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Competitive dynamics of strategic groups in the Portuguese banking industry Dinámica competitiva de los grupos estratégicos en la industria bancaria portuguesa

Albérico Travassos Rosário^a, António Carrizo Moreira*, Pedro Macedo^b

^a PhD Marketing and Strategy, University of Aveiro. Research Unit on Governance, Competitiveness and Public Policies (GOVCOPP). University of Aveiro. – alberico@ ua.pt – http://orcid.org/0000-0003-4793-4110

^b MSc Economics, University of Porto. PhD Mathematics, University of Aveiro. CIDMA - Center for Research and Development in Mathematics and Applications, Department of Mathematics, University of Aveiro. – pmacedo@ua.pt – http://orcid.org/0000-0002-4371-8069

* Corresponding author: Master in Management, University of Porto. PhD Management, University of Manchester. Department of Economics, Management, Industrial Engineering, and Tourism. GOVCOPP. University of Aveiro. – amoreira@ua.pt – http://orcid.org/0000-0002-6613-8796

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ABSTRACT

The objective of this paper is to analyse the retail banking behaviour in Portugal (2008–2010, 2011–2013 and 2014–2016), by taking into account the financial and economic assistance programme (FEAP) – monitored by the European Commission, the European Central Bank and the International Monetary Fund – that Portugal went through and that started in 2011. With competitive dynamics it is possible to understand the evolution of competitive strategies of the institutions of a strategic group within a given time horizon. Data were collected after consultation of reports and accounts of Banks from Banco de Portugal database. The results were analysed and discussed in light of the theory of strategic groups and their competitive dynamics allows us to conclude that: Banks implemented different competitive strategies; Strategic groups have dissimilar resources; and Strategic groups display different strategies. The 2008–2010 period can be considered as a 'deregulated' period, the 2011–2013 as a period of 'imposed regulation', and the 2014–2016 as a period of 'strategic consolidation' with strategic changes that have prompted strategic groupings of the various institutions as consequence of a low mobility barrier strategy.

Keywords: Strategic Groups; Competitive Dynamics; Strategy; Banking Industry; Portugal

RESUMEN

El objetivo de este artículo es analizar el comportamiento del sector bancario minorista en Portugal (2008-2010, 2011-2013 y 2014-2016), teniendo en cuenta el programa de asistencia económica y financiera (FEAP) —monitoreado por la Comisión Europea, el Banco Central Europeo y el fondo Monetario Internacional— que Portugal atravesó y que empezó en el 2011. La dinámica competitiva permite comprender la evolución de las estrategias competitivas de las instituciones de un grupo estratégico dentro de un determinado horizonte temporal. La recolección de datos se realizó a través de la consulta de los informes y datos contables de los años analizados. Los resultados analizados y discutidos a la luz de la teoría de los grupos estratégicos y de la dinámica competitiva nos permiten concluir que: las instituciones bancarias tienen diferentes estrategias competitivas; los grupos estratégicos no tienen recursos similares; y las estrategias difieren entre los grupos estratégicos. El período 2008-2010 puede considerarse como un período 'desregulado', el 2011-2013 como un período de 'regulación impuesta' y el 2014-2016 como un período de 'consolidación estratégica' con cambios estratégicos que han dado lugar a agrupaciones estratégicas de las diversas instituciones como consecuencia de una estrategia de barrera de baja movilidad.

Palabras clave: Grupos Estratégicos; Dinámica Competitiva; Estrategia; Sector Bancario; Portugal



1. INTRODUCTION

The study of strategic groups (SGs) is not something new, being at the core of strategic management (Hervás *et al.* 2006; Chen and Miller 2012, Bonetti and Schiavone 2014). It involves the study of how a small group of rival companies engage in rivalry against other groups of rival companies, shaping the structure of rivalry within an industry (Porter 1980; Cattani *et al.* 2017). As such, one can argue that SGs follow similar strategies despite their different motivations and results (Chen and Miller 2012; Gur and Greckhamer 2018).

Research on SGs analyses both intra- and inter-SGs relationships and rivalry between companies and groups (e.g., Leask and Parker 2007; Ebbes *et al.* 2010; Pätäri *et al.* 2011; Bonetti and Schiavone 2014; Anwar and Hasnu 2016), which may lead to the study of competitive dynamics and how performance and stability differ among SGs over time (e.g., Más-Ruiz and Sala 1992; Reger and Huff 1993; Martins *et al.* 2010).

The concept of SGs implies that corporate strategies result in a certain degree of homogeneity among the companies within a SG and heterogeneity between SGs. Evidence of homogeneity within the SGs and heterogeneity between SGs over a given time period leads to strategic stability periods in the industry during such period. This strategic stability entails the existence of entry barriers for companies to enter a given SG, and of mobility barriers for companies to swap among SGs (Zúňiga-Vicente *et al.* 2004a; Garcés-Cano 2007; Garcés-Cano and Duque-Oliva 2008; Rebière and Mavoori 2019).

Evidence of high mobility barriers, isolation mechanisms and other type of asymmetries are characteristics of oligopolistic sectoral structures (Garcés-Cano and Duque-Oliva 2008), and Garcés-Cano (2007) claim that the reasons that lead organisations to compete intensely in the short term within SGs are the same that lead them to seek for long-term strategic stability in their SGs. This is clearly shaped by the size and scale of the activities of organisations within the industry they compete, i. e. their real competitive strength is determined by its degree of monopoly or market power. This is an aspect of relevance, especially in the light of the banking system.

The study of the competitive dynamics of SGs may provide clarification on the positioning of a company and of its competitors, thereby increasing their anticipation ability, by foreseeing the strategic actions and reactions of companies within a SG. This has been done in several contexts, such as the bioenergy industry, in which Pätäri *et al.* (2011) compare actors in the bioenergy, in the leisure industry, in which Li and Srinivasan (2019) demonstrate that the sharing economy platforms have strongly influenced traditional industries, and traditional industries, in which Escobar and Vredenburg (2011) analyse the sustainable development pressures multinational companies felt in their strategic responses to social investment and climate change.

The banking industry has also been analysed. For example, Más-Ruiz (1999) analysed how the number of players, composition and strategy of SGs changed over time. Zúñiga-Vicente *et al.* (2004a) analysed the strategic stability of the SGs during periods of huge environmental disturbances. The asymmetry f rivalry within and between SGs has been addressed by Más-Ruiz *et al.* (2014), who claim that dominant positions tolerated. Some studies on SGs and competitive dynamics in the banking industry are analysed in Table 1, although there are more (e.g., Maudos and Pastor 2003; Zúñiga-Vicente *et al.* 2004a; Zúñiga-Vicente *et al.* 2004b; Garcés-Cano 2007; Lozano-Vivas and Pastor 2010).

It is known that the Portuguese banking system went through an unprecedented economic/financial crisis, which led to the implementation of a recapitalisation programme known as the Financial and Economic Assistance Programme (FEAP) - monitored by the European Commission, the European Central Bank and the International Monetary Fund. The FEAP started in 2011 and ended in 2014. However, although prior research has recognised the importance and reaction of companies to different contextual shocks in the banking industry, there is no study on how the banking industry was affected by an external intervention programme - which is a very specific environmental shock - in a period of crisis, on the response behaviour of the players over time. As such, taking into account the SGs can be identified in the banking industry and their structure over time was supposed to be stable over time, this paper seeks to answer the following two research questions (RQs), based on the context of external intervention of FEAP that is supposed to have affected the Portuguese banking industry: RQ, - What are the main strategic groups that emerged over time?; RQ₂ – How was competitive dynamics in the banking industry affected as a result of the FEAP?

As such, the main objective of this article is to analyse the competitive dynamics of SGs as a result of the external recapitalisation programme via the FEAP. To this end, the competitive dynamics of SGs in Portugal's banking sector in the 2008–2010, 2011-2013 and 2014-2016 periods was analysed, and so the following specific objectives have been formulated: (i) identifying whether there are differences in the composition of SGs in the periods under analysis; (ii) identifying whether there are differences in the composition of SGs in the periods under analysis; (iii) identifying whether there are differences in the competitive dynamics between SGs in the periods under analysis; (iii) identifying which changes occur regarding the actors that make up the SGs; and (iv) identifying whether there are differences in the results in SGs.

Given the relevance of the banking industry, in general, and of the banking industry in the context of a small country as Portugal, in particular, this study is of added value for two main reasons: a) the lack of previous studies on how pervasive a FEAP programme can be for the competitive dynamics in the banking industry; and b) it compares the banking industry in three different periods of time: before, during and after the external intervention via the FEAP. For the Portuguese context this is a novel study in the banking industry. Based on the scarcity of studies addressing external intervention programmes, we aim to contribute to the understanding of the strategic behaviour among SGs and competitive dynamics of the banking industry.

This paper is structured as follows: after this introduction, section 2 presents the literature review on competitive dynam-

ics and strategic groups; section 3 characterises the Portuguese banking system; section 4 provides information about the methods used; section 5 presents the main results; and section 6 briefly presents the main conclusions.

2. COMPETITIVE DYNAMICS OF STRATEGIC GROUPS

Companies are in constant interaction with their competitors, committed to defend their market positions and to conquer market share (Smith et al. 2001). Those interactions cause a set of actions and reactions, fostering competitive behaviour leading competitors to react to achieve a competitive positioning (Chen et al. 1992; Yu and Cannella 2007; Chen and Miller 2014; Meilich 2019). As a result of such competitive interactions, companies actively fight for a competitive advantage, seeking profitability or market shares (Chen and Hambrick 1995; Ferrier 2001; Cattani et al. 2017). Understanding these mechanisms is a key factor to understand the market and competitors (Smith et al. 2001; Ketchen et al. 2004; Gur and Greckhamer 2018; Rebière and Mavoori 2019), since companies foster competitive advantages that can be translated into long-term sustainability of the adopted corporate strategy.

Hunt (1972) defends that an industry can be grouped in several SGs, arguing that they could be composed of companies following similar strategies. Therefore, SGs are useful to study the competition within an industry (Porter 1980).

Although the study of SGs has been known since the mid-1980s, the focus was on the causes and consequences of rivalry among companies, whose approach became known as *competitive dynamics*. In this context, several studies have been developed (e.g., Mascarenhas 1989; Chen and Miller 2012; Chen *et al.* 2017) seeking to analyse the competitive dynamics of SGs and to explain how they are established, based on a strategic orientation.

If some analyse the study of the SGs' internal structure (e.g., McNamara *et al.* 2003), others analyse the role of the SG in the strategic orientation in the decision-making in the company's competitive behaviour (e.g., Chen and Miller 2012, 2014) and in the competitive dynamics behaviour of the SG within a given time period (e.g., Mascarenhas 1989; Lee *et al.* 2002; DeSarbo *et al.* 2009). Another perspective analyses the profitability of companies among SGs by taking into account the barriers to mobility (Prior and Surroca 2006).

Research on SGs shows that companies react differently to the actions of their rivals, whether such actions are undertaken by companies in the same SG or in another SG (e.g., Leask and Parker 2007; Dhandapani *et al.* 2019). Moreover, not all members of a SG have similar returns, as there may be some differences in their profiles and risk levels (Garcés-Cano and Duque-Oliva 2008). Table 1 identifies the main studies on the dynamics of SGs in the banking industry. This focus emerges from the research on understanding the changes in the strategy of the SG and/or the number of SGs over time (Mascarenhas 1989). Although theory claims that the evolution of SGs is relatively stable over time, companies within a SG may show different evolutionary strategic paths over time (DeSarbo *et al.* 2009; Chen and Miller 2014).

During a deregulated period, the behaviour of the companies within and between SGs is asymmetrical. Dominant SGs expect strong retaliation from companies in their own group, but with great strategic propensity to minimise responses from companies within a smaller SG (Más-Ruiz *et al.* 2014). In this context, the size of the SGs is a determinant factor in complex industries undergoing changes. As such, managers need to analyse the environment from the point of view of each competing strategic group (Más-Ruiz *et al.* 2005). Conversely, companies in a given SG can anticipate intra group rivalry and such competitive behaviours are detected by companies from other SGs (Más-Ruiz and Moreno 2011).

It is important to understand the strategic changes implemented by each company within each SG to properly understand the behavior of the industry (Garcés-Cano and Duque-Oliva 2008). Thus, competitive dynamics reflects the constant and continuous competitive actions and reactions among companies over time (Chen and MacMillan 1992; Chen and Miller 2012; Brito and Brito 2014). Research on competitive dynamics has been studying the behaviour across competing companies by analysing companies' competitive movements. Studies have taken up the idea that rivalry among companies (e.g., Mehra 1996; Más-Ruiz *et al.* 2005, 2014; Más-Ruiz and Moreno 2011) has an impact on the competitive dynamics among companies (Chen and MacMillan 1992; Ferrier 2001).

Competitive dynamics is the result of a set of competitive actions and reactions among companies struggling for the same market position (Chatterjee and Samuelson 2001; Smith et al. 2001; Zucchini et al. 2019). In competitive dynamics, the efficiency and effectiveness of a business strategy is determined by the company's competitive position in the industry and by anticipating competitors' actions and movements (Wiersema and Bowen 2008; Kalnins and Chung 2004) that occur in SGs. Evidently, companies in a given industrial sector are at the heart of competitive dynamics (Mehra 1996; Más-Ruiz et al. 2005, 2014; Más-Ruiz and Moreno 2011), in which competitive advantages are key for value creation (McNamara et al. 2003). The competitive environment takes on a key role in the competitive movements among companies. Such idea considers the existence of environmental disturbances, corporate changes and direct influences on competitive actions (McGrath et al. 1998; Chen and Miller 2012). It is worth to consider two consequences on the effect of corporate behaviour. Once a disturbance occurs in the market, there is a direct effect on the decision-making of competitive measures, and companies are confronted with both a range of new opportunities and the need to seek a way to anticipate competitors, seeking to gain a market advantage (McGrath et al. 1998). The second implication, which affects the companies' governance mechanisms and competitive choices (Lieberman and Asaba 2006), leads to question the effectiveness of the decisions of past actions. In addition, market shocks may weaken companies' market positioning by creating competitive tension in decision-making (Chen and Miller 2014).

Researchers	Analysis periods	Data analysis	Main findings/dynamics
Más-Ruiz (1999)	Spain, 1984–1991, 24 banks in 1984 and 22 banks in 1991, four sub-periods (1984; 1985–1986; 1987–1988; 1989–1991).	(i) stable periods identified by the homogeneity of the average vector and covariance; (ii) analysis of clusters to identify SGs; and (iii) ANOVA to explain the intergroup differences.	The composition and strategy of SGs change over time.
Zúñiga-Vicente <i>et al.</i> (2004a)	Spain, 1983–1997, 92–103 banks.	(i) Box's M test and Hotelling's T2 test to check the homogeneity of covariances and the averages of structures; and (ii) analysis	Strategic stability exists at a SG level and at a company level, punctuated by a high degree of strategic instability during large environmental disturbances.
Zúñiga-Vicente et al. (2004b)	Spain, private banks, 1983–1997, 136 banks.	of clusters to identify SGs.	Performance differences between SGs are stable over time.
Más-Ruiz <i>et al.</i> (2005)	Spain, 1994	(i) Large (deposites 2 hillion pesetas).	Rivalry between patterns of SGs.
Más-Ruiz and Moreno (2011)	Spain, 1992–1998	 (i) Earge (deposits>2 binlon pesetas); medium (415 billion pesetas>2 deposits≤2 billion pesetas); small (deposits < 415,000 million pesetas); (ii) Lerner index (describes the relationship between elasticity and the price margin for a profit- 	Low levels of competitive intensity and high levels of performance in companies within SGs of large companies (market power, efficiency, differentiation and multimarket contact).
Más-Ruiz <i>et al.</i> (2014)	Spain, 1992, 1994	maximising company) of the bank in the loan market.	Rivalry within and between groups is asymmetrical, supporting the dominant relationship between companies.
Garcés-Cano and Duque- Oliva (2008)	Colombia, 1995, 2004	Strategic positioning approach; the groups are formed from multivariate statistics (cluster) using ANOVA and MANOVA.	The structure is stable over time and shows signs of high mobility barriers, isolation mechanisms and asymmetries, which is a particular reality in current oligopolistic markets. An industry is more than the sum of SGs: it is a synergistic combination of them, whose average indicators only partially explain the behavior of the industrial sector.
DeSarbo and Grewal (2008)	United States (New Jersey, New York and Pennsylvania). COMPUSTAT Banks Database for 2001; 131 banks.	(i) liquidity and leverage indexes; (ii) loan products portfolio; and (iii) deposit products portfolio; (iv) debt to capital; (v) total loans to total assets; and (vi) interest expenses to total assets as indicators of the leverage ratio.	Competition among companies depends on the SG and on the overlap of such SG with other SGs, thereby combining strategic revenues of more than one group.
DeSarbo <i>et al.</i> (2009)	United States (New York, Ohio and Pennsylvania) 1995, 1999, 2003	(i) number of SGs; (ii) sizes of SGs; and (iii) development of the strategy of such SGs over time.	There are different evolutionary paths over time. <i>There are</i> pronounced differences in the company's performance across all five SGs.

 Table 1

 Overview of the dynamics of SGs in the banking industry

Note: studies (a) not pertaining to the banking industry; (b) not using data analytical techniques to derive SGs over time; (c) relying on the researcher's judgement; (d) relying on an a priori classification; (e) with dynamic data, but that do not study SG dynamics have been excluded. *Source:* Own elaboration.

3. CHARACTERISATION OF THE PORTUGUESE BANKING SYSTEM

The Portuguese banking system went through very important structural changes during the last 40 years (Bento 1998; Mendes and Rebelo 2003). In the aftermath of the revolutionary period all Portuguese privately owned banks were nationalised in 1975. In the mid-1980s a period of profound economic liberalisation took place as the banking industry was reopened to the private initiative and in the second half of the 1980s re-privatisation of formerly nationalized banks took-off. In the 1990s bank credit ceilings were abolished (Mendes and Rebelo 2003). After 1993, as part of the European Union (at that time EEC), the European single market for financial services enabled the banking industry to evolve from to a fully government-controlled system to a market-driven environment (Mendes and Rebelo 2003). This perspective is complemented by Silva (2009), who characterised the Portuguese banking system based on the analysis of the five largest groups (CGD, BCP, BPI, BES and BPSM/BST). Silva (2009) found that between 1992 and 2007: the ratio employee/branch declined 55%; the credit per employee increased 7.5 times; the deposit per employee increased 3 times; and that the concentration in the banking industry increased.

Silva (2009) claims that the Portuguese banking industry is in the hands of large Portuguese financial groups, which opted to homogenise their product/service portfolio and to reduce the number of brands.

In the 2000s left-wing governments started to intervene in the banking system and in the early 2010s Portugal went through a severe economic/financial crisis that lead to the external intervention via FAEP, which led to a deep restructuring of the Portuguese banking industry (Rosário 2018; Rosário *et al.* 2019).

Research analysing the Portuguese banking system is not abundant. Moreira and Mota (2002) analysed the concentration/segmentation challenge of the BCP/Atlântico, as a result of a merger and acquisition strategy. The evolutionary perspective of the banking system in Portugal is addressed by Canhoto and Dermine (2003) who claim that the join effect of deregulation and the granting of new banking licenses led to an increase on operational efficiency never experienced before. After a heavily regulated period after the nationalisation of all Portuguese private-owned banks, Mendes and Rebelo (2003) claim that in the 1990s competition, in a period of profound economic liberalisation, was important to diminish market power.

According to Alcarva (2011), this competition led to the secundarisation of risk and profitability in order to enable rapid growth. This was a deliberate strategy not only to gain market share, but also to avoid being an easy target of hostile takeovers from Spanish banks. The main drawback of this strategy was to increase debt so that the credit/risk assumed did not pay the expected dividends. This led most of the banks to a shortage of cash-flow and over indebtedness.

Costa (1998) analysed the 1988-1997 period and found that there are five clusters (universal banks; specialised banks; foreign banks; investment banks; international focus (credit+deposits)) in which banks follow different evolutionary paths.

Silva (2013) analysed the banking system in Portugal before and after the subprime effect and concluded that the most representative banks in Portugal complied with the stress tests, namely the required capital ratios and liquidity levels. The number of banks in Portugal has been diminishing over time (Rosário 2018; Rosário *et al.* 2019): there were 20 banks in 2008; 18 in 2010; and 15 in 2013.

The Portuguese banking system is very similar to the Eurozone system, although more concentrated vis-à-vis the Spanish banking system (Alcarva 2011). The Portuguese banking system is highly concentrated, as the largest banks (CGD, BCP, BES, Santander Totta and BPI) owned around 70% of the assets in 2010. In Spain, e.g., the largest five institutions have around 40% of the assets (Alcarva 2011).

The study of strategic groups and competitive dynamics in the Portuguese banking is scarce (Rosário 2018; Rosário *et al.* 2019). The analysis of the 2008–2010 period found that among 18 retail banks in Portugal, there were four main SGs (Rosário *et al.* 2019): 'universal', 'traditional', specialised' and 'undefined' banks. These strategic groups are going to be the bedrock of this paper.

In 2011, the Portuguese banking industry went through several legal changes (e.g., Ordinance no. 121/2011) governing the sector, through a mandatory Tier 1 Core ratio of 8% from the 31st of December 2011, as a result of the FEAP. On the other hand, Espírito Santo Financial Group (ESFG) and the French group Crédit Agrícole, on May 15, 2014, dissolved BE-SPAR holding company, through which Banco Espírito Santo (BES) was controlled, witnessing a three-level cut in its longterm debt rating and a two-level cut in its long-term bank deposits rating, due to concerns about credit capacity, with a loss of 3,577 million euros, culminating in the bank's resolution in 2014.

Based on the characterisation of the retail banking industry, and taking into account that: (a) corporate strategy seeks to adjust internal competences and resources to the external context; (b) the FEAP constituted an 'external disturbance' as it led to the introduction of several legal changes, as referred above; and (c) changes in the number of SGs is the result of strategic actions posed by banks trying to adapt their strategies, in which some of them will be capable of staying in the same SG, while others should be forced to change to another SG (Mascarenhas 1989; Fiegenbaum and Thomas 1993; Más-Ruiz 1999), it is possible to draw the next hypothesis:

Hypothesis H₁: Strategic groups in Portuguese retail banking industry show temporary changes over time.

According to Fiegenbaum and Thomas (1993) and Más-Ruiz (1999), it is expected that individual banks with the same strategic characteristics follow homogeneous behaviour of the SG, and swap to another SG whenever they try to change their corporate strategies. As a result of the external disturbance posed by the FEAP, it is expected the individual banks are differently prepared for the external shock and therefore be willing to follow the strategy of another strategic group. As such, it is expected that the composition of the SGs is influenced by the conditions in which the banks muddle through over time. Therefore, the following hypothesis is posed:

Hypothesis H_2 : The composition of strategic groups in Portuguese retail banking industry differs during the three periods analysed.

As strategy is a continuous process over time that depends on the continuity of the fit between the internal competences with the external context, based on what was posed on the two previous hypotheses, and the disruptive change retail banks were exposed to – see for example the resolution of BES – it will also be hypothesised that it is not expected that all SGs maintain their strategic direction. As such, the third hypothesis is as follows:

Hypothesis H_3 : The external recapitalisation programme via the FEAP affected the Portuguese retail banking industry competitive dynamics.

4. METHODOLOGICAL APPROACH

According to the objectives identified in the Introduction section, this paper analyses the reality of the Portuguese retail banking sector for three distinct periods, 2008-2010, 2011-2013 and 2014-2016, which were determined following the intervention of the FEAP financial assistance programme. The Portuguese retail banking system underwent drastic changes, altering the competitive environment with enormous changes, reflecting the profound reforms that occurred in the sector, culminating in the resolution of BES in 2014, the leading Portuguese private bank. We can characterize the periods under analysis before the crisis, during and after the crisis. In this context, the Portuguese retail banking sector is empirically analysed, studying its competitive dynamics and implications, discussing its strategic mobility and competitiveness, and determining the existence the structural stability of the main SGs.

4.1. Sample Identification, Data Source

Between 2008 and 2016, the Portuguese banking sector underwent profound legal changes, which regulated the industry with the aim of mitigating systemic risks, as a consequence of the major disturbance provoked by the FEAP intervention programme. The regulatory changes, through the Basel III agreement, led to major changes in the European banking industry, particularly in Portugal, with minimum Common Equity Tier 1 ratios.

In this context, in order to analyse the retail banking industry we used data from statistical bulletins of the Portuguese Banking Association [Associação Portuguesa de Bancos]. The period of analysis covered years 2008 to 2016, which allowed a longitudinal analysis that covers a period of important changes for the banking system. Data from BPN -Banco Português de Negócios, S.A. has not been considered when characterising the Portuguese financial system, since it was undergoing a process of integration into BIC. Data from EFISA - Banco Efisa, S.A. and the Branch of NCG Banco, S.A. have not been included due to unavailability of information. In addition, BPP - Banco Popular Portugal, S.A. stopped drawing up consolidated accounts as of the 2011 financial year, and DEUTSCHE - Deutsche Bank Portugal, S.A. changed its legal form to branch and adopted the name DEUTSCHE – Deutsche Bank AG, Branch in Portugal.

In 2014, as a result of the resolution of BES, in the characterisation of the Portuguese financial system, the data referring to BES and Banco Espírito Santo dos Açores, S.A. (BCA) were excluded. On the other hand, the data of Novo Banco and NB Açores that resulted from the BES resolution were considered, which are the new denominations of the two entities mentioned above. BANIF in 2014 presents consolidated accounts for the last time. Caixa Central – Caixa Central de Crédito Agrícola Mútuo, CRL (CCCAM) is known thereafter as the Sistema Integrado de Crédito Agrícola Mútuo (SICAM). Therefore, this study focuses on retail banking, analysing the period from 2008 to 2016. The total sample is composed of 23 retail banking institutions.

4.2. Identification of Variables

The Portuguese retail banking industry bases its commercial activity on revenues that come from the commercialisation of products/services of their branches, which are very similar across the industry. We decided to analyse the SGs based on corporate strategic dimensions.

SGs are identified based on their strategic reach dimension, which in studies on the banking industry reflects the key variables of the banking industry (e.g., Espitia *et al.* 1991; Reger and Huff 1993; Rhee and Mehra 2006; Garcés-Cano and Duque-Oliva 2008; DeSarbo *et al.* 2009). In this sense, we consider that strategic dimensions define the competitive strategy of retail banking in Portugal, the latter being determined by nine strategic variables, reflecting the strategic reach (Table 2). The variables emerge from the balance sheets and individual and/or consolidated income statements of the Chart of Accounts for the Banking System, with very specific characteristics for determining/identifying the accounts for financial institutions operating in Portugal.

In the literature review of the SGs of the banking system, the reach dimension is very particular of the strategic groups, as is a key dimension of the banking industry that reflects the different products and services of the banking system (e.g., Reger and Huff 1993; Garcés and Duque 2007; DeSarbo *et al.* 2009).

 Table 2

 Strategic dimension/operationalisation of strategic groups

Strategic Dimensions	Operationalisation	Code		
	Credit not represented by securities / Total Assets.	V1		
	Securitised and non-derecognised credit / Total Assets	V2		
Specialisation (product/	Other credit and values (tittles) / Total Assets	V3		
market).	Overdue credit and interest loan / Total Assets			
	Provisions and Impairments / Total Assets			
	Call-Demand deposits / Total Liabilities	V6		
	Term Deposits / Total Liabilities	V7		
Resources.	Central Bank Resources / Total Liabilities	V8		
Size of the institution.	Total Assets	V9		

Source: Own elaboration.

We selected six ratios that are regularly used to reflect the level of results of banks. Those results are expressed in relative terms and are strongly influenced by personnel and administrative expenses (Sinkey and Joseph 1992), as shown in Table 3.

For the analysis of performance ratios it was taken into account the need of the banking industry to comply with the FEAP requirements imposed by the regulatory changes of the Basel III agreement, which was expected to influence the retail banking activity. There are many aims for capitalising and leveraging the Portuguese banking sector: (i) strengthening financial strength ratios, whereas the increase in solvency to a minimum of 9% until the end of 2011 and of 10% from 2012 has become mandatory; (ii) decreasing the transformation ratio, by reducing credit weight on deposits to a maximum of 120% until the end of 2014; (iii) lowering stable funding to 100% until the end of 2014, which is a measure intended to reduce dependence on short-term markets; (iv) reducing exposure to the European Central Bank (ECB); financial institutions were required to reduce dependence on ECB funding, to facilitate the return to the markets in 2013; and, lastly, (v) maintaining credit to the productive sector, with the guideline of continuing funding the Portuguese economic fabric, with added focus on small and medium-sized enterprises engaged in tradable goods, and the banking sector started having a quarterly assessment of capital and liquidity plans from the eight largest banks. Therefore, the economic and financial ratios chosen are shown in Table 3.

Table 3
Result variables

Dimension	Variables	Acronym	Operationalisation
		PBMF	Banking product / Financial margin.
	Economic profitability.	CPMF	Costs with Personnel / Financial margin.
Feenomic		GGAMF	General administrative expenses / Financial margin.
Economic and financial dimensions		ROE	Return on Equity (Net results / Shareholder Equity).
	Financial profitability.	ROI	Return on Investment (Net results / Total Assets).
		GAF	Degree of financial leverage (Operational results / EBIT).
0 0 1	1		

Source: Own elaboration.

4.3. Data Analysis Procedure

In order to achieve the objectives defined in the introductory section, the following stages were defined to analyse the retail banking industry: (i) The identification of the periods of analysis; (ii) The identification of the different SGs; (iii) The characterisation the SGs; (iv) The analysis of the competitive dynamics of SGs; (v) The analysis of differences between SGs; and, finally, (vi) The analysis of strategic consequences of competitive dynamics.

The definition of the periods of analysis was determined *a priori* as composed by the following periods of time: 2008-2010, 2011-2013 and 2014-2016. This was the first stage of the study. This subjective selection of aims at identifying changes occurred over time, recognising breaking points in stable periods (e.g., Zúñi-ga *et al.* 2004a; Ebbes *et al.* 2010; Más-Ruiz and Moreno 2011;

Más-Ruíz *et al.* 2014), based on previous knowledge of the retail banking industry and from the FEAP intervention.

Different hierarchical clustering algorithms were tested (single, average and complete linkage, as well as the Ward's algorithm) and some similar solutions between them were obtained, suggesting the existence of some possible natural groups. Thus, given its desirable properties, the Ward's algorithm (Ward Jr. 1963) was elected for the work. To determine SGs based on the corporate conduct for the three periods of analysis, this second stage involves the creation of clusters using the Ward's method (e.g., Más-Ruiz et al. 1992; Reger and Huff 1993; Martins et al. 2010; Pätäri et al. 2011). The Ward's hierarchical algorithm of minimum variance is applied to the standardized mean values of the variables of each bank for the three periods under analysis. This procedure has shown superior results when compared to other methods of hierarchical groupings, revealing a natural structure of the data (e.g., Fombrun and Zajac 1987; Más-Ruiz et al. 1992; Reger and Huff 1993; Martins et al. 2010; Pätäri et al. 2011).

The third stage involves the characterisation of the SGs' dimension in order to identify similar and dissimilar strategic behaviours. The next procedures have been implemented for that purpose, following Amel and Rhoades (1988): (i) calculating the average values of strategic variables regarding each SG in the identified stability periods; (ii) calculating the average values of the stability periods regarding the entire banking industry; and (iii) comparing the averages of each SG to the average of the sample in order to identify any degree of specialisation in the SGs in any specific strategic dimension.

Competitive dynamics of SGs in the banking industry in Portugal, in the periods from 2008-2010, 2011-2013 and 2014-2016, is analysed transversally in relation to the composition and its changes over time, as well as the strategies undertaken by the SGs. It is based on comparing the average values of strategic variables in each strategic group and analysing the centroids of SGs in each period of analysis of the Portuguese retail banking industry.

The fourth stage involves a discussion regarding the features of the competitive dynamics of SGs according to the structure proposed by Mascarenhas (1989). Given the likelihood of a strategic change of some banks in a given SG, there are three possible results: a change in its strategy, in its composition and/or in the number of its members. This is the result of the interdependence between the members of the group, swapping between SGs or of using a diverging strategy from the members of the SG. In this sense, a strategic change may occur when some banks in the same SG change their strategy. The change in the composition of a SG means that some retail bank changed its strategy and is implementing a different strategy, which might be tuned to the strategy of another SG. If the remaining members of the group do not follow the change, we are in the presence of a new SG or a change in the composition of two SGs.

The fifth stage aims at analysing the differences in results of the SGs. Lastly, the sixth stage discusses the strategic consequences of competitive dynamics of SGs in the Portuguese retail banking industry.

5. RESULTS

This paper analyses the unfolding of events culminating in the 2011 recapitalisation programme of the Portuguese banking system and in the resolution of BES in 2014. The major changes in the Portuguese banking system during the 2008-2010, 2011-2013 and 2014-2016 periods are explained by the recapitalisation programme of the Portuguese banking system via the FEAP, which changed the competitive environment of the banking system, by introducing significant changes in the sector's behaviour, particularly regarding the compliance with the new solvency levels imposed on banks and the need to deleverage the banking activity.

Table 4 shows the development of average values of strategic variables in the periods under analysis. From the first to the second period, there is a clear fall in the average ratio of credit not represented by securities on total assets from 0.54 (2008-2010) to 0.44 (2011-2013) albeit it increases in the third period (0.48). The average ratio of overdue credit and interest on total assets increased from 0.01 to 0.03 to 0.04 during the three periods. The same occurred to the provisions and impairments on total assets that increased from a null average value to an average value of 0.03 and then to an average value of 0.05 in the 2014-2016 period. There was a decrease in the average ratio of call deposits on total assets, from 0.20 to 0.09, from the first to the second period and an improvement to 0.06 from the second to the third period. Conversely, the average ratio of central bank resources on total liabilities went from 0.06 in the first period to 0.11 in the second period to 0.07 in the third period The average increase of 3,021 Million euros in total assets from the first period to the second one should also be noted, as well as a decrease of 2,310.57 Million Euros from the second to the third period.

Table 4

	Strategic variables over time periods								
Variables	Operationalisation	2008-2010	2011-2013	2014-2016					
V1	Credit not represented by securities / Total Assets	0.54	0.44	0.48					
V2	Securitised and non- derecognised credit / Total Assets	0.04	0.07	0.07					
V3	Other credit and values (tittles) / Total Assets	0.01	0.03	0.04					
V4	Overdue credit and interest loan / Total Assets	0.01	0.03	0.04					
V5	Provisions and Impairments / Total Assets	0.00	0.03	-0.05					
V6	Call-Demand deposits / Total Liabilities	0.20	0.09	0.16					
V7	Term Deposits / Total Liabilities	0.15	0.29	0.35					
V8	Central Bank Resources / Total Liabilities	0.06	0.11	0.07					
V9	Total Assets (1)	24,209.07	27,230.97	24,920.40					
Note: ⁽¹⁾ M	illion Euros.								

Source: Own elaboration.

The SGs have been classified as: "Universal"; "Traditional"; "Specialised"; and "Undefined" SGs. This classification is based on article 4 of Decree-Law no. 298/92. It has the scope of the banking activity as reference for naming the SG, which discloses the main strategic feature of each strategic cluster or group.

Taking into account the assets of the banks, the SG named "Universal Banking" is composed of: small institutions in the 2008-2010 period; very small, small and medium-sized institutions in the 2011-2013 period; and two medium-sized institutions and a large institution in the 2014-2016 period.

The second SG may be referred as "Traditional Banking". In the 2008-2010 period, based on the size of the assets of the banks, this SG is comprised of three large banks and one medium bank. In this SG - composed of banks that traditionally operate at a national level covering all market segments - the primary strategic variables influencing the SG are: total assets, credit not represented by securities and securitised and non-derecognised credit. In the 2011-2013 period, it is composed of one small institution, two medium-sized institutions and three large institutions. In the 2014-2016 period is composed of one very small, two small and two large banks. This SG is comprised of banks that traditionally operate at national level serving all market segments, and is expressed by the following strategic variables: total assets, credit not represented by securities, demand deposits and a high central bank resource ratio on total liabilities.

The third SG is referred as "Specialised Banking". It is composed of three very small banks and one small bank in the 2008-2010 period. In the 2011-2013 period, this SG is composed of two very small banks and one medium bank. In the 2014-2016 period it is composed of two very small, one small and one mid-sized institution. This SG can be characterised by the following two variables: securitised and non-derecognised credit on total assets and a high central bank resource ratio on total liabilities.

The fourth SG may be referred as "Undefined Banking" as it is difficult to prescribe the strategic variables that characterise this SG. BIC is a very small bank that incorporated BPN in 2011 and BPI is a medium-sized bank. Novo Banco, which is a large bank, belongs to this SG in the 2014-2016 period.

In order to complement the analysis of the composition of the SG, it was used the proposal of Reger and Huff (1993) that characterises SGs according to the structural position in the cluster. Based on the Euclidean square distance among individual players, Reger and Huff (1993) distinguish the following typologies: "core"; "secondary"; "transient"; "misfit" and "idiosyncratic", as shown in Table 5. As such, one can claim that "core" players are closer the core of the SG and "idiosyncratic" are likely to have a poor resemblance to the SG behaviour, i.e. the higher the Euclidean square distance the less likely the player is to remain in the SG.

Table 5 characterises the SGs in terms of number and composition for the three periods analysed. For simplicity reasons, the Undefined Banking SG was not represented. In summary, national banking institutions have developed different strategies in the three time periods (2008-2010, 2011-2013 and 2014-2016), impacting the structure of SGs. Over the three time periods MG and BANIF maintained their strategies as secondary players, but as part of the Universal Banking SG in the first period, as part of the Traditional Banking SG in the second period and as part of the Specialized Banking in the third period. BCP and CGD remain in the Traditional Banking SG during the three periods, although they changed their strategic behaviour as they behaved as core players in the first period and as secondary players in the second and third periods. On the other hand, BES also maintains its position in the Traditional Banking SG. It moved from a core to a secondary position from the first to the second period, becoming insolvent in the third period. Part of its assets were transferred to Novo Banco, which is part of the Undefined SG. Finally, the BST in the first period is in the Traditional Banking SG behaving as secondary player. In the second period BST moves to the Universal SG as a transient player, remaining in the Universal Banking SC as a core player.

Universal Banking			Traditional Banking			Specialised Banking			
Period	2008/10	2011/13	2014/16	2008/10	2011/13	2014/16	2008/10	2011/13	2014/16
Core	_	_	BST	BCP CGD BES	_	_	_	_	_
Secondary	FINI MG BAC CCCAM BBVA BANIF DEUTSCHE	BPP	BIC BPI	BST	MG BCP BES BANIF CGD CCCAM	BCP SICAM BBVA	ITAU BARCLAYS BF BSNP	_	BANIF MG
Transient	ВРР	BST BIC BPI BAC BBVA	_	_	_	NBA Açores CGD		_	BF
Misfit	_	_	_	_	_	_	_	BARCLAYS BF BSC	BSC
Idiosyncratic	_	_	_	_	_	_	—	_	_

Table 5
Characterisation of the composition of main SGs in the periods under analysis

Source: Own elaboration.

The Undefined Banking group was not represented in Table 5 because it does not include any institution in the second period – for all purposes, it was deemed as a strategically undefined group comprised of two medium institutions seeking to position themselves in the banking market, becoming included in the Universal Banking strategic group by means of strategic redefinition.

As shown in Table 5, in the first period there are four SGs (Universal, Traditional, Specialised, Undefined), while the second period is composed of three SGs (Universal, Traditional, Specialised), since the Undefined SG has disappeared. Finally, the third period is composed of four main SGs (Universal, Traditional, Specialised, Undefined), with Novo Banco being set aside as part of the Undefined SG as its only member.

Table 6 presents the individual characteristics of the three main SGs over time.

The Universal Banking SG experienced the following transformations from the first to the second period: from eight banking institutions (MG acquired Finibanco in 2010) to six; their number of workers decreases from 36,415 to 4,987; and total assets increase from 65,993 to 103,841 Million euros. In the third period the number of institutions decreases to three, the number of workers increases to 22,286 and total assets decrease again to 86,027 million Euros. BPP, BAC, BST and BBVA behaved as structural players of the Universal Banking SG during the first two periods.

The Traditional Banking SG also undergoes important changes from the first to the second period: from four to six institutions; from 3,159 to 3,762 offices; from 27,816 to 33,629 workers; and total assets remain relatively stable from 330,095 to 311,702 million euros. In the third period the number of institutions decreases to five, with an increase in the number of workers to 59,989 and a decrease in total assets to 162,044 million Euros. Clearly, BCP (during the three periods) and BES (during the first two periods) remained as structural players within this SG, with the entry of CCCAM and MG coming from the strategic group of Universal Banking in the second period, and BST exiting in the first period. BBVA enters the Traditional SG leaving the Universal Banking SG. The Specialized Banking SG underwent the following changes from the first to the second period: from four to three institutions; from 251 to 236 offices; from 2,456 to 2,317 workers; and total assets of 24,382 to 26,546 million euros. BARCLAYS (during the first two periods) and BF (during the three periods) are its structural institutions. In the third period, this SG has four institutions, 12,312 employees and a total asset of 40,891 million Euros. Clearly, BANIF and MG become major players coming from the Traditional Banking SG.

For simplicity reasons the Undefined Banking SG is not represented in Tables 5 and 6.

Characteristics of the main strategic groups										
Periods	Strategic groups	Number of entities	Number of offices (1)	Number of workers (2)	Total assets (3)					
	Universal Banking	8 (4)	1 793 (4)	36 415 (4)	65 993 437.33					
2008-2010	Traditional Banking	4	3 159	27 816	330 095 376.00					
	Specialized Banking	4	251	2 456	24 381 963.83					
	Universal Banking	6	1 753	4 987	103 841 953.03					
2011-2013	Traditional Banking	6	3 762	33 629	311 702 424.68					
	Specialized Banking	3	236	2 317	26 546 115.47					
	Universal Banking	3	1 378	22 286	86 026 997.00					
2014-2016	Traditional Banking	5	1 276	59 989	162 043 810.30					
	Specialized Banking	4	352	12 312	40 891 270.00					

Table 6

Note: ⁽¹⁾ coverage in Portugal; ⁽²⁾ in Portugal; ⁽³⁾ thousands of euros; ⁽⁴⁾ Finibanco in 2010 was purchased by Montepio. *Source:* Own elaboration.

As shown in Tables 5 and 7, the following changes were identified between the first and the second period: Eight changes have been identified in the Universal Banking strategic group: MG, CCCAM and BANIF became part of the Traditional BG; BIC and BPI left the Undefined Banking; BST left the Traditional Banking group; DEUTSCHE left the Universal Banking and FINE entered into the Universal Banking. Four changes have been identified in the Traditional Banking SG: entry of MG, BANIF and CCCA from the Universal Banking and BST leaving to the Universal Banking strategic group. Three changes have been identified in the Specialised SG: ITAU and BSNP leaving in the first period and BSC's entry in the second period. On the other hand, between the second period and the third periods, the following major changes are clear: BAC with the resolution of BES in 2014, is no longer present, BBVA and BPP are now part of the Traditional Banking group. MG and BANIF that comprised the Traditional Banking SG moved to the Specialized Banking SG.

SGs have been analysed from both a longitudinal and a composition standpoint, by identifying the number of groups and its variation over time (2008-2016). It was possible to identify 17 strategic changes by comparing the first and the second periods, translating into a strategic redefinition of the institutions that have become integrated in other SGs. Between the second and the third periods 13 strategic changes were identified, as shown in Table 7.

The mobility ratio is calculated by identifying the number of banks remaining in the same strategic group, as well as the number of times they move from a given SG to another. As shown in Table 7, mobility between SGs – assessed by the mobility ratio (MR) – is medium/high between the first and the second periods (average MR = 0.346). This medium/high strategic mobility likely reflects the troubled period of adaptation occurred in the banking industry as a result of the FEAP, which led to the strategic adjustment of the different players. On the other hand, a milder mobility ratio is found between the second and the third period (average MR = 0.277).

	Table	7	
Mobility ratios	(MR)	between	periods

2008-2010 and 2011-2013					2011-2013 and 2014-2016			
Strategic Groups	Remains in SGs	Changes among SGs	MR*	Average MR	Remains in SGs	Changes among SGs	MR*	Average MR
Universal Banking	1	8	0.111		3	3	0.500	
Traditional Banking	3	4	0.429	0.046	3	6	0.333	0.277
Specialised Banking	3	3	0.500	0.346	2	3	0.400	0.277
Undefined Banking	2	2	0.500		0	1	0	

Note: *Mobility Ratio (MR); MR = 1 no mobility (perfect strategic stability); RM = 0 total mobility (perfect strategic instability). *Source:* Own elaboration.

Between the first and the second period the Universal Banking group is the most mobile SG (MR = 0.111) and the Undefined Banking is the SG with the least mobility. In turn, the Specialised and Undefined Banking are the SGs with the least mobility (MR = 0.500). Between the first and the second period, the Undefined SG is the SG with the most mobility, whereas the Universal Banking SG is the one with the least mobility (MR = 0.500). This reorganisation suggests there is a low barrier to mobility between periods, resulting in a low barrier to the entry of institutions into other strategic groups, with strategic mobility diversity. It can be argued that the three periods are characterised by different strategic behaviours. The first period can be characterised as a period of deregulation of the Portuguese retail banking industry, and the second period as resulting from an imposed regulation, in which institutions have been reorganised into SGs in order to adapt to the new economic and legal framework. Finally, the third period can be considered as a period of strategic consolidation.

The analysis of the dynamics of SGs was based on the average values and standard deviations of strategic variables in each SG. The results of the strategic variables are not uniform, thereby evidencing that there are differences in decisions across strategic groups over time. The structure of the SGs changed over time, and the changes demonstrate that the banking institutions of a SG reorganise themselves seeking a new competitive strategic positioning. The results obtained show that not all retail banking institutions move in the same way due to the changing relative distance between the members of a same group over time. Competitive responses from the institutions to the environment differ in decision-making and time thereof.

Table 8 shows the average values of the result variables between periods. There is an average increase of the banking product ratio on the financial margin (BPMF), from 0.647 (2008-2010) to 2.010 (2011-2013) and to 1.938 (2014-2016). The average ratio of personnel expenses on the financial margin (PEFM) went from 0.204 to 0.642 from the first to the second period and to 0.591 in the third period; the general administrative expenses ratio on the financial margin (GAEFM) went from 0.175 to 0.446 from the first to the second period and stabilised in the third period (0.420); ROE (return on equity) went from minus 0.003 to an average value of minus 0.204 and then to a minus 0.069; ROI becomes negative with an average value of minus 0.076 in the second period and then to a minus 0.002 in the third period; lastly, the degree of financial leverage went from 1.006 to an average value of 0.962 in the second period to 0.646 in the third period. There is a clear increase in costs (PEFM and GAEFM) and decrease in financial profitability, indicating deterioration of the banking competitive context. This indicates a deterioration of the competitive context in the banking system in the first two periods, with a decrease in costs (PBMF and CPMF) between the second and third period and with a decrease in financial profitability in the three periods under analysis.

In this framework, the different results over the periods are shown in Table 8, according to the SGs (Universal, Traditional, Specialised and Undefined), using the simple arithmetic average for each strategic group and for each period under study.

Results of strategic groups										
Variables	Periods	Universal Banking	Traditional Banking	Specialised Banking	Undefined Banking	Average Value				
	2008-2010	1.800	1.592	1.951	1.859	0.647				
PBMF: Banking product / Financial margin	2011-2013	2.313	1.754	1.371	(1)	2.010				
	2014-2016	1.572	2.232	1.938	1.989	1.938				
	2008-2010	0.542	0.490	0.985	0.616	0.204				
CPMF: Costs with Personnel / Financial margin	2011-2013	0.781	0.000	0.358	(1)	0.642				
	2014-2016	0.337	0.736	0.527	0.970	0.591				
	2008-2010	0.366	0.560	0.626	0.679	0.175				
GGAMF: General administrative expenses /	2011-2013	0.516	0.000	0.491	(1)	0.446				
	2014-2016	0.234	0.522	0.337	0.808	0.420				
	2008-2010	0.064	-0.887	-0.133	0.049	-0.003				
ROE: Return on Equity	2011-2013	-0.094	-2.529	0.311	(1)	-0.204				
	2014-2016	0.053	-0.091	-0.130	-0.165	-0.069				
	2008-2010	0.004	0.000	-0.009	0.001	0.002				
ROI: Return on Investment	2011-2013	-0.044	-0.007	-0.503	(1)	-0.076				
	2014-2016	0.003	-0.003	-0.003	-0.016	-0.002				
	2008-2010	0.827	0.652	0.946	2.534	1.006				
GAF: Degree of financial leverage	2011-2013	1.265	0.942	1.117	(1)	0.962				
	2014-2016	0.891	0.562	0.746	1.024	0.646				

Table 8 Results of strategic groups

Note: ⁽¹⁾ no data.

Source: Own elaboration.

The Universal Banking SG is composed of banks operating in their broader sense. This SG has a negative ROE and ROI in the second period, influenced by the net result, and shows a favourable average leverage in the second period (1.265) that was unfavourable in the preceding period (0.827), decreasing again in the third period (0.891).

The Traditional Banking SG has a negative ROE in the three periods (-0.887; -2.529; -0,091), influenced by the net results, which, in turn, have a negative influence on ROI in the three periods. The results of the Traditional Banking SG worsened in the second period, expressing a low ROE (-2.529) improving in the third period (-0,091). Lastly, the three periods have an unfavourable leverage, improving in the second period (0.942), decreasing again in the third period. The Undefined Banking SG is characterised by an extremely favourable leverage, with an average value of 2.534 in the first period.

It is clear that the change of the competitive environment from a deregulated period to a regulated period and then to a consolidated strategic period significantly changed the composition between periods. Intervention from the FEAP, the European Union (EU) and the International Monetary Fund (IMF) has conditioned individual strategies of retail banking institutions in Portugal. This constraint led to deep changes in the banking activity and caused surgical time changes so as to not introduce large uncertainties in the activity of the institutions, which led to a period of consolidation conditioning the results obtained in the banking industry in a decisive manner. The existence of relationships between structure - conduct - performance and competition indicates an asymmetrical growth in behaviour, showing the difficulties of establishing commitments among banking entities, thereby reducing the benefits for retail banking. The mechanisms of competitive dynamics of SGs are clear between and within periods, which is also the case within and between strategic groups, due to the fact that they are responding to the changes in the competitive environment.

The national retail banking system is comprised of three primary strategic groups: the Universal, the Traditional and the Specialised SGs. It can be argued that competitive dynamics occurs with greater intensity among members in the same group due to the conduct of its members in relation to the activity, creating barriers to mobility and responding in a similar way to the changes in the competitive environment. In addition, it is important to take account the existence of a mutual dependence that may be obstructed by some actors. As such, one can claim that hypotheses H_1 and H_2 are accepted.

The national retail banking sector is comprised of SGs that underwent major changes between the periods under analysis, due to the changes imposed on the competitive environment. The study does not prove that strategic groups are necessarily a cohesive force. In the second period under analysis (2011-2013) there was a greater concern in complying with the requirements of the FEAP than in addressing market competition. The fulfilment of the imposed goals had a decisive influence on the composition and competitive dynamics of SGs, whose number, composition and strategies have changed. In addition, it is apparent that managers/decision-makers are aware of the implications of strategic decisions and recognise the existence of SGs, as well as their competitive dynamics. Decisions made by bank managers or strategic decision-makers by virtue of the FEAP have been different between banking institutions, regardless of the SG in which they were integrated. Such decisions have shaped the strategic groups in the second period of analysis and the search for a consolidation in the third period. Therefore, it can be argued that different decisions have shaped competitive dynamics of the retail banking, led by the three – "Universal", "Traditional" and "Specialised" – main SGs. Competitive dynamics of strategic groups has direct and indirect implications on the conduct of retail banking institutions, their results, the nature of the competitive interactions between banking institutions in a same SG and between SGs in a same industry. As such, one can claim that H_3 is accepted as competitive dynamics of the banking industry is affected by the external recapitalisation programme via the FEAP.

6. CONCLUSION

The study shows the different SGs in Portugal's retail banking sector during the three periods. The analysis allows to reflect on the competitive dynamics of SGs and the (in)direct implications on companies' conduct, results and the nature of competitive interactions. It is clear that the Portuguese retail banks follow different competitive strategies, SGs have dissimilar resources and that different SGs follow different strategies. Variables used in the analysis support the argument that the retail banking in Portugal has changed its commitments and strategies over time, as financial profitability and degree of financial leverage have deteriorated from the first to the second analysis period.

National banking institutions have developed different strategies in all three time periods under study, stimulating the restructuring of SGs as to their number and composition, significantly reflecting the existence of a deep volatility between the periods under analysis, which indicates there were changes in the context of banking with the mandatory requirements determined by the BdP [Bank of Portugal] and imposed by the FEAP, of a Tier 1 Core ratio of 8% from the 31st of December 2011 that enforced minimum capital requirements through Ordinance no. 121/2011. The competitive structure of the retailing banking industry is reflected on the different SGs formed, in which the concern for complying with the requirements imposed by the recapitalisation programme of the Portuguese banking system led to the reorganisation and restructuring of SGs. Thus, the different periods of analysis may be characterised by a medium/high strategic mobility, which presumably reflects a low barrier to the entry into SGs. Therefore, it can be argued that the 2008-2010 period may be considered as a 'deregulated' period, 2011-2013 as a period of 'imposed regulation' and, finally, 2014-2016 as a 'strategic consolidation' period, with strategic changes leading the various institutions to strategically regroup, as a result of a low barrier to strategic mobility, which led to a broad competitive dynamics between periods.

There are important implications for the scientific community. The first one is that this financial and economic foreign intervention had pervasive structural changes in the Portuguese banking industry. This is the result of not only the lack of industry-based stability, but also the individual conditions to the banks, which were not analysed. The second implication is that a tight regulation seems to be mandatory if the banking industry is to perform properly, which was not the case under analysis as its historical events indicated.

For the business community it would be important to claim that despite the intricacies of strategic actions and reactions institutions need to be aware of the contextual signs that strongly influence the long-term stability of corporate strategies. As such, if institutions want to stay afloat in open competitive markets, they need to define a clear long-term strategic orientation not to be caught in the eye of the storm.

The results contribute to the understanding of the retail banking in Portugal, namely: (i) the competitive position of the players in the sector; (ii) the structure and competitive dynamics; (iii) the analysis of the SGs and their competitive dynamics; and (iv) the analysis of the competitive the dynamics of the SGs of the Portuguese banking sector in the three periods under analysis.

The main limitation of this paper is related to the analysed time horizon – only three time periods, 2008-2010, 2011-2013 and 2014-2016 – that was extremely volatile in the Portuguese banking sector. The second limitation is related to the small sample used. Finally, due to the subjectivity associated to any cluster analysis, the results should be interpreted by taking into account the limitations of this statistical methodology. De la Fuente-Sabaté et al. (2007) and Carroll and Thomas (2019) propose new methodological and theoretical insights in the research on strategic groups that should be considered in future work to study the retail banking behaviour.

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8. REFERENCES

Alcarva, P., 2011. A Banca e as PME. Porto. Vida Económica.

- Amel, D. F. and Rhoades, S. A., 1988. Strategic groups in banking. *The Review of Economics and Statistics*, 70 (4), 685-689.
- Anwar, J. and Hasnu, S., 2016. Business strategy and firm performance: A multi-industry analysis. *Journal of Strategy and Management*, 9 (3), 361-382.
- Bento, P., 1998. Concentração bancária em Portugal: O caso português entre 1992 e 1996. Master thesis, ISCTE Business School, Portugal.
- Bonetti, E. and Schiavone, F., 2014. Identifying and mapping strategic groups in the fashion industry. *International Studies of Management* & Organization, 44 (1), 55-69.
- Brito, R. P. and Brito, L. A., 2014. Dynamics of competition and survival. *Brazilian Administration Review*, 11 (1), 64-85.
- Canhoto, A. and Dermine, J., 2003. A note on banking efficiency in Portugal, New vs. Old banks. *Journal of Banking & Finance*, 27 (11), 2087-2098.
- Carroll, C. and Thomas, H., 2019. Strategic categories and competition: Significant clustering for strategic groups. *Journal of Strategy and Management*, 12 (4), 505-521.

- Cattani, C., Porac, J. and Thomas, H., 2017. Categories and competition. *Strategic Management Journal*, 38 (1), 64-92.
- Chatterjee, K. and Samuelson, W. F., 2001. *Game theory and business applications*. Norwell, MA: Kluwer Academic Publishers.
- Chen, M. J. and Hambrick, D. C., 1995. Speed, stealth, and selective attack: How small firms differ fprom large firms in competitive behavior. *Academy of Management Journal*, 38 (2), 453-482.
- Chen, M. J. and MacMillan, I. C., 1992. Nonresponse and delayed response to competitive moves: The roles of competitor dependence and action irreversibility. *Academy of Management Journal*, 35 (3), 359-370.
- Chen, M. J. and Miller, D., 2012. Competitive dynamics: Themes, trends, and a prospective research platform. *Academy of Management Annals*, 6 (1), 135-210.
- Chen M. J. and Miller D., 2014. Reconceptualizing competitive dynamics: A multidimensional framework. *Strategic Management Journal*, 36 (5), 758–775.
- Chen, T., Tribbitt, M., Yang, Y. and Li, X., 2017. Does rivals' innovation matter? A competitive dynamics perspective on firms' product strategy. *Journal of Business Research*, 76, 1-7.
- Chen, M. J., Smith, K. G. and Grimm, C. M., 1992. Action characteristics as predictors of competitive responses. *Management Science*, 38 (3), 439-455.
- Chen, M. J., Su, K. H. and Tsai, W., 2007. Competitive tension: The awareness-motivation-capability perspective. Academy of Management Journal, 50 (1), 101-108.
- Costa, C. A., 1998. Banking strategies in Portugal-A cluster analysis approach to the Portuguese banking activity between 1988 and 1997. School of Economics and Management, University of Minho
- De la Fuente-Sabaté, J. M., Rodríguez-Puerta, J., Vicente-Lorente, J.D. and Zúñiga-Vicente, J.A., 2007. Do stable strategic time periods exist? Towards new methodological and theoretical insights. *Managerial and Decision Economics*, 28 (3), 171-180.
- Decree-Law nº 298/92, of 31st of December. Diário da República, Nº 301 — 1.ª series –A — Ministry of Finance.
- DeSarbo W. S. and Grewal R., 2008. Hybrid strategic groups. *Strategic Management Journal* 29 (3), 293-317.
- DeSarbo, W. S., Grewal, R. and Wang, R., 2009. Dynamic strategic groups: Deriving spatial evolutionary paths. *Strategic Management Journal*, 30 (13), 1420-1439.
- Dhandapani, K., Upadhyayula, R. S. and Basant, R., 2019. Post internationalization strategies of born global service firms. *Competitiveness Review*, 29 (5), 481-496.
- Ebbes, P., Grewal, R. and DeSarbo, W. S., 2010. Modeling strategic group dynamics: A hidden Markov approach. *Quantitative Marketing and Economics*, 8 (2), 241-274.
- Escobar, L. and Vredenburg, H., 2011. Multinational Oil Companies and the Adoption of Sustainable Development: A Resource-Based and Institutional Theory Interpretation of Adoption Heterogeneity. *Journal of Business Ethics*, 98 (1), 39-65.
- Espitia, M. A., Polo, Y. and Salas, V., 1991. Grupos estratégicos y resultados en el sector bancario español. *Información Comercial Española*, 690, 189-212.
- Everitt, B. S., 1980. *Cluster Analysis*. London: Heinemann Educational Books.
- Ferrier W. J., 2001. Navigating the competitive landscape: the drivers and consequences of competitive Aggressiveness. *Academy of Management Journal*, 44 (4), 858-877.
- Ferrier, W. J., Smith, K. G. and Grimm, C. M., 1999. The role of competitive actions in market share erosion and industry dethronement: A study of industry leaders and challengers. *Academy of Management Journal*, 42 (4), 372-388.

- Fiegenbaum, A. and Thomas, H., 1993. Industry and strategic group dynamics: Competitive strategy in the insurance industry, 1970-1984. *Journal of Management Studies*, 30 (1), 69-105.
- Fombrun, C. H. and Zajac, E. J., 1987. Structural and perceptual influences on intraindustry stratification. *Academy of Management Journal*, 30 (1), 33-50.
- Garcés-Cano, J., 2007. Grupos Cognitivos (Estratégicos y Competitivos) en Fondos de Pensiones y Cesantías de Colombia al 2005. Suma Psicológica, 14 (1), 107-200.
- Garcés-Cano, J. and Duque-Oliva, E., 2008. Revisión del concepto de grupo estratégico y propuesta de definición para aplicaciones en el ámbito colombiano. *Innovar*, 17 (30), 99-112.
- Gur F. A. and Greckhamer T., 2018. Know the enemy: A review and agenda for research on competitor identification. *Journal of Management*, 45 (5), 2072-2100.
- Gur, F. and Greckhamer, T., 2019. Know the enemy: A review and agenda for research on competitor identification. *Journal of Management*, 45 (5), 2072-2100.
- Hervás, J. L., Dalmau, J. I. and Albors, J., 2006. 1972-2005: En la cuarta década de la investigación sobre grupos estratégicos ¿Qué hemos aprendido? *Investigaciones Europeas de Dirección y Economía de la Empresa*, 12 (1), 167-205.
- Hunt, M., 1972. Competition in the Major Home Appliance Industry, 1960-1970. Unpublished doctoral dissertation, Harvard University.
- Kalnins, A. and Chung, W., 2004. Resource seeking agglomeration: A study of market entry in the lodging industry. *Strategic Management Journal*, 25 (7), 689-699.
- Ketchen, Jr., D. J., Snow, C. C. and Hoover, V. L., 2004. Research on competitive dynamics: Recent accomplishments and future challenges. *Journal of Management*, 30 (6), 779-804.
- Leask, G. and Parker, D., 2007. Strategic groups, competitive groups and performance within the U.K. pharmaceutical industry: Improving our understanding of competitive process. *Strategic Management Journal*, 28 (7), 723-745.
- Lee, J., Lee, K. and Rho, D., 2002. An evolutionary perspective on strategic group emergence: A genetic algorithm-based model. *Strategic Management Journal*, 23 (8), 727-746.
- Lewis, P. and Thomas, H., 1990. The linkage between strategy, strategic groups and performance in the U.K. retail grocery industry. *Strategic Management Journal*, 11 (5), 385-397.
- Li, H. and Srinivasan, K., 2019. Competitive dynamics in the sharing economy: An analysis in the context of Airbnb and hotels. *Marketing Science*, 38 (3), 365-541.
- Lieberman, M. B. and Asaba, S., 2006. Why do firms imitate each other? Academy of Management Review, 31 (2), 366-385.
- Lozano-Vivas, A. and Pastor, J. T., 2010. Do performance and environmental conditions act as barriers for crossborder banking in Europe? Omega, 38 (5), 275-282.
- Martins, T. S., Cruz, J. A. W., Kato, H. T., Silva, W. V. and Silva, E. D., 2010. Análise de grupos estratégicos e desempenho na indústria de bancos comerciais no brasil. RCO - Revista de Contabilidade e Organizações – FEA-RP/USP, 4 (9), 100-125.
- Mascarenhas, B., 1989. Strategic group dynamics. *Strategic Management Journal*, 32 (2), 333-352.
- Más-Ruíz, F. J., 1999. Dynamic analysis of competition in marketing: Strategic groups in Spanish banking. *International Journal of Bank Marketing*, 17 (5), 233-250.
- Más-Ruiz, F. J. and Ruiz-Moreno, F., 2011. Rivalry within strategic groups and consequences for performance: the firm-size effects. *Strategic Management Journal*, 32 (12), 1286-1308.
- Más-Ruiz, F. J. and Sala, J. C., 1992. Identificación de grupos estratégicos en las cajas de ahorros españolas. *Revista Europea de Dirección e Economía de la Empresa*, 1 (3), 9-28.

- Más-Ruiz F. J., Nicolau-Gonzálbez, J. L. and Ruiz-Moreno, F., 2005. Asymmetric rivalry between strategic groups: response, speed of response and ex ante vs. ex post competitive interaction in the Spanish bank deposit market. *Strategic Management Journal*, 26 (8), 713-745
- Más-Ruiz, F. J., Ruiz, F. M. and Martínez, A. L., 2014. Asymmetric rivalry within and between strategic groups. *Strategic Management Journal*, 35 (3), 419-439
- Maudos J. and Pastor J. M., 2003. Cost and profit efficiency in the Spanish banking sector (1985–1996): A nonparametric approach. *Applied Financial Economics* 13 (1), 1–12
- Meilich, O., 2019. Strategic groups maps: Review, synthesis, and guidelines. Journal of Strategy and Management, 12 (4), 447-463.
- McGrath, R. G., Chen, M. J. and MacMillan, I. C., 1998. Multimarket manoeuvring in uncertain spheres of influence: Resource diversion strategies. *Academy of Management Review*, 23 (4), 724-740.
- McNamara, G., Deephouse, D. L. and Luce, R. A., 2003. Competitive positioning within and across a strategic group structure: The performance of core, secondary, and solitary firms. *StrategicManagement Journal*, 24 (2), 161-181.
- Mehra, A., 1996. Resource and market based determinants of performance in the U.S. banking industry. *Strategic Management Journal*, 17 (4), 307-322.
- Mendes, V. and Rebelo, J., 2003. Structure and performance in the Portuguese banking industry in the nineties. *Portuguese Economic Journal*, 2 (1), 53-68.
- Moreira, A. C. and Mota, F. D., 2002. Fusões e aquisições. O desafio da concentração na banca e a segmentação no novo BCP/Atlântico. *Percursos e Ideias*, 5, 47-69.
- Ordinance nº 121/2011, of 30th of March. Diário da República, Nº 63 1.ª series Ministry of Finance and Public Administration.
- Pätäri, S., Puumalainen, K., Jantunen, A. and Sandstrüm, J., 2011. The interface of the energy and forest sectors—Potential players in the bioenergy business. *International Journal of Production Economics*, 131 (1), 322-332.
- Porter, M., 1980. The contributions of industrial organization to strategic management. *Academy of Management Review*, 6 (4), 609-620.
- Prior, D. and Surroca, J., 2006. Strategic groups based on marginal rates: An application to the Spanish banking industry. *European Journal of Operational Research*, 170 (1), 293-314.
- Rebière, P. and Mavoori, H., 2019. Minimizing blind men effect in strategic group research: Visualizing complex turbulent markets. *Strategic Change*, 28 (3), 185-201.
- Reger, R. and Huff, A. S., 1993. Strategic groups: A cognitive perspective. *Strategic Management Journal*, 14 (2), 103-124.
- Rhee, M. and Mehra, S., 2006. Aligning operations, marketing, and competitive strategies to enhance performance: An empirical test in the retail banking industry. *Omega*, 34, 505-515.
- Roberts, P. W. and Dowling, G. R., 2003. Corporate reputation and sustained superior financial performance. *Strategic Management Journal*, 24, 1077-1093.
- Romesburg, H. C., 1984. *Cluster Analysis for Researchers*. Belmont: Lifetime Learning Publications.
- Rosário, A., 2018. Dinâmica competitiva dos grupos estratégicos do setor Bancário de retalho em Portugal (2008-2010 e 2011-2013). PhD thesis, University of Aveiro, Portugal.
- Rosário, A., Moreira, A. C. and Macedo, P., 2019. Strategic Groups in the Portuguese Banking Industry: An Analysis of the 2008-2010 Period. In: Moreira, A. C. & Silva, P. Eds. Handbook of Research on Corporate Restructuring and Globalization. Hershey, PA: IGI Global, 1-29.

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- Short, J. C., Ketchen, D. J., Palmer, T. B. and Hult, G. T., 2007. Firm, strategic group, and industry influences on performance, *Strategic Management Journal*, 28 (2), 147-167.
- Silva, T. F., 2009. Concentração bancária em Portugal. Master thesis, ISCTE Business School, Portugal.
- Silva, L. M., 2013. A banca em Portugal antes e após o subprime. Master thesis, University of Évora, Portugal.
- Sinkey, Jr. and Joseph F., 1992. Commercial Bank Financial Management in the Financial Services Industry. New York: Macmillan Publishing Company.
- Smith, A. D., 2007. Making the case for the competitive advantage of corporate social responsibility, *Business Strategy Series*, 8 (3), 186-195.
- Smith, K. G., Ferrier, W. J. and Grimm, C. M., 2001. King of the hill: Dethroning the industry leader. *Academy of Management Executive*, 15 (2), 59-70.
- Ward Jr., J. H., 1963. Hierarchical grouping to optimize an objective function. *Journal of the American Statistical Association*, 58 (301), 236-244.

- Wiersema, M. F. and Bowen, H. P., 2008. Corporate diversification: The impact of foreign competition, industry globalization and product diversification. *Strategic Management Journal*, 29 (2), 115-132.
- Yu, T. and Cannella, A. A., 2007. Rivalry between multinational enterprises: An event history approach. *Academy of Management Journal*, 50 (3), 665-686.
- Zucchini, L., Böhmer-Horländer, S. and Kretschmer, T., 2019. Competitive pressure: Competitive reactions at the group-level. *Industry and Innovation*, 26 (6), 643-666.
- Zúñiga-Vicente, J. Á., Fuente-Sabaté, J. M. and González, I. S., 2004a. Dynamics of the strategic group membership–performance linkage in rapidly changing environments. *Journal of Business Research*, 57 (12), 1378-1390.
- Zúñiga-Vicente, J. Á., Fuente-Sabaté, J. M. and Rodríguez-Puerta, J., 2004b. A study of industry evolution in the face of major environmental disturbances: Group and firm strategic behaviour of Spanish banks, 1983-1997. *British Journal of Management*, 15 (3), 219-245.