EFFECT OF FAMILY MANAGEMENT IN EVALUATION THE COMPANY'S PERFORMANCE: EVIDENCE FROM BRAZIL

ELISANE BRANDT
*Regional University of Blumenau. **Address:** Rua Antônio da Veiga, 140 | Itoupava Seca | 89030-903 | Blumenau/SC | Brazil.*
http://orcid.org/0000-0001-8129-0908
E-mail: *elisane_brandt@hotmail.com*

ADRIANA KROENKE
*Regional University of Blumenau. **Address:** Rua Antônio da Veiga, 140 | Itoupava Seca | 89030-903 | Blumenau/SC | Brazil.*
http://orcid.org/0000-0001-6625-3017
E-mail: *akroenke@furb.br*

CAROLINE PLETSCH
*Regional University of Blumenau. **Address:** Rua Antônio da Veiga, 140 | Itoupava Seca | 89030-903 | Blumenau/SC | Brazil.*
http://orcid.org/0000-0002-1978-2204
E-mail: *carol_spletsch@yahoo.com.br*

ABSTRACT

This research aims to verify the effect of family management in performance evaluation of Brazilian publicly traded companies belonging to the cyclical consumer sector listed in Brazil, Bolsa, Balcão (B3). For that, a descriptive, documentary research was conducted with a quantitative approach through the use of Multiple Linear Regression. The period of analysis comprised the years from 2012 to 2016. The study sample consisted of 34 Brazilian family companies and 66 non-family companies, totaling the 100 companies classified in the cyclical consumption sector. The results revealed differences between the family and unfamiliar companies regarding the accounting performance, since this variable was related in a significant and positive way with the performance measured by the ROA proxy. This result suggests that family companies seek over the years to improve the value of assets, since the higher the book performance, the more investors will be interested in family firms with expectations of long-term returns. Other evidence worth mentioning is the relationship between the size of the company and the market and accounting performance of family and non-family companies. In family firms, this finding indicates that the size of the company is related to these companies in the cyclical consumption sector, since they tend to be more efficient in the use of their assets, presenting a positive relation with performance. It is concluded that the market performance, as measured by the Tobin Q proxy, was one of the main measures of performance that lead companies to a high organizational performance.

Keywords: Family Business. Performance of the Company. Cyclical Consumption Sector. Brazil.

Elisane Brandt, Adriana Kroenke, Caroline Pletsch

1 INTRODUCTION

Family businesses contemplate two distinct environments, family and business, which leads these companies to constantly seek the balance between both (Beuren, Politelo, & Martins, 2016; Masri, Tekathen, Magnan, & Boulianne, 2017). In this sense, its peculiar characteristics significantly influence the company's objectives and the strategies implemented (Chua, Chrisman, & Sharma, 1999; Erbetta, Menozzi, Corbetta, & Fraquelli, 2013; Hiebl, Duller, Feldbauer-Durstmüller, & Ulrich, 2015), distinguishing them from non-family companies.

For national economies, family businesses are one of the most important kinds of business (Ayranci, 2014; Hiebl et al., 2015; Beuren et al. 2016). According to the *Family Firm Institute* (2015), in the Brazilian scenario 90% of private companies are family, and correspond to 50% of Gross Domestic Product (GDP) and 85% of the jobs generated. These however are distinguished from other companies by having a family involvement based on the conduct of business (Donckels & Frochich, 1991; Chua et al., 1999; Shyu, 2011).

Therefore, standards of ownership, governance, management and succession significantly influence the objectives of the family business and the strategies implemented (Chua et al., 1999; Mazzi, 2011). Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes (2007) the potential advantages of these are the long-term organizational commitment, since they are concerned with the wealth contained in the perpetuation of family values through the business (Chua *et al.,* 1999; Shyu, 2011) and over the generations (Reyna & Encalada, 2016), which reflects the market performance and accounting of family businesses.

In these companies, family ties can create conditions for achieving differentiated performance compared to non-family members (Martínez, Stöhr & Quiroga, 2007; Shyu, 2011; Erbetta *et al.*, 2013). Although there is evidence in the literature of the influence on business performance (Sharma, Chrisman, & Chua, 1997; Anderson & Reeb, 2003; Martínez et al., 2007; Amran & Ahmad, 2009; Bonilla, Sepulveda & Carvajar, 2010; Shyu, 2011; Din & Javid, 2011; Mazzi, 2011; Speckbacher & Wentges, 2012; Erbetta *et al.*, 2013; Hamberg, Fagerland, & Nilsen, 2013; Pukthuanthong, Walker, Thiengtham, & Du, 2013; Muttakin, Khan, & Subramaniam, 2014; Ayranci, 2014; Vieira, 2014; Politelo, Kaveski, Chiarello, & Silva, 2014; Halili, Saleh, & Zeitun, 2015; Hiebl *et al.*, 2015; Beuren et al., 2016; Kang & Kim, 2016; Poletti-Hughes & Williams, 2017; Saleh, Halili, Zeitun & Salim, 2017; Costa, Macedo, Yokoyama & Almeida, 2017), this configuration deserves to be better explored, since the presence of relatives in management implies better performances and support of the competitive advantage (Mazzi, 2011; Speckbacher & Wentges, 2012). In addition, the family can exert influence and control in the management of the company, having direct involvement in decisions, both strategic and operational (Gómez-Mejía *et al.*, 2007; Sciascia, Mazzola & Kellermanns, 2014).

According to Pukthuanthong et al. (2013), despite the existing literature, the relationship between family management and market and accounting performances remains largely unresponsive, given the conflicting results about its impact on the company's value. These factors stimulate the development of this research, which sees a gap not yet fulfilled in the area of corporate finance. In addition, family businesses tend to have higher performance and profitability assessments than non-family companies (Anderson & Reeb, 2003), and there is still no evidence in the literature on the influence of the life cycle on the performance of the former, revealing Another opportunity for this study. Regarding this last aspect, Franks, Mayer, Volpin and Wagner (2012) found evidence that, in countries with strong investor protection and developed financial markets, family businesses evolve throughout their lifecycle for configurations Open capital as they ripen, while in countries with poor investor protection and less developed financial markets, family control is intense and lasting.

In this context, considering the importance of family businesses for the national economy, given their representativeness and particularities, this study seeks to clarify the effect of family management on the performance of Brazilian capital companies belonging to the cyclical consumption sector listed in the Brazil, Stock Exchange, Counter (B3).

According to Chahine (2007), although advantageous, the role of family control is poorly explored in corporate finances, and it is necessary researches that aim to analyze the connection between family business and its performance, since this relationship is complex

(Mazzi, 2011). Seeking to elucidate the aspects of this relationship, this study is also justified by the family companies being the most common form of organization in the world and, in general, family control can have a positive effect on business performance (Kang & Kim, 2016).

Given the representation of family businesses in the world economy (Zahra & Sharma, 2004), as well as its significant economic impact (Speckbacher & Wentges, 2012), the importance of these companies is undeniable for the social and cultural spheres (Acquaah, 2013). Moreover, because Brazil is an emerging country, national family companies have notorious participation in the economy, higher than developed countries (Politelo *et al.*, 2014); factors that also justify the elaboration of this research.

In general, this paper contributes to the literature on market and accounting performances, because it focuses on the impact of family decisions on these indicators, considering new independent variables as determinants of performance, such as the cycle of Organizations ' lives. Thus, the empirical results of this study provide useful information for researchers, professionals and investors who operate in the capital market, regarding family and non-family businesses (Saleh et al., 2017).

2 PERFORMANCE OF FAMILY BUSINESS

Due to the predominance and representativeness of family businesses, and their significant economic impact (Speckbacher & Wentges, 2012) in both developed and developing countries, studies on the theory, research and practice of this area come intensifying over the last few years (Zahra & Sharma, 2004; Speckbacher & Wentges, 2012; Dawson & Mussolino, 2014).

However, it is still recurrent in the literature the ambiguity of definitions of family businesses due to their specificities (Chua et al., 1999; Shyu, 2011).

The family characteristic of these companies can, to a certain extent, affect their performance, since the majority of them are members of the family. Thus, indirectly, this configuration of the councils can affect the company's performance (Amran & Ahmad, 2009). In addition, many publicly traded companies are owned and controlled by their founding families (Burkart, Panunzi & Shleifer, 2003; Hamberg et al., 2013), being one of the most prevalent forms of property structure around the world, contributing strongly to their economies (Pukthuanthong et al., 2013). Thus, one of the main characteristics of family businesses is the influence of the family in the management of the company, whether direct (general administration is under family responsibility), or indirect (the family is not part of the management of the company, but integrates the board of directors or participates in administrative decisions) (Beuren, Hein & Boff, 2011). In this sense, the performance of companies is an important element of management, as it reflects on its competitiveness (Beuren, Politelo, & Martins, 2013).

Thus, family involvement is associated with a specific way of managing and controlling business operations (Ussman, 1996; Zahra, 2005; Holt, Rutherford, & Kuratko, 2010), which can present positive reflexes in the performance of family businesses. Consequently, and due to the intensity of family involvement, companies create a specific set of objectives that contemplate family interests and values (Ussman, 1996; Sharma et al., 1997; Gómez-Mejia et al., 2007; Shyu, 2011), in turn used to pursue the vision of the company (Donckels & Frochich, 1991; Chua et al., 1999; Sciascia et al., 2014) and achieve a combination of financial and non-financial goals, that is, the desired market and accounting performance (Sharma, 2004; Poletti-Hoghes & Williams, 2017).

Thus, family participation focuses on the need to exercise authority and control in the organization (Berrone, Cruz & Gomez-Mejia, 2012), and interfere with the company's performance. According to Speckbacher and Wentges (2012), family businesses have better performances than non-relatives, and consequently have a competitive advantage (Mazzi, 2011). In this sense, in comparison with non-family companies, family organizations, due to their peculiar characteristics, may present a differentiated economic-financial performance (Erbetta et al., 2013).

The performance of family businesses is consistent with performance in terms of business and family dimensions, considering any point of their life cycle (Sharma, 2004). Speckbacher and Wentges (2012) mention the conservative tendency of family businesses in strategic planning in the first years of life. However, over time they become more aggressive due to the competitive environment. According to Franks *et al.* (2012), family control is important because it dominates several financial markets around the world and, according to the vision of the life cycle, the determinants of family control interact with the age of the company, that is, with the life cycle that is found (Franks et al., 2012), denoting the relationship between both factors.

The research developed by Speckbacher and Wentges (2012) revealed that companies that have founding members acting as executives in general perform better than others. However, different strategies lead to the use of different types of performance indicators (Micheli & Mura, 2017). Thus, the performance differs in family and non-family businesses. Another delimiter of the use of financial indicators comes from the stage of the life cycle that the company is in, that is, the changes that the company suffers over time, such as organizational changes, standards of management control systems, characterized by developmental stages that may affect their performance (Dickinson, 2011; Costa et al., 2017), in addition to the way the organization, whether familiar or not, faces management challenges.

The evaluation of the performance of companies has excelled in the management of organizations, because it is accounting or market, it is essential for their survival (Macedo & Corrar, 2010), making the analysis of this of paramount importance, because it is essential for the control business management (Olson & Slater, 2002). Thus, it is necessary to understand the variables that influence the performance of family and non-family businesses, as proposed in this research. However, despite the relevance of evaluating the performance of companies in the literature, this theme has been the subject of discussion, especially with regard to the use of indicators (Macedo & Corrar, 2010).

In studies revisited and developed from family and non-family companies, accounting indicators such as return on assets (ROA), Return on equity (ROE), Market-to-Book, as well as *Tobin's Q*, were generally analyzed to identify market performance as well.

The research developed by Anderson and Reeb (2003) showed that family businesses present a *Tobin's Q* and a higher ROA when compared to non-relatives. Thus, the participation of family members in the management of companies reflects on their performance. With regard to the greater profitability, Maury (2006) investigated family and non-family businesses in Western Europe, revealing a greater profitability of the former compared to non-family companies.

The study by Andres (2008) analyzed the performance of family businesses in Germany, indicating that these are more profitable and have major shares in the financial market when compared to the other companies surveyed. However, the performance of family businesses is only better in those where the founding family is still active in the executive or fiscal council. In this sense, it is evident that family property relates to the company's higher performance only under these conditions. Moreover, when families are only large shareholders, without significant representation in the councils, the performance of these companies is not distinguished from the others.

Din and Javid (2011) investigated the influence of family involvement in the performance of public companies in Pakistan, through the accounting performance variables ROA and ROE. According to the results measured, there is a positive and significant relationship between the determinant factors of family business and its performance. The study by Shyu (2011) also aimed to evaluate the influence of family property on the performance of Taiwan's public companies, revealing that the performance measured by the *proxies* ROA and *Tobin's Q* was positively related to the property Family. The author concluded that in family companies there is a greater engagement in obtaining better performances.

Erbetta *et al.* (2013) also obtained a positive relationship between the family property and the performance of its companies. Ayranci (2014) developed a research using in his sample family and non-family companies, highlighting that the influence of the family on the business should be considered through the analysis of the performance of these organizations. Reyna and Encalada (2016) analyzed the effect of succession on economic and financial performance,

scoring that, in a process of change from the second to the third generation family, there is a positive effect on the indicator in question.

Before the mentioned contexts, it is noted that family management can trigger positive effects on the performance of family businesses, which stimulates the development of this research in the Brazilian scenario of publicly traded companies. Moreover, the relevance of the papers presented is evident, since they reveal the differential of family businesses in their performance. Thus, according to Beuren *et al.* (2016), the different perspectives of the families, with regard to investments in companies, result in the performance of their companies, distinguishing them from the others for their particularities that, consequently, present reflections on performance. Subsequently, the procedures adopted for conducting this research are presented.

3 METHODOLOGICAL PROCEDURES

In order check the effect of family management in the performance of Brazilian companies, this research is characterized as descriptive; for procedures such as document and; when it comes to addressing the problem, as quantitative as this study used statistical methods to highlight the results.

3.1 Population and Sample

The study population consisted of 100 Brazilian family and non-family companies listed in B3, classified in the cyclical consumption sector. For this purpose, the sample consisted of 34 family and other non-family companies, with a view to comparing the results.

The cyclical consumption sector was chosen because it has the highest percentage of companies characterized as family members (Beuren *et al.*, 2013). In addition, this sample has relevance in the Brazilian scenario, as it contributes to about 50% of GDP and 85% of the jobs generated (Family Firm Institute, 2015), generating a significant economic impact (Speckbacher & Wentges, 2012). Thus, they are integral parts of the basis of economic growth and development measured in the country, being extremely important for the economic, social and cultural spheres (Acquaah, 2013). It was also decided to analyze family companies listed on stock exchanges, because according to Vieira (2014), over the decades, several studies have shown that family companies are present among publicly traded companies worldwide.

Also according to Vieira (2014), a difficulty in this type of study is the definition of family and non-family businesses. For this research, this identification was made through the reference form available on the website of the Securities and Exchange Commission (SEC), in Item 15.1/2, for family participation in the capital, and in items 12.6/8 and 12.9, for family participation in Company. Thus, it was defined as relatives the companies that presented the concentration of ownership with a family and/or the participation of family members on the Board of Directors (Shyu, 2011; Politelo *et al.*, 2014).

Besides that, to determine the company as a family member, a percentage of minimum stock concentration of 10% was used (Anderson & Reeb, 2003; Shyu, 2011; Politelo et al., 2014). However, there are different combinations of possible family ownership and/or management, considering the complexity of organizations (Frezatti, Bido, Mucci, & Beck, 2017). According to Chua *et al.* (1999), these combinations are three: property and family management; non-family property and family management; Family property and non-family management.

3.2 Collection and Data Analysis

The collection of information was given in the *Economática*® database, in the reference forms disclosed on the website of B3 or in the company's own websites, annually, in the period between the years 2012 to 2016 The specificity of the sampling period results from the availability of data. According to previous studies revisited in this study, three dependent and three independent variables were used to explain the performance of family and non-family businesses, which are presented in table 1.

Elisane Brandt, Adriana Kroenke, Caroline Pletsch

Table 1
Variable of the search

Classification	Variable	Mensuration	Authors (Year)
Dependents	*Q of Tobin* (QT)*	$\dfrac{VMA + D}{\text{Ativo Total}}$	Anderson and Reeb (2003); Martínez *et al.* (2007); Amran and Ahmad (2009); Shyu (2011); Erbetta et al. (2013); Hamberg *et al.* (2013); Pukthuanthong et al. (2013); Muttakin *et al.* (2014); Vieira (2014); Beuren, Politelo and Martins (2016); Poletti-Hughes and Williams (2017).
	Return on Total Assets (ROA)	$\dfrac{\text{Lucro Operacional}}{\text{Ativo Total}}$	Anderson and Reeb (2003); Martínez *et al.* (2007); Amran and Ahmad (2009); Bonilla *et al.* (2010); Shyu (2011); Dickinson (2011); Pukthuanthong et al. (2013); Muttakin *et al.* (2014); Vieira (2014); Halili et al. (2015); Beuren et al. (2016); Saleh *et al.* (2017).
	Return over Equity (ROE)	$\dfrac{\text{Lucro Líquido}}{\text{Patrimônio Líquido}}$	Martínez et al. (2007); Bonilla et al. (2010); Vieira (2014); Halili et al. (2015); Saleh *et al.* (2017); Costa *et al.* (2017).
Independents	Family business (FB)	*Dummy*: (Assigned 1 for family business and 0 for non-family company)	Anderson and Reeb (2003); Amran and Ahmad (2009); Ayranci (2014); Speckbacher and Wentges (2012); Hamberg et al. (2013); Pukthuanthong *et al.* (2013); Politelo et al. (2014); Muttakin *et al.* (2014); Vieira (2014); Halili *et al.* (2015); Hiebl *et al* (2015); Beuren *et al.* (2016); Kang; Kim (2016); Poletti-Hughes and Williams (2017); Saleh *et al.* (2017).
	Life Cycle (LC)	As Table 2 assigned: (1) Birthdate; (2) Growth; (3) Maturity; (4) Turbulence; (5) Decline.	Dickinson (2011); Costa *et al.* (2017); Frezatti *et al.* (2017).
	Variable of Control		
	Size (TAM)	Log (Total Assets)	Anderson and Reeb (2003); Martínez *et al.* (2007); Amran and Ahmad (2009); Bonilla *et al.* (2010); Shyu (2011); Speckbacher and Wentges (2012); Hamberg *et al.* (2013); Halili *et al.* (2015); Hiebl *et al.* (2015); Beuren *et al.* (2016); Kang and Kim (2016); Poletti-Hughes and Williams (2017); Costa *et al.* (2017).

Note. Caption: * VMA = V the public market value (obtained by multiplying the number of outstanding shares by its counted price on the stock exchange); D = VCPC – VCAC + VCE + VCDLP (VCPC: Book value of the company's circulating liabilities; VCAC: Book value of the company's circulating assets; VCE: Book Value of Stocks; VCDLP: Book value of long-term debts).
Source: Own elaboration (2018).

In this research we considered accounting measures (ROA and ROE) and market (*Tobin's Q*) as *proxies* to check for differences in the performance of companies, that is, the family and unfamiliar effect in this indicator.

One of the differentials of this study is the use of the explanatory variable life cycle, because the stage in which the company is reflected in its performance. Therefore, the variable in question was categorized according to the definitions developed by Dickinson (2011), which are presented in table 2.

Table 2
Life Cycle Stage as Dickinson Model (2011)

Phases		Date of Birth	Industrial	Maturity	Turbulence	decay
Operational Cash Flow		Companies enter the market with a deficit of knowledge about revenues and costs.	Profit margins are maximized during the period of increased investment.	The efficiency maximized by increasing operational knowledge.	The decline in growth leads to falling prices. Established routines prevent flexibility.	The decline in growth leads to falling prices.
		Cash flow (-)	Cash flow (+)	Cash flow (+)	Cash flow (+/-)	Cash flow (-)
Investment Cash Flow		Managerial optimism boosts investment.	Companies make large investments in advance to prevent entry.	Obsolescence increases with respect to the new investment.	Empty in theory.	Liquidation of assets to pay off debts.
		Cash flow (-)	Cash flow (-)	Cash flow (-)	Cash flow (+/-)	Cash flow (+)
Financing Cash Flow		Growing company's access bank debt, that is, they increase debt.	Growing companies access bank debt, increase debt.	Change of focus for acquiring financing and distributing excess dividends to shareholders, so that companies decrease debt.	Empty in theory.	Focus on refunds and/or debt negotiation.
		Cash flow (+)	Cash flow (+)	Cash flow (-)	Cash flow (+/-)	Cash flow (+/-)

Source: Adapted from Dickinson, V. Cash flow patterns as a proxy for firm life cycle. *The Accounting Review*, *86*(6),1969-1994. (2011)

To identify the stage of the life cycle of the companies, this research was based on the study by Dickinson (2011), which demonstrated how the combinations of cash flows related to the company's operations, its investments and financing can be used to classify the life cycle stage of organizations, and how these phases explain the profitability of companies. In this sense, we opted for the identification model proposed by the author to align itself with the purposes of this study.

The stage of birth of the company was classified as number 1; growth with the number 2; maturity, number 3; subsequently, when the company presents itself in turbulence, it was classified as number 4 and, finally, the number 5 was destined for companies in decline. For this, according to table 2, the identification of the phases of the life cycle of the companies was made by vertical analysis. In other words, the company was classified in the birth phase when it presented, in the years analyzed, cash flows and negative investment and financing, positive. For the growth phase, the company has positive cash flows for operational, negative for investment and positive for financing.

In the maturity phase, the cash flow presents positive values for operational and negative for investment and financing. The turbulence phase is identified by the three positive or negative cash flows. Finally, the decline phase can be identified by means of the negative cash flow to operational, positive for investment, and positive or negative for financing.

For data analysis, Multiple Linear Regression was performed through the *software* SPSS®. This method was chosen because, according to Wooldridge (2012), it allows analyzing a time series for each cross-sectional of the data set and starts to eliminate the effects of variables that were excluded from the study of variations in the variable Dependent over the years analyzed. This method also offers the possibility of studying the relationship between one or more explanatory variables (Fávero, 2015). The regression model of this search is defined as follows:

$$Desempenho = \beta_0 + \beta_1 \text{ Family Business} + \beta_2 \text{ CV1} + \beta_3 \text{ CV2} + \beta_4 \text{ CV3} + \beta_5 \text{ CV4} + \beta_6 \text{ CV5} + \beta_7 \text{ Size} + \varepsilon$$

It is noteworthy that initially it was considered as the dependent variable (performance) in the *Tobin's Q* model, subsequently the ROA and, finally, the ROE. Subsequently, the data analysis and the results obtained for the Brazilian family and non-family companies approached in this study are presented.

4 DESCRIPTIONS AND ANALYSIS OF DATA

According to the procedures listed in the methodology, a descriptive analysis of the companies belonging to the sample was carried out. Further, the correlation matrix is presented to evidence the relationship between dependent and independent variables. Finally, a regression analysis was conducted to observe whether there is an effect of family management on the performance of the companies studied. Firstly, family and non-family businesses were analyzed together (dichotomous variable).

Table 3 shows the descriptive statistics of the dependent and independent variables. It is emphasized that the variables family company (EF) and life cycle (CV) for descriptive statistics were not considered, since they are dichotomous variables.

Table 3
Descriptive statistics of variables

Variable	Minimum	Maximum	Average	Standard deviation
QT	3.006	8.472	5.856	0.814
ROA	0.000	0.814	0.083	0.095
ROE	0.000	2.835	0.472	2.134
SIZE	10.250	17.530	14.143	1.492

Source: Research data.

Table 3 shows that the sample is composed of a group of heterogeneous companies, although they are classified in the same sector. It appears that there are companies with favorable performances, and in counterpoint, there are companies with low performance. In general, both family and non-family businesses have comparable performance, although the return on equity variable presents maximum and average values that indicate the presence of some companies with better ROE than others. Thus, the characteristics of the sample reveal companies with high and low accounting and market performance, profitability, as well as size.

Before analyzing the effect of family management on the performance evaluation of Brazilian public companies belonging to the cyclical consumption sector listed in B3 by means of Multiple Linear Regression, the normality tests and the correlation of *Spearman* among the variables to identify potential multicollinearity problems, as shown in tables 4 and 5.

Table 4
Normality Test

Variable	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistics	Federal district	Sig.	Statistics	Federal district	Sig.
QT	0.167	344	0.000	0.797	344	0.000
EF	0.418	344	0.000	0.135	344	0.000
ROA	0.209	344	0.000	0.639	344	0.000
ROE	0.068	344	0.001	0.976	344	0.000
BV	0.252	344	0.000	0.890	344	0.000
SIZE	0.344	344	0.000	0.636	344	0.000

Source: Source of the search (2018).

The data presented in table 4 are not normal, since the *Kolmogorov-Smirnov* and *Shapiro-Wilk* tests showed significance at the level of 5%, indicating their distribution out of the

pattern. Then he performed the correlation *Spearman* to identify the intensity and relationship between the variables and possible multicollinearity problems (Fávero, Belfiore, Chan & Silva, 2009). This test does not only suggest a cause and effect relationship, but also an association between the variables studied. According to Gujarati and Porter (2006), the presence of multicollinearity in the data does not mean that the model presents problems, however, when elevated in relation to the variables, this consequently increases the error. Table 5 shows the results of *Spearman*'s correlation between the variables analyzed in the research.

Table 5
Correlation of *Spearman* between variables

Variables	ROA	ROE	QT	SIZE	BV	EF
ROA	1	0.585	-0.234	0.229	0.002**	0.150
ROE		1	0.010	0.055**	0.022**	0.038**
QT			1	-0.845	0.175	0.039
SIZE				1	-0.077	-0.124
BV					1	0.021**
EF						1

Note. Caption: * Correlation is significant at the 1% ** Correlation is significant at the 5 %
Source: Source of the search (2018).

According to the data presented in table 5, the existence of a relationship between the dependent and the independent variables is noted. Thus, there is no high degree of correlation between the explanatory variables (correlation higher than 85%), which reveals that there are no multicollinearity problems that affect the results of the regression model with the variables used. Thus, all explanatory variables illustrate the effect of family management on the performance of Brazilian public companies listed in the B3 belonging to the cyclical consumption sector.

These results reveal that family involvement is related to the other variables of the study, although this is better explained by the analysis of Multiple Linear Regression, which using the *Tobin's Q* as the dependent variable, and in the sequence, the ROA and the ROE , resulted in three models, presented in table 6.

Table 6
Results of Linear Regression model

Variable		Q of Tobin	ROA	ROE
Constant	Coefficient	-5.80	3.37	-0.32
	Sig.	0.00	0.00	0.75
Family business	Coefficient	-0.01	3.33	-0.88
	Sig.	0.996	0.00	0.38
Date of Birth	Coefficient	-2.37	-3.12	-1.82
	Sig.	0.02	0.00	0.07**
Industrial	Coefficient	-1.88	-0.41	-0.08
	Sig.	0.06**	0.68	0.94
Turbulence	Coefficient	-0.26	-1.33	-0.08
	Sig.	0.79	0.19	0.93
Decay	Coefficient	-0.73	-1.60	-0.21
	Sig.	0.47	0.11	0.83
Size	Coefficient	-3.25	5.72	-0.07
	Sig.	0.00	0.00	0.95
R²		0.39	0.41	0.12
R² Adjusted		0.15	0.17	0.01
Durbin-Watson		1.02	1.93	2.06
ANAL VARIANCE		0.00	0.00	0.79

Note. Caption: *Significance at the 5% level. **Significance at the 10% level.
Source: Source of the search (2018).

Table 6 shows, from the analyzed models, that the set of independent variables explains 39% of the market value of the companies analyzed, 41% of the return on assets and 12% of the return on equity, that is, the economic and financial performance. The low capacity to explain the model regarding family and non-family businesses and their performance was also

found in previous studies (Martínez et al., 2007; Bonilla et al., 2010; Din & Javid, 2011; Shyu, 2011; Ayranci, 2014; Reyna & Encalada, 2016).

We used *Tobin's Q*, ROA and ROE as *proxy* to measure the performance, which presented the variable family business as positive and significantly related to *Tobin's Q* and ROA. This finding supports the finding of Amran and Ahmad (2009), in which *Tobin's Q* is a measure that best explains the company's performance, as it reflects market performance rather than accounting. Another explanation for the *Tobin's Q*, in other words, the book value of the assets minus the book value of equity plus the market value of the equity, all divided by the book value of the assets, have excelled in this analysis is based on Hamberg et al. (2013) and Pukthuanthong *et al.* (2013), which argue about *Tobin's Q* being a future-oriented measure, which aims to reflect the market valuation of companies' assets in relation to the book value and future growth opportunities of the company. ROA and ROE, on the other hand, are considered profitability and productivity measures. Thus, these results revealed that family and non-family businesses have differences in their performance and market value Poletti-Hughes and Williams (2017) corroborate this assertion by showing that family businesses outweigh non-Family in terms of value (market performance).

Vieira (2014) analyzed as *proxies* for performance the Tobin's Q, ROA and ROE, noting also that one of the explanatory models for the relationship between the independent variables (family business) and the performance of the companies is the dependent variable *Tobin's Q*. Besides that, the authors found positive results for the ROA, as well as this research. The results of Shyu (2011), Hamberg *et al.* (2013), Muttakin *et al.* (2014), Beuren et al. (2016) and Poletti-Hughes and Williams (2017) also revealed that the family business influences the market performance, from the *Tobin's Q*, as evidenced in this research. In the study by Vieira (2014), the *proxy* for ROE performance also presented lower value of R^2, suggesting that this variable is not appropriate to measure the performance of the company.

Another variable that deserves prominence is the size of companies, since it was related to market performances (*Tobin's O*) and economic-financial (ROA). These findings indicate that the size of the company influences the market and economic-financial performance of the company, according to Martínez et al., (2007), Bonilla et al. (2010), Shyu (2011) and Hiebl *et al.* (2015). Saleh *et al.* (2017) also found a significant relationship between the size of the company and the performance of this measured by the ROE, corroborating with the findings of this study with family businesses, although these are inconsistent with those of Anderson and Reeb (2003), which indicate the variable size as non-determinant of a company's performance.

On the other hand, in this joint analysis of family and non-family businesses, the stages of the life cycle of birth and growth were related to the *proxies* of performance, although the other phases (maturity, turbulence and decline) did not have presented relations. These results do not corroborate the inferences of Dickinson (2011) and Costa *et al.* (2017), since they discuss that the experience and expertise acquired throughout the life cycle phases help to better decision-making, consequently improving performance.

Overall, the evidence found does not provide sufficient results for the other performance *proxies* (ROE), indicating that the evidence related to the performance of the family business is sensitive to the different performance settings, as approached by Vieira (2014).

In a comprehensive way, it is noted that family businesses differ from other companies mainly in terms of their value. According to Shyu (2011), compared to other shareholders, members of a family have more internal information and can predict the prospects of the company more easily. This allows them to make more precise decisions about reducing or increasing their properties, which affects the company's performance (Pukthuanthong et al., 2013). In addition, families can better know the market, as well as the company, due to its long-term presence in this (Pukthuanthong et al., 2013), thus guaranteeing a more effective monitoring and encouraging the increase of the family's wealth, consequently the Company's performance (Muttakin et al., 2014).

Therefore, as a consequence of the inherent particularities of family businesses, several arguments are presented to determine their performance, thus detecting divergences in the literature. These conflicting results are products of the different concepts of family business, as well as the use of different indicators to assess organizational performance, a statement corroborated by the results of this study. Thus, it is suggested that the classification of the family

businesses used in this study may be the reason for the non-significance in relation to the variable of *Tobin's Q* and, at the same time, significance with, for example, the variable ROA. According to the family businesses literature revisited, no studies were found that would support the reason why our results between the ROA, ROE and *Tobin's Q* performance measures diverged.

5 CONCLUSIONS

This study aimed to verify the effect of family management on the performance evaluation of 100 Brazilian public companies belonging to the cyclical consumption sector listed in B3. For this purpose, a descriptive, documental and quantitative approach was carried out using multiple Linear Regression, which comprised the years 2012 to 2016. The results were analyzed by means of statistical tests such as: normality test; *Spearman*'s correlation to verify the intensity and direction of the correlations between the variables; and multiple Linear Regression, to verify the significance of the models.

The findings revealed that family and non-family businesses differ in their value, that is, in the accounting performance measured by the ROA *proxy*, since the variable "family businesses" was significantly and positively related to the performance measure. Thus, in the use of the ROA, family management positively influenced the company's performance, differently from what occurred for the accounting performance measured by ROE and market performance by *Tobin's Q*, since these variables did not present relationship with family businesses. Another prominent variable in the analyzed model was the size of the company, which influences the performance of the analyzed sample. To this end, the size of the company implies greater efficiency in the use of assets by the family businesses of the cyclical sector, which denotes a positive relationship with the market and accounting performances.

These results allow us to infer why family businesses are one of the most important models of business development in Brazil and other countries, in addition to showing a relationship in the performance of family and non-family businesses. Thus, an increase in family ownership can trigger an increase in market performance, which indicates that the family has a stronger incentive to maximize the company's performance, for its wealth to be linked to it.

It is inferred therefore that is in family businesses greater engagement with the aim of obtaining better performance accounting. These valorize the maximization of the company's value in the long term, which was also proven by previous studies (Bonilla et al., 2010; Shyu, 2011; Hiebl *et al.*, 2015). Following Shyu (2011), Ayranci (2014) and Reyna and Encalada (2016), these findings demonstrate that there are differences in performance between family and non-family businesses.

This study contributes scientifically to corporate finances, both by identifying the performance elements of the commonly used companies, as well as by aggregating the existing literature with the reality of Brazilian family organizations of the cyclical consumption sector. In addition, this research can contribute socially by collaborating with the capital market in the market evaluation of the companies listed in the cyclical consumption sector in the stock exchange. In addition, this study provides an overview of different *proxies* that can be adopted by family businesses for performance evaluation, with a view to seeking a differential in the capital market, since the financial health of companies can attract investors. The contribution of this research can also be identified in relation to the greater efficiency of managers regarding accounting performance, since the companies of this research showed differences in market performance measured by the ROA *proxy*.

This work, despite its contributions on the effect of family management in assessing the performance of companies in the cyclical consumption sector, has limitations. The first consists in the use of only one sector of B3, making it impossible to generalize the results to other sectors. In second place, the analysis of only Brazilian companies precludes the comparability of results with other countries. Another limitation concerning model researched, since other variables of market performance, economic-financial and other determinants of family and non-family businesses could have been used. Also, other factors such as contingent variables and

organizational culture, together with the family business context, can affect an organization's performance.

It is suggested for future investigations the increase of the sample, both for other economic sectors of the stock exchange and for other countries, in order to obtain a broader picture of the reality of Brazilian family businesses and enable the comparability of results, as well as its generalization to similar economies. It is also recommended to replicate this study in other countries to consolidate the literature on family businesses. Because family influence is a relevant theme that awakens the interest of academia, the analysis of its impact on financial business becomes necessary through other variables. It is also suggested to consider the succession process and the migration of family management to the professional. Therefore, further research with deeper approaches on the subject is essential.

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