was the cost of capital of Company X, that is 20% annually. Table 35 shows the main premises of the model and the financial result in the base scenario. Table 36 breaks down the calculations of monthly revenue.

Table 35. Base economic scenario of Product Y considering 60 months horizon.

| | | |
|---|---|---|
| Initial salary investment (R$) | R$ | 859.798,58 |
| Set up cost (R$) | R$ | 500.000,00 |
| Estimated salary of the fixed team (monthly R$) | R$ | 218.422,57 |
| Outsourced marketing campaing | R$ | 80.000,00 |
| Marketing investments (monthly R$) | R$ | 50.000,00 |
| Average ticket (R$) | R$ | 49 |
| Profit margin (%) | | 34% |
| Total Revenue per client (R$) | R$ | 16,66 |
| Percentage of revenue sharing to Company X (%) | | 35% |
| Revenue per client - Company X (R$/month) | R$ | 5,83 |
| Number of customers/CE | | 7.500 |
| Discount rate - Cost of capital (%) | | 20% |
| Discount rate monthly (%) | | 1,53% |
| **NPV (R$)** | **R$** | **68.184.146,69** |
| **Payback (months)** | | **13 months** |

Source: Elaborated by the author.

Table 36. Base scenario economics during the first 12 months.

| Month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of clients - Company X | 12.000.000 | 12.216.667 | 12.433.333 | 12.650.000 | 12.866.667 | 13.083.333 | 13.300.000 | 13.516.667 | 13.733.333 | 13.950.000 | 14.166.667 | 14.383.333 |
| Product Y penetration (%) | 0,04% | 0,04% | 0,08% | 0,17% | 0,25% | 0,33% | 0,42% | 0,50% | 0,58% | 0,67% | 0,75% | 0,83% |
| Number of clients Product Y | 5.000 | 5.000 | 10.361 | 21.083 | 32.167 | 43.611 | 55.417 | 67.583 | 80.111 | 93.000 | 106.250 | 119.861 |
| Volume of premiums (R$ '000) | R$ 245 | R$ 245 | R$ 508 | R$ 1.033 | R$ 1.576 | R$ 2.137 | R$ 2.715 | R$ 3.312 | R$ 3.925 | R$ 4.557 | R$ 5.206 | R$ 5.873 |
| Number of CE | 6 | 6 | 6 | 6 | 6 | 6 | 8 | 10 | 11 | 13 | 15 | 16 |
| Salary of CE (R$) | R$ 31.756 | R$ 31.756 | R$ 31.756 | R$ 31.756 | R$ 31.756 | R$ 31.756 | R$ 42.341 | R$ 52.926 | R$ 58.219 | R$ 68.804 | R$ 79.389 | R$ 84.682 |
| Market share of individual life (%) | 0,03% | 0,03% | 0,07% | 0,14% | 0,21% | 0,28% | 0,36% | 0,44% | 0,52% | 0,61% | 0,69% | 0,78% |
| Revenue (R$) | R$ 29.155 | R$ 29.155 | R$ 60.416 | R$ 122.937 | R$ 187.564 | R$ 254.296 | R$ 323.135 | R$ 394.078 | R$ 467.128 | R$ 542.283 | R$ 619.544 | R$ 698.910 |
| Monthly salary fixed team (R$) | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 | R$ 218.423 |
| Marketing budget (R$) | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 | R$ 50.000 |
| Net revenue (R$) | -R$ 271.023 | -R$ 271.023 | -R$ 239.763 | -R$ 177.241 | -R$ 112.614 | -R$ 45.882 | R$ 12.371 | R$ 72.730 | R$ 140.487 | R$ 205.057 | R$ 271.732 | R$ 345.806 |
| Cumulated Cash Flow (R$ '000) | -R$ 1.707 | -R$ 1.970 | -R$ 2.199 | -R$ 2.366 | -R$ 2.470 | -R$ 2.512 | -R$ 2.501 | -R$ 2.436 | -R$ 2.314 | -R$ 2.138 | -R$ 1.908 | -R$ 1.619 |

Source: Elaborated by the author.

## 5.8 Final considerations

The schedule proposed before estimates the duration and the cost of people involved in Product Y first version launch. After the implementation, Company X needs to monitor the main performance indicators of Product Y, considering customer care (for instance, Service Level Agreement, First Response Time, Average number of interactions, Number of ticket per

customer, NPS etc.), profitability (revenues, costs) and penetration (share of customers that hired the product).

The engineering team will continue to work with Product Y with three main goals. Firstly, engineers need to make sure that Product Y roll-out occurs as smoothly as possible. Secondly, they need to fix eventual bugs that appear. Thirdly, they will need to incorporate customer feedbacks to the product and implement features that were not implemented in the MVP.

Monitoring the performance of the Insurance partner is another critical activity to be performed after product roll-out. Company X needs to ensure that the partner is meeting quality requirements.

Gathering customers' feedback is recommended in order to assess product performance and to collect possible insights, continuously improving the product.

In economic terms, the product is very profitable, with high profit margins, as illustrated in the previous section. The main challenge is to scale the operations with efficiency, allowing the company to increase the sales capacity with the same fixed team.

# 6    CONCLUSIONS

The goal of this work was to analyze the viability of an insurance product for Company X in Brazil, considering the competitive environment, the Brazilian macroeconomic landscape and the Company X business model. With this analysis, it was expected to provide a recommendation about launching this new product, defining the entering strategy, the MVP, the implementation cost and revenue estimative.

Initially, this thesis performed a Literature Review, gathering a set of relevant theories studied throughout the Production Engineering course that would further support the analysis made in this work.

In sequence, this work analyzed the insurance market from a global and from a local perspective, highlighting the attractiveness of developing countries for insurance companies. Then, the Brazilian landscape was studied, taking into account the macroeconomic scenario, the competitive overview, the regulatory requirements and the customers' insights.

Then, AHP was applied in order to select the most suitable insurance product to Company X adopt when entering this market. After defining that life insurance was the best one, the tools presented in the Literature Review were applied, enabling an accurate and meaningful assessment about its current strategic positioning. For instance, the analysis of the competitive environment was made by using the Porter's Five Forces framework. Also, the CANVAS model helped in defining the business model for Product Y.

After applying the frameworks, this thesis presented an implementation schedule, considering the workforce involved, the duration of the activities and the cost that would incur in case of implementing the project. This schedule comprehends all the development process, from building the business case and presenting to the management team to software development and marketing activities.

In the end, it was possible to conclude that the insurance business is extremely attractive to Company X. The scenario is very similar to the one Company X faced when entering the credit card business in 2014: it is a huge market in terms of revenue, usually presents a high profit margin, it has a strong market concentration and it is a business that has seen few innovative initiatives in Brazil.

## 6.1    Contributions

For Company X, this work represents a very rich set of analysis concerning the Brazilian insurance business. It is presented the current situation of the Brazilian market, highlighting the main opportunities Company X can pursue in the next months. Also, it put together several indicators about different insurance products, allowing a rational choice about which product to launch. In the end, the revenue for this opportunity was estimated, allowing managers to decide if it is an attractive opportunity that can help Company X to finally become profitable in the next two years.

For the author, this work was extremely important because it allowed him to review the main topics learned during the course and apply them in a real situation. Applying the literature review in a real-life situation was very positive for the reason that it proportionated a better understanding of the theories and attested their applicability in the practice. The exposition to Company X leaderships while writing this work was also very positive to the author. In addition, the author gained a deep knowledge about the insurance business that will allow him to have an important role during the product implementation.

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