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## ARTICLE

## Segmentation of current and potential investors in retirement plans to retain and capture customers

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### ABSTRACT

The goal of this research was to fill the gap represented by the lack of studies that apply Behavioral Finance concepts in the segmentation of investors in retirement savings plans. Based on a bibliographic review, and the study of multiple cases, there was revealed relevant aspects of the supplemental retirement market in Brazil, this article proposes a new set of demographic and psychographic variables that were more effective in previous research in the segmentation of financial services clients. It innovates by incorporating variables from Psychology and Behavioral Finance, especially the “rationality” variable which has a remarkable ability to synthesize vulnerabilities to a wide universe of heuristics and biases when applied to investors. In addition, significant behavioral barriers were identified for the expansion of the retirement market, such as a low level of maturity of current market practices in Brazil and the need to use Behavioral Finance instruments in this confrontation.

### KEYWORDS

Supplemental Retirement Savings Plans, Behavioral Sciences, Financial Markets, Market Segmentation, Consumer Behavior

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## 1. INTRODUCTION

Research about the hybrid segmentation focused on investors are rare, and the ones developed by Keller and Siegrist (2006) and by Deccax and Campani (2019) are exceptions. Regarding investors in retirement savings plans, within the scope of the extensive bibliographic review conducted by this study, a survey by Gough and Sozou (2005) was the only one found about segmentation with this specific focus. The present study intends to mitigate this gap by considering research results on the segmentation of clients of other financial services and employing the applicable knowledge of Behavioral Finance.

The segmentation of individual investors in general, regardless of the types of investment in which they invest their resources, is a complex activity and of evident importance for financial institutions, regulatory bodies, and for the investors themselves.

One of the most relevant and promising applications for segmenting individual investors is in those that invest (or could invest) in supplemental retirement savings plans. Such plans represent an investment modality with increasing economic and social representativeness.

The objective of this research is to develop a new set of variables for segmenting current and potential individual investors in private retirement savings plans. This set of variables for segmentation is of special interest for private retirement savings plans because of the possibility of mapping the most promising segments of potential customers (directing actions to attract new customers) and to improve their loyalty and profitability actions for their customers current customers.

According to the classification used by Hunt (2014), this study can be qualified as “marketing research” because it seeks an expansion of the Marketing knowledge base and a contribution of general application (more specifically, for private retirement savings plans), not being restricted to the reality of a particular organization. The same applies to other published studies - such as Gough and Sozou (2005), Keller and Siegrist (2006), Fünfgeld and Wang (2009), Makgosa et al. (2016) and Deccax and Campani (2019) - who developed hybrid approaches to segmenting financial services customers.

This study, like the ones mentioned above, can also be classified as “problem-oriented research” because, according to Myers, Massy and Greyser (1980, as quoted in Hunt, 2014), this type of research “can be fundamentally or highly applicable, but its driving force is the desire to make a contribution to the solution of an important practical problem”. This is corroborated by its normative character - when proposing a new set of variables for segmenting retirement investors – evidenced by the search for an answer to the following research question: “How should private retirement savings plans segment current and potential investors with the objective of improving customer loyalty and attracting customers?”.

The method used here was the study of multiple cases, with a sample of five companies representative of the Brazilian private pension market. The script used in the semi-structured interviews with the executives of these companies was developed based on a bibliographic review.

The results achieved by this study reveal a general picture of diversified, limited, and predominantly incipient practices for segmenting potential and current customers. This leads to an inadequate understanding of their needs, constituting a limiter for the maturation and expansion of this market.

The contributions of this research are the identification of opportunities for development of this theme, both in the literature and in market practices, as well as the proposition of a new set of variables for the segmentation of current and potential individual investors in private retirement savings plans.

For “practitioners” (executives and entrepreneurs, especially), the relevance of this study is the result of the sum of two factors that we highlight below.

### 1.1. RELEVANT MARKET, WITH GROWING COMPETITION AND GREAT EXPANSION POTENTIAL

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The supplemental retirement market in Brazil, despite being far from the maturity level of many other countries, already has a significant economic magnitude: USD 223 billion in assets in 2018. On the other hand, its potential for expansion is revealed by its reduced (only 12.6%) representativeness compared to the country’s GDP (Gross Domestic Product). The average of OECD member countries (Organization for Economic Cooperation and Development) for this indicator is 53.3%. The potential of the Brazilian market is reiterated by the 7.9% growth from 2017 to 2018 (that is, in a period of low GDP growth in the country), while the average of the OECD countries was a decrease of 3.9% and with only four of them exceeding our index (Antolin et al., 2019).

The evolution of age groups in Brazil since 2010, and projected until 2060, with an expected reduction in PAA (Population in Active Age, between 15 and 64 years) from 67.99% to 59.80% in this period, also constitutes a powerful motivation for the expansion of the supplemental retirement market in the country (IBGE, 2019).

The recent approval of the public retirement reform represents an additional factor to leverage this market, with estimates of a 25% increase in the number of people who invest in private pension (from 16 to 20 million). As a result, competition tends to increase even more: since 2007, the number of retirement savings plans has increased from 392 to 1,786 and the total number of fund managers from 45 to 124. “Other factors favor the growth of the private pension market: the fall in the economy’s basic interest rates and the growing competition between fund managers, fintechs, banks and insurance companies.” (Setti and Sorima Neto, 2019).

### 1.2. INCREASINGLY COMPLEX AND DIVERSIFIED SUPPLY AND DEMAND

Another contributing factor to the growing importance of the theme of this research, which is strongly related to the previous factor, is the change in profile both in supply and demand in this market. Experts point out that private retirement savings plans have complex rules and that this is aggravated by the need to adapt the offer to the specific needs of each investor. On the other hand, fund managers have sought to modernize the products in this market (Jakitas and Nascimento, 2019).

On the demand side, the heterogeneity of retirement investors was recently evidenced by Gallo et al. (2018) when identifying segments of individuals with different behaviors. In addition, and even more relevant, the authors found that the cognitive processes underlying the decision to participate in retirement plans can be diverse and complex.

## 2. LITERATURE

The segmentation of current and potential private pension investors requires an in-depth understanding of the aspects that ultimately determine and condition their individual decision-making process regarding this specific financial product. In the universe of reputable journals that were researched in the scope of this research, the behavioral aspects related specifically to private pension and the segmentation approaches already used in individual clients of financial services in general (including private pension) emerged with prominence.

There is a range of behavioral aspects which, individually or together, have already been proved important by studies in the decision to invest or not in private pensions, in addition to how and how much to invest.

Bongini and Cucinelli (2019) identified numerous factors that positively influence people's intention to invest in a retirement plan: attitude, subjective norms, perceived behavioral control, knowledge about retirement, management of financial resources, and a high level of financial knowledge. This result confirms and extends the discovery by Van Rooij et al. (2011) that individuals with greater financial knowledge are more likely to plan for retirement and also that of Cobb-Clark et al. (2016). They found that people with a "locus of internal control" (who believe they control most of the relevant aspects of their lives) save more.

Additional factors regarding the predisposition to invest in private pension are age - especially around 40 years old (Gourinchas and Parker, 2002) - and healthy behaviors such as the practice of physical exercise and the search for a balanced diet (Finke and Huston, 2013). This latest study found evidence that this surprising variable (healthy behaviors) is a more powerful predictor of the inclination to invest for retirement than all the other explanatory variables considered (age, race, parents' income level, gender, and academic performance).

Once the decision to invest in a private retirement savings plan is made, other behavioral issues arise. The exploratory study by Harrison et al. (2006) revealed evidence that the decisions of these investors are neither rational nor fully informed, being characterized by complexity, confusion, and apathy. Sourdin (2008), for instance, found that individuals with self-control problems are more likely to invest in private retirement savings plan with less liquidity and Dahlquist and Martinez (2015) identified that inertia and a lack of attention to past performance can translate into worse results for investors in their private pension investments. Recently, Ongena and Zalewska (2018) went further and concluded that, given their deficient decision-making process, investors are not prepared for the role that the private pension industry has reserved for them.

Along the same lines, and in investigating the exercise of investor autonomy when choosing the portfolio of their retirement savings plans, Benartzi and Thaler (2002) reached the relevant conclusion that they do not have well-defined preferences. Regarding risk aversion when choosing private retirement savings plans, Gürdal et al. (2017) revealed that the willingness declared by investors themselves to take risks in general seems to be the most relevant measure in predicting their real behavior in this regard, and Hauff (2014) showed that individuals with a higher level of financial knowledge take more risks.

Unlike the descriptive nature of the studies, Reyers et al. (2015) and Mitchell and Utkus (2006) sought to incorporate a normative (prescriptive) character in their research. Reyers et al. (2015) indicate that interventions such as decision support and guidance can help individuals to make optimal decisions regarding private pension. Mitchell and Utkus (2006) are more specific, prescribing the inclusion of standard options selected optimally; the design of simplified menus in retirement savings plans; better approaches to help workers and retirees to manage risk; and the inclusion of improved standard options in retirement.

## 2.2. INVESTOR SEGMENTATION

To obtain superior results, some studies have used segmentation techniques with hybrid approaches and in different financial services markets, such as those presented in Table 1.

**Table 1**  
*Segmentation Studies in Different Financial Services Markets*

Financial Service Markets	Studies
Investments	Keller and Siegrist (2006) and Deccax and Campani (2019)
Pension plans	Gough and Sozou (2005)
Savings	Makgosa et al. (2016)
Financial and banking products	Harrison (1994), Alfansi and Sargeant (2000), Machauer and Morgner (2001) and Fünfgeld and Wang (2009)
Insurance	Ansell et al. (2007)

**Note.** Source: elaborated by the authors.

The vast majority of the most recent of these studies - Gough and Sozou (2005), Keller and Siegrist (2006), Fünfgeld and Wang (2009), Makgosa et al. (2016) and Deccax and Campani (2019), to name just a few - combine psychographic and demographic characteristics in their hybrid financial services customer segmentation approaches.

The first relevant studies on the segmentation of financial services clients employed unique factors, whether demographic or psychographic, in their analysis. Stanley et al. (1985), for example, revealed through a survey with bank account holders that the “age” factor is decisive for their use of specific banking products.

However, over time, the need to use multiple factors in the segmentation of financial services clients has been highlighted to achieve more effective results. Harrison (1994) and Machauer and Morgner (2001) are examples of criticism to the unrealistic simplicity, the questionable generalization of results, and the limited practical relevance of segmentation with unique factors.

There is a considerable diversity of combinations of factors in relevant research on hybrid segmentation of financial services customers. Makgosa et al. (2016) argue that the different approaches to segmentation have strengths and weaknesses and that an ideal approach does not exist. Nevertheless, there are two trends that emerge with clear evidence: the use in almost all studies of demographic factors and the predominance of the combination of demographic and psychographic factors, the latter also containing the so-called “segmentation by benefits”.

### *2.2.1. Demographic segmentation*

The demographic segmentation of financial services customers, applied alone or in conjunction with other types of segmentation, employs variables that measure characteristics of individuals relevant to their purposes. Makgosa et al. (2016) highlight that demographic variables - such as “gender”, “age”, “income level”, “educational level”, “occupation” and “marital status” - are observable and, in this way, are easier to obtain. Minhas and Jacobs (1996) state that these variables influence consumer behavior and that, therefore, they can be used as “proxies” for the analysis of their direct needs.

Many relevant studies have evidenced a significant impact of the use of demographic variables, usually in conjunction with other demographic variables or with psychographic variables, in the segmentation of financial services clients: Stanley et al. (1985), Harrison (1994), Alfansi and Sargeant (2000), Andronikidis and Dimitriadis (2003), Gough and Sozou (2005), Keller and Siegrist (2006), Ansell et al. (2007), Fünfgeld and Wang (2009), Foscht et al. (2010) and Makgosa et al. (2016).

The relationship between these surveys and the demographic variables employed by each of them in this type of segmentation is summarized in Table 2.

### *2.2.2. Psychographic Segmentation*

Any type of segmentation related to the psychological and behavioral aspects of financial services clients belongs to the sphere of psychographic segmentation. This includes the so-called “benefit segmentation”.

Makgosa et al. (2016) emphasize that psychographic characteristics are not directly observable - which makes it difficult to obtain them - but are critical in determining preferences and needs for products or brands. Therefore, and unlike what happens with demographic characteristics, psychographic characteristics are directly related to consumer behavior and, thus, make the use of “proxies” unnecessary.

As with demographic segmentation, many relevant studies have also shown a significant impact due to the use of psychographic variables. The relationship between these studies and the psychographic variables employed by each of them is summarized in Table 3.

It is important to mention that there are several other studies on psychographic analysis in the context of the financial behavior of individuals, but without the specific purpose of performing the psychographic segmentation of financial services clients. Therefore, its effectiveness in this type of application has not yet been assessed.

In short, the hybrid segmentation of financial services customers is a predominant trend, especially with the combined use of demographic and psychographic factors. Notwithstanding the diversity of these factors - even more prominently in the case of psychographic factors, with an increasing range of criteria that is typical of rapidly developing areas of study -, there is still room for the consideration of additional variables. This is evidenced, for example, by the variety of psychographic analyzes in the context of the financial behavior of individuals, but not yet applied in the psychographic segmentation of financial services clients. The Behavioral Finance area represents another promising source of psychographic variables for this type of segmentation.

**Table 2***Demographic Variables Employed by Different Studies in Customer Service Segmentation*

Demografic Variables	Paper										
	Stanley et al. (1985)	Harrison (1994)	Minhas and Jacobs (1996)	Alfansi and Sargeant (2000)	Machauer and Morgner (2001)	Andronikidis and Dimitriadis (2003)	Keller and Siegrist (2006)	Ansell et al. (2007)	Fünfgeld and Wang (2009)	Foscht et al. (2010)	Muhamad et al. (2012)
Marital Status								Used			
Ethnicity or Culture						Udes					
Gender								Used	Used	Used	
Consumption History		Used					Used	Used			
Age	Used							Used	Used	Used	
Income Level											
Educational Level									Used		
Occupation				Used						Used	

*Note.* Source: elaborated by the authors.**Table 3***Psychographic Variables Employed by Different Studies in Segmentation of Financial Services Clients*

Psychographic Variables	Paper										
	Stanley et al. (1985)	Harrison (1994)	Minhas and Jacobs (1996)	Alfansi and Sargeant (2000)	Machauer and Morgner (2001)	Andronikidis and Dimitriadis (2003)	Keller and Siegrist (2006)	Ansell et al. (2007)	Fünfgeld and Wang (2009)	Foscht et al. (2010)	Muhamad et al. (2012)
Financial Attitudes and Perceptions							Used		Used		
Benefits			Used	Used	Used						Used
Behaviours, Intentions and Interests							Used			Used	
Financial Knowledge		Used									
Personal Values							Used				Used

*Note.* Source: elaborated by the authors.



### 2.3. BEHAVIORAL FINANCE

Two essential concepts of Behavioral Finance are that of “heuristics” (artifice that simplifies intuitive thinking to facilitate decision making) and that of “bias” (systematic error in decision making and resulting from the heuristics used). Both are detailed by Tversky and Kahneman (1975), who in this seminal article explored three heuristics (“representativeness”; “availability”; and “adjustment and anchoring”) and several resulting biases.

The known universe of heuristics and biases is vast and still expanding due to the huge number of studies already conducted and in progress in several areas (Psychology and Behavioral Finance, most notably). Its order of magnitude today reaches dozens of heuristics and biases, and many of them have already had their influence on financial decision making evidenced by research published in respected periodicals. Three of these last biases were particularly prominent in the bibliographic review conducted within the scope of this study, due to the number of articles in renowned journals that addressed them:

- **Risk Aversion:** Kahneman and Tversky (1979), Keller and Siegrist (2006), Singh (2010), Merkle and Weber (2014), Aren and Zengin (2016) and Bucciol and Zarri (2017);
- **Overconfidence:** Barber and Odean (2001), Hirshleifer (2001), Hilary and Menzly (2006), Chen et al. (2007), Deaves et al. (2009), Grinblatt and Keloharju (2009), Hackbarth (2009), Adam et al. (2015) and Huang et al. (2016);
- **Optimism:** Singh (2010), Campbell et al. (2011), Antoniou et al. (2013), Campbell (2014), Arif and Lee (2014), Kuhnen (2015) and Kuo et al. (2015).

All heuristics and biases originate from brain mechanisms involved in the decision-making process and were synthetically represented by the revolutionary and mutually complementary concepts of “System 1” (automatic, fast, intuitive, largely unconscious, and very vulnerable to bias) and “System 2” (voluntary, relatively slow, rational, conscious, analytical, and responsible for self-control and complex calculations) introduced by Stanovich and West (2000). This theoretical contribution, also coming from Psychology - from studies like Epstein’s (1994) and his Cognitive-Experiential Self-Theory (CEST) that created the ideas of “experiential system” and “rational system” - represents one of the pillars of Behavioral Finance, recognized and used even by renowned works in the area, such as, for example, Thaler and Sunstein (2008) and, especially, Kahneman (2011).

Kahneman (2011) mentions studies that reveal that there are individuals (called “lazy”) more inclined to accept decisions made exclusively by their System 1 - and, as a consequence, more likely to make mistakes - and there are others (called “engaged”) in which their System 2 assume a greater role - they are naturally less subject to decision-making errors.

Stanovich (2011) summarizes the result of decades of study, the core of which is relevant to the purposes of this study in the observation that “intelligence” and “rationality” are distinct phenomena and belong to “minds” that coexist in “System 2”.

“Intelligence” refers to slow, analytical, and complex thoughts. Intelligent people tend to excel in conventional IQ tests. “Rationality”, on the other hand, refers to reflective thoughts and the ability to mitigate the occurrence of cognitive errors. It coincides with the concept of “cognitive reflection” (the ability or willingness to resist reporting the answer that first comes to mind) measured by the Cognitive Reflection Test (CRT) proposed by Frederick (2005).

In addition, Pacini and Epstein (1999) demonstrated that “rationality” can be assessed by an improved version of the Rational-Experiential Inventory (REI) by measuring the styles of rational and experiential thinking. Experiments conducted revealed that “rationality” tests are superior measures of vulnerability to biases than conventional IQ tests.

This deepening by Stanovich (2011) of the understanding of Simon’s pioneering and fundamental concept of “bounded rationality” (1957) represents a significant advance not only for the areas of Psychology and Behavioral Finance, but for Social Sciences in general.

### 3. METHODOLOGY

According to the classification used by Creswell (2003), this research can be characterized as being qualitative and exploratory. As its objective is to develop a new set of variables for segmenting current and potential individual investors in private pensions, we sought to raise both what science has already produced in this regard – that which is materialized by the published literature cited in this article, highlighting those of a normative (prescriptive) nature on segmentation approaches - and the identification of real and contemporary market practices - revealed by the multiple case study undertaken here, constituting the descriptive portion of this research. Therefore, it used, in a complementary way, a normative and a descriptive approach, respectively.

Here we followed the fundamental principles of “engaged scholarship” defended by Van de Ven (2007), both through their means - by involving “practitioners” (in this case, market executives) in the design of the research and also in the provision of relevant information during the same - and its ends, by aiming to develop knowledge that contributes in a relevant way both for science and for the daily practices in organizations.

In its strategy, this research opted for the study of multiple cases to explore the practical reality and, from the understanding of it, and in line with the findings of Yin (2001), to elaborate theoretical propositions more robust than those derived from a single case. The analytical technique adopted was the “synthesis of cross cases” with the case comparison approach, in this study comprising five companies in the Brazilian private pension market.

The bibliographic review previously conducted makes it possible to understand the topic from a theoretical perspective, to identify the most promising investor segmentation techniques for the purpose of this study and to support the development of a semi-structured interview script that prioritized the most relevant topics without hindering the incorporation of others that might appear spontaneously during each interview. This script included questions on several pertinent topics regarding the practices currently used by each company: objectives and scope - with questions based on Deccax and Campani (2019); - demographic and psychographic variables considered, procedures, difficulties faced, results obtained and opportunities for improvement - with questions based on the studies cited in Tables 2 and 3; - and importance for the company’s business and differentials in relation to the market as a whole, with questions based on Jakitas and Nascimento (2019). Additionally, there were also questions about the perception of the importance of this activity, about the practices adopted in the competition, the degree of maturity of this activity in the Brazilian market and in the interviewee’s company - with questions based on Deccax and Campani (2019) -; and the similarities and divergences between competitors and the interviewee’s own company, with questions based on the studies cited in Tables 2 and 3.

The choice of the five companies in the Brazilian private pension market to conduct this multiple case study was conducted jointly with Brasilprev, which provided financial and technical support for this research through the Brasilprev Chair in Private Pension. In this selection of this sample, the following criteria were used: representativeness of each company in each of the different relevant segments of the Brazilian private pension market; relevance (financially or in innovative practices) in this market as a whole; and accessibility (availability and interest in participating in the research).

The four selected companies (in addition to Brasilprev) were formally invited by email to participate voluntarily, which was facilitated by the relationship that already existed within the scope of the National Federation of Private Pension and Life (FenaPrevi). This invitation ensured confidentiality (the non-public identification of the executives interviewed) and the discussion of the results achieved, before its publication, between the researchers and the executives of the participating companies.

In-depth interviews were scheduled and conducted in person at the offices of the participating companies themselves. Interviews were conducted using the previously prepared script, making a total of 255.33 minutes of recording, and as summarized in Table 4.

**Table 4**  
*Interviews*

Company	Location	Duration (minutes)
Bradesco	São Paulo/SP	47,27
Brasilprev	São Paulo/SP	56,58
Guide	São Paulo/SP	48,47
Sulamérica	São Paulo/SP	45,73
Zurich Santander	São Paulo/SP	57,28
Total		255,33

*Note.* Source: elaborated by the authors.

The transcription of these interviews resulted in more than 42 thousand words that were analyzed using the Qualitative Content Analysis method and aiming to interpret the meaning of the content obtained (Hsieh and Shannon, 2005). For this, the excerpts selected in the transcriptions were grouped by similarity and later coded considering the concepts previously extracted from the previous bibliographic review.

In the end, the results obtained were presented by the researchers and discussed in a joint face-to-face meeting with executives from all participating companies. The final product was refined, validated, deepened, and the results were expanded, which are presented in the following section.

## 4. RESULTS

The grouping of relevant excerpts from the interview transcripts and related aspects identified and explained by the interviewed executives resulted in 17 topics, of which four related to the private pension market as a whole and the remaining 13 to companies operating in the same sector, and belonging to the sample of this research (Tables 5 and 6):

**Table 5***Topics and Aspects Relating to the Supplemental Retirement Market*

Topic	Key Aspects
Behavioral barriers to the expansion of the pension market	<p>(1) Limited knowledge of Finance, aggravated by the complexity of pension products.</p> <p>(2) Prejudice due to lack of knowledge about Social Security.</p> <p>(3) Immediate (present bias), aggravated by the lack of self-discipline and “savings culture” in Brazil.</p> <p>(4) Undue comparison of social security with other financial products, mistakenly considering it only as an investment.</p> <p>(5) Negative perception of the banking sector.</p> <p>(6) Poor visibility of the benefits of the “social security product”.</p>
Potential and opportunities for expanding the pension market	<p>(1) Social security is a product with enormous market potential due to its low penetration in Brazil and its breadth and versatility, in addition to its improvement over the years.</p> <p>(2) The following actions could contribute to the expansion of the market:</p> <ul style="list-style-type: none"> <li>(a) Educational campaigns, complementing free advertising with the Pension Reform;</li> <li>(b) Correction of misinformation disseminated in the market; and</li> <li>(c) Improvement of business practices to reduce “sloppy pensions”.</li> </ul> <p>(3) There is an opportunity for growth via more intensive use of technology, including for monitoring the type of information the customer seeks.</p> <p>(4) There is potential for expansion of the market via the “2nd wave of social security”, focusing on the small customer who is starting to save and who aims at the long term to complement public retirement.</p> <p>(5) There is potential for growth in new generations, who are more “aware”. New social security products could induce behaviors, such as making parents allocate part of the “allowances” paid to their children to social security.</p> <p>(6) An additional action to expand the market would be the use of Advertising and Marketing mechanisms to also induce behaviors, thus complementing and reinforcing “educational actions”.</p> <p>(7) Products that combine savings with consumption could be launched, such as the allocation of a percentage of all purchases made with a card to a pension plan product.</p> <p>(8) It would be promising to explore the “ecosystem” directly and indirectly related to social security.”</p>
Importance of targeting potential and current customers to competitors and their practices	<p>(1) In brokers and platforms, segmentation is poorly performed. In these, only commercial campaigns are targeted.</p> <p>(2) The part of the market that is concerned with segmenting customers to serve them better is treating segmented communication as a priority over obtaining information.”</p>
Maturity of the Brazilian market in both segments	<p>(1) The Brazilian market has, in general, an “incipient” or “between incipient and median” maturity level in terms of demographic and psychographic segmentation of clients and non-clients.</p> <p>(2) The market lacks customers’ behavioral analysis and an adequate understanding of their pension needs.”</p>

**Note.** Source: elaborated by the authors.

**Table 6**  
*Topics and Aspects Relating to Supplemental Retirement Companies*

Topic	Key Aspects
Procedures for attracting and targeting potential customers	<p>“(1) The following funding procedures and instruments are employed:</p> <ul style="list-style-type: none"> <li>(a) Agencies supported by remote structures.</li> <li>(b) Other channels (market brokers, autonomous agents, digital channel, etc.).</li> <li>(c) Relationship with customers.</li> <li>(d) Financial education.</li> <li>(e) Models of propensity to invest.</li> </ul> <p>(2) The segmentation performed considers the following variables:</p> <ul style="list-style-type: none"> <li>(a) Income, equity and capital to invest.</li> <li>(b) Relationship history.</li> <li>(c) Expected and objective benefits when investing.</li> <li>(d) Age.</li> <li>(e) API (Investor Profile Analysis) of the bank.</li> <li>(f) Investment horizon.</li> <li>(g) Risk aversion. “ </li></ul>
Results with attracting and targeting potential customers	<p>“(1) Significant growth in assets.</p> <p>(2) Stable or growing customer base.</p> <p>(3) Future trend of less significant growth in assets.</p> <p>(4) Future trend of greater growth in the customer base. “</p>
Current customer segmentation procedures	<p>“(1) There is no structured and recurring process of assessing which customers are not covered by the bank’s “generic” API (Investor Profile Analysis).</p> <p>(2) The segmentation performed considers the following variables:</p> <ul style="list-style-type: none"> <li>(a) Income, equity and capital to invest.</li> <li>(b) Relationship history.</li> <li>(c) Expected and objective benefits when investing.</li> <li>(d) Age.</li> <li>(e) API (Investor Profile Analysis) of the bank.</li> <li>(f) Propensity to redeem the capital already invested.</li> </ul> <p>(3) There is a lack of monitoring of the customer’s “life cycle” to ensure that the product continues to meet their needs.”</p>
Results with the segmentation of current customers	<p>“(1) There is a lot of opportunity to evolve in the relationship and in customer loyalty, advising them throughout the product’s life cycle.</p> <p>(2) Private pension plans have several attributes that, if well understood, can add enormous value to customers throughout their journey. It is a product that, in theory, can accompany the customer for his whole life (from junior plan, accumulation, “de-accumulation” and succession).”</p>
Importance of both segments for the company’s business	<p>“(1) The importance is fundamental because it allows treating current and potential customers differently, providing “solutions” and not just “making a sale”.</p> <p>(2) In addition to the competition being more fierce, investments have also become more sophisticated and complex. On the other hand, investors have more information and are more demanding.”</p>
Challenges and difficulties in targeting potential and current customers	<p>“(1) Obtain and keep the client’s information (financial, behavioral, etc.) up to date.</p> <p>(2) Ensure the veracity of the information (behavioral, above all) provided by the client.</p> <p>(3) The currently performed suitability check is not specific for pension plans.</p> <p>(4) Effectively segment and differentiate customers, as the “standard treatment” predominates in the market (with the exception of high-income customers).</p> <p>(5) For a specific audience, technical and rational issues will not be effective. The path is through perception. For this it is important to know him and be close.</p> <p>(6) The market “simplified” private pension as a simple variant of a traditional investment fund. Deconstructing this perception of “half truth”, where the true side of the argument gives verisimilitude and the support for the fallacious part, is laborious. This partly explains the treatment for social security identical to that of other investment products.</p> <p>(7) Segmentation today takes place more in terms of cost than the final product offered, whether in the product itself or in the service provided.</p> <p>(8) The pension suitability check could be complementary to the current suitability check carried out by the banks, to avoid “yet another bureaucracy” (in the customer’s view) when making their investments.”</p>

Table 6

Cont.

Topic	Key Aspects
Improvement opportunities in the segmentation of potential and current customers	<p>“(1) Having more access to the client’s real financial information, obtaining more reliable behavioral information from the client and increasing digitization.</p> <p>(2) Create an API (Investor Profile Analysis) specific for social security.</p> <p>(3) Increase the number of variables used in the segmentation, such as “family profile” (number of dependents and sources of income, etc.).</p> <p>(4) Replace the classification APIs (Investor Profile Analysis) that are self-declarations, generating distortions as the same customer is classified differently.</p> <p>(5) Use data from sources other than customers, both from external sources (CAGED, LinkedIn etc.) as well as internal sources (profile of expenses and investments, etc.).</p> <p>(6) Increase touch points with customers to reassess their profiles, provide content, present other investment options, etc.”</p>
Comparison of your company versus your competitors in both segments	<p>“(1) Platform professionals serve better because they have more knowledge. Insurance and retail brokers in general sell poor pension products due to lack of knowledge and because they have a very wide range of products.</p> <p>(2) The curatorship of brokers and platforms with the sales force is better done.</p> <p>(3) The bank managers’ above-market stability increases bond, trust and level of knowledge about customers.</p> <p>(4) “”We are in the market average””.</p> <p>(5) We may be going through a moment of changing the market structure (2nd social security wave): from oligopoly to monopolistic competition. The way of seeking to differentiate can be via: (i) low cost or (ii) through the different perception of value.</p> <p>(6) In a world in constant transformation and in the digital age, where the customer is more and more informed, it is up to us to give him the highest level of diversification through sophistication. Sophistication that must be delivered with specific knowledge of market products, investment funds and credible arguments to continue as a customer.</p> <p>(7) Differentiating is the way to attract or maintain revenues, without having to change the TAF (Financial Administration Fee). This differentiation can be due to the change in perception. If this is done and the customer does not perceive a distinction, it becomes a cost. For this, one must work to meet the real needs of the client and how to make him perceive them.</p> <p>(8) Many of the companies’ statements about customer service are not verified in practice because, despite the level of knowledge of the “”seller””, there are other interests in the process that end up overlapping the interests of customers. Norms of suitability and conduct are essential for a significant change in this scenario.”</p>
Positive aspects of your company in targeting potential and current customers	<p>“(1) Performance with a focus on “”specialized advice””, seeking to understand the financial life of the client and meet their real needs.</p> <p>(2) Ethical conduct and respecting the customer’s profile, not offering products contrary to their interests.</p> <p>(3) One of the main differentials of the competition is the exclusive service. In order to protect and attack, have first-line consultants (advisors) trained to serve customers in a sophisticated way, generating added value in services and extolling the EAPC (Open Private Pension Entity) brand, emphasizing service and approaching the customer through of periodic contact points (checkpoints).</p> <p>(4) The best way to make the social security product tangible is through the provision of transparent, adequate, intelligible and periodic information to customers, in addition to constant advice so that they feel supported in this journey and can have time for an eventual correction. route.”</p>
Demographic variables used by your company in both targets	<p>“(1) Marital status.</p> <p>(2) Gender.</p> <p>(3) History of consumption of financial products.</p> <p>(4) Age.</p> <p>(5) Income level.</p> <p>(6) Educational level.</p> <p>(7) Professional occupation (very important variable).</p> <p>(8) Volume of investment.”</p>

**Table 6**  
*Cont.*

Topic	Key Aspects
Psychographic variables used by your company in both segments	“(1) Financial attitudes and perceptions. (2) Behaviors, intentions and interests. (3) Knowledge of finance. (4) Risk aversion.”
Other psychographic and demographic variables used by your company in both segments	“(1) We use the API (Investor Profile Analysis) to check non-specific suitability for pension plans. We also used a psychological profile questionnaire. (2) If you are an investor, borrower or hybrid within the bank. (3) If you are a customer with some restriction (“negative”, politically exposed, with a judicial problem, etc.). (4) The “investment objective” could assist, for example, in advising throughout the product’s life cycle and delivering solutions to the customer.”
Your company’s maturity in both segments	Unanimously expressed by the executives interviewed: perception that your company is currently at an intermediate level of maturity in terms of segmentation practices.

**Note.** Source: elaborated by the authors.

The following table (Table 7) details the comparative analysis between the literature considered by this research and its empirical findings.

From the results above, a much diversified panorama of potential and current customer segmentation practices emerges among the companies studied, with a predominantly incipient general maturity level, and with a clear lack of behavioral analysis of customers and of adequate understanding of their private pension needs. In addition, segmentation is relatively restricted to commercial and communication campaigns.

This is, in a way, surprising and incoherent, as the participating companies recognize the great importance of segmentation to make possible the differential treatment of current and potential customers and as something necessary to handle a more competitive market, more sophisticated and complex investments, and more demanding investors.

There are numerous and significant behavioral barriers present in potential and current clients, and recognized for the expansion of the retirement market, however these barriers are not being adequately addressed and mitigated by companies. On the other hand, there are several opportunities for action envisioned by these same companies to expand the retirement market and segmentation and other behavioral mechanisms are seen as tools to leverage the exploitation of the growth potential of this market.

The segmentation procedures adopted by the companies studied are varied, both in terms of the instruments used and the segmentation variables considered and in relation to their objectives and results. The main common aspect that stands out is the significant potential for improvement (and the actions that are seen as promising for this) and, therefore, for increasing customer acquisition, loyalty, and profitability. The challenges and difficulties are also expressive, contributing to the prevailing current scenario of using “standard treatment” for most potential and current customers.



**Table 7***Comparative Chart between Literature and Empirical Findings in this Study*

Literature Theme	Empirical Findings of this Study	Comparison and Analysis
Behavioral aspects in social security	Behavioral barriers to the expansion of the pension market	<p>“The behavioral barriers perceived by the interviewees partially or totally corroborate the results of the studies by Bongini and Cucinelli (2019), Van Rooij et al. (2011), Harrison et al. (2006), Sourdin (2008) and Ongena and Zalewska (2018 ), but not those of Cobb-Clark et al. (2016), Gourinchas and Parker (2002), Finke and Huston (2013), Dahlquist and Martinez (2015), Benartzi and Thaler (2002), Gürdal et al. (2017 ) and Hauff (2014).</p> <p>Therefore, it was evidenced that the executives interviewed are unaware of a wide range of behavioral barriers, already identified in the literature, that limit the expansion of the pension market.”</p>
Behavioral aspects in social security	Potential and opportunities for expanding the pension market	<p>“The interviewees envisioned a set of possible actions for the expansion of the pension market that includes those recommended by Reyers et al. (2015) and Mitchell and Utkus (2006) but also includes many others not identified by the literature.</p> <p>In this respect, there are indications of possible gaps to be filled by scientific studies. “</p>
Investor segmentation	Demographic and psychographic variables used by your company in both segments	<p>“According to the interviewees, the following variables already used successfully by different studies in segmentation of financial services clients are not yet used by the companies in which they work in the segmentation of current and potential investors in social security: Ethnicity or Culture, Benefits and Personal Values.</p> <p>On the other hand, most of the variables already used in the literature are already used in practice by the companies studied, but with varying levels of effectiveness.</p> <p>Given this situation, it is possible to see a high level of alignment between scientific studies and market practices. “</p>
Behavioral Finance	Psychographic variables used by your company in both segments	<p>According to the interviewees, only the psychographic variable “Risk Aversion” from the Behavioral Finance literature is used by the companies in which they work in the segmentation of current and potential pension fund investors. The variables “Excess of Trust”, “Optimism” and “Rationality” are not used.</p> <p>Therefore, it is clear that there is a significant opportunity for companies operating in this market to improve their customer segmentation practices.</p>

**Note.** Source: elaborated by the authors.

## 5. CONCLUSIONS

The segmentation of individual investors, including in the private pension market, represents an activity of great relevance and potential for generating results, as demonstrated by the literature found and emphatically recognized by the executives interviewed.

There is a relative scarcity of articles and a disparity in approaches on this specific topic, both in relation to those documented by theory and those employed by the market. The fact that the research by Gough and Sozou (2005) was the only one found on segmentation of investors in retirement savings plans, coupled with the revelation in the interviews conducted that the level of maturity of market practices in Brazil today is perceived as among “incipient” and “intermediate”, reveals that there are opportunities for theoretical and practical improvement in this theme.



These opportunities for theoretical and practical improvement are corroborated by the discovery that both the literature and the market practices identified by this study employ in a limited way valuable and provenly pertinent concepts from the increasingly recognized area of Behavioral Finance. The most promising one, due to its ability to synthesize vulnerability to a wide universe of heuristics and biases identified by that area, is that of “rationality” according to Stanovich’s (2011) precepts.

The significant behavioral barriers to the expansion of the retirement market recognized by the interviewed executives and evidenced by several studies cited in this article reinforce the deleterious practical effect in this market of heuristics and bias repeatedly confirmed by studies of Behavioral Finance in general. And, above all, they emphasize the need to use instruments in this area - such as those prescribed by Reyers et al. (2015) and Mitchell and Utkus (2006) specifically for supplemental retirement - which has already had four academics awarded the Nobel Memorial Prize in Economic Sciences, the last of which (Richard H. Thaler, in 2017) is the author of the following phrase that reinforces the value and potential of these instruments: “The biggest lesson is that, as soon as a behavioral problem is perceived, it is possible to invent a behavioral solution for it”.

The bibliographic review conducted within the scope of this study and the relevant aspects of the supplemental retirement market in Brazil revealed by the interviews conducted constitute a powerful marker for proposing a new set of variables for segmenting current and potential individual investors in retirement savings plans. The analyzed literature shows that the use of a hybrid approach, combining psychographic and demographic characteristics, is the most promising.

This hybrid approach could materialize in a set of variables for segmentation that used the following variables obtained through a questionnaire designed for this specific purpose:

- **Demographic variables:**

- (a) Marital status;
- (b) Gender;
- (c) Age;
- (d) Educational level;
- (e) Academic training;
- (f) Public and private pension in which you are currently a beneficiary or investor;
- (g) History of consumption of financial products;
- (h) Investment volume;
- (i) Professional occupation; and
- (j) Income level.

- **Psychographic variables:**

- (a) Behaviors and intentions, according to the concepts used by Gough and Sozou (2005);
- (b) Financial knowledge about private pensions, according to the concepts used by Hauff (2014);
- (c) Risk aversion, according to the concepts employed by Hauff (2014); and
- (d) Rationality, measured by the Cognitive Reflection Test (CRT) proposed by Frederick (2005).

This approach proposed here does not include the so-called “benefit segmentation” because the studies located - Minhas and Jacobs (1996), Alfansi and Sargeant (2000) and Machauer and

Morgner (2001) - applied it to customers of banking products, with the “perceived benefits” considered and identified and are not applicable to the segmentation of investors in retirement savings plans. Minhas and Jacobs (1996), for example, identified 8 “perceived benefits” - personalized services, investment, limited banking, affordable money, debit card, consulting, resource management and full banking - which are specific to banking products.

The natural continuity of this research is the development of a questionnaire in accordance with the above proposal and its application in a statistically representative sample and the analysis of the collected data through quantitative techniques. As a result, the major objective of producing a set of variables for segmentation that effectively contributes to the maturation of a market as relevant, economically, and socially, as that of supplemental retirement can be achieved.

The limitations of this study stem from its qualitative and exploratory nature, without aiming at generalizing the results obtained or identifying causal relationships. These objectives may be achieved, partially or totally, by future research, such as the one suggested above.

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#### ADDITIONAL INFORMATION

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