

# THE PERFORMANCE OF FAMILY FIRMS: A STUDY OF “GOING PUBLIC” EFFECT IN PORTUGAL

J. Vaz Ferreira\*

\*School of Economics and Management, University of Coimbra, Portugal

## Abstract

**How to cite this paper:** Ferreira, J.V. (2017). The performance of family firms: A study of “going public” effect in Portugal. *Corporate Ownership & Control*, 14(4), 132-149. <http://dx.doi.org/10.22495/cocv14i4art12>

Copyright © 2017 by Virtus Interpress  
All rights reserved

The Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0) will be activated starting from June, 2018 followed by transfer of the copyright to the Authors

**ISSN Online:** 1810-3057  
**ISSN Print:** 1727-9232

**Received:** 19.01.2017  
**Accepted:** 29.03.2017

**JEL Classification:** G3, G32  
**DOI:** 10.22495/cocv14i4art12

The aim of this study is to investigate the pre and post going public process of the operational, social, and financial and dividend policy performance of twenty-five Portuguese family companies in most of the sectors of economic activity that went public through public share offering and direct sale. In a family firm, the business belongs to a family, in which, most of the family members work. This investigation develops a framework to conclude if the decision to open the capital by the traditional family firms to the investors, in general, had caused or not, improvements on the economic and financial health of those firms. On the economic side, we find relevant declines in profitability, operating efficiency and activity levels and an increase in capital investment and real output. On the employment side, we document an irrelevant decline on employment. On the financial side, we observe that the financial equilibrium of firms after going public was negatively affected. On the dividend side, we document an increase in the dividend payout. Lastly, our results are generally robust surviving the partition of the dataset into various sub-samples.

**Keywords:** Initial Public Offerings, Going Public, Separation of Ownership and Control, Economic, Social, Financial and Dividend Performance of Family Firms

## 1. INTRODUCTION

The aim of this work is to investigate the pre and post going public process of the operational, employment, financial and dividend policy performance of twenty-five Portuguese family companies in most of the sectors of economic activity that went public through public share offering, direct sale. That is, this work develops a framework to conclude if the decision to open the capital by the traditional family firms to the investors, in general, had caused or not improvements on the economic and financial health of those firms. Going public means that an entrepreneur gives up ‘private benefits of control’<sup>17</sup>. On the operational side, we find relevant declines in profitability, operating efficiency and activity levels, but an increase in capital investment and real output. On the employment side, we document an irrelevant decline on employment. On the financial side, we observe that the financial equilibrium of firms after going public was negatively affected. On the dividend side, we document an increase in the dividend payout. Lastly, our results are generally

robust surviving the partition of the dataset into various sub-samples.

Too many business people, too many family companies, going public are the ultimate badge of success, the proof that their hard work for many years has been worthwhile. Nevertheless, this extremely important move should be made only after entrepreneurs carefully calculate their costs, benefits, namely, in terms of performance, and risks. Going public may be the best possible strategy for the family firms, cementing and even magnifying their success. Or it may be a disaster, undermining the management team’s hard work and transforming a strong company into a failure. It is impossible to know ahead of time which possibility will be realised, but these firms that want to go public must take some basic steps and analysis to ensure that their decision is a sound one and that their chances of success are high.

The initial public offering (IPO) is frequently the largest equity issue a corporation ever makes. Every year, an average of one-third of all the funds raised through common equity is raised through going public. The going public process is also an important channel through which an entrepreneur or venture capitalist gets rewarded for his initial

<sup>17</sup> The ‘private benefits’ can also be regarded as costs saved by a firm for not being traded publicly

effort. The understanding of the process of going public is critical to any attempt both to increase equity financing and to stimulate entrepreneurial and venture capitalist activities.

IPO's are one of the most researched fields in finance. Mostly, the focus of that research has been the anomalies such as short-run underpricing and long-term underperformance. For the long run underperformance, the focus has almost always been on the stock price performance, with a few exceptions, such as, Mikkelson, Partch and Shah (1997), who investigate the operating performance of US IPO's after going public. Outside the US, this type of investigation is even scarcer. This was the main reason that motivates us to investigate the operational, financial, employment and dividend performance of IPO Portuguese firms. To the best of our knowledge, this paper is the first attempt to do such study on the Portuguese IPO's.

This investigation wants to contribute to the clarification of this notion. Our study examines how the process of opening the capital to the public in a sample of Portuguese companies affects the financial and operational performance of the former closely-held operations. Since, in Portugal, family firms, little and medium enterprises (PME), are the great majority of all Portuguese firms, this issue is of crucial importance, the analysis conducted in this study seeks to find out whether selling part of the capital of these PME in Portugal is truly desirable for the families and their descendants. The scope is not only limited to economic aspects of firms after going public but also, it is oriented to the social and financial consequences on firms of the going public process. In particular, this work tries to determine whether, after going public, these firms increase (1) their profitability, (2) their operating efficiency, (3) their capital investment, (4) their real output, (5) their employment, (6) their dividend policy (7) their activity levels, (8) their short-term equilibrium and (9) their capital structure.

Jain and Kini [1994] found that family companies exhibit a decline in post-issue operating performance, as measured by the operating return on assets and operating cash flows deflated by assets, relative to their pre-going public levels, both before and after industry adjustments. According to them, there are a number of potential explanations for the decline in the post-issue operating performance after firms go public. One explanation is related to the potential for increased agency costs when a company makes the transition from private to public ownership. As a result of the heightened conflict of interest between initial owners and shareholders, the performance of the firm could suffer as managers have more incentives. A second reason could be that manager's attempt to window-dress their accounting numbers prior to going public. This will lead to the pre-IPO performance being overstated and post-IPO performance being understated. A third explanation for the decline in operating performance is that entrepreneurs time their issues to coincide with periods of unusually good performance levels, which they know cannot be sustained in the future.

Our work goes beyond what was done by Anderson and Reeb (2003), since the work is

extended to several subsamples, besides the whole sample, such as: (1) Companies operating in competitive industries and companies operating in non-competitive industries (2) Companies with national allocation of control (more than fifty percent) and companies with foreign allocation of control (3) Firms with a new CEO after going public and firms with no changes in CEO after going public (4) Firms with a concentrated structure after going public and firms with a no-concentrated structure after going public (5) Firms going public by IPO and firms going public by direct sale (6) firms that have shareholders in management after going public and firms that do not have shareholders in management after going public and (7) Firms that were restructured before going public and firms that were not restructured before going public.

We feel that, in Portugal, there is a knowledge gap about the operational, social and financial performance and dividend policy of firms after going public. Our work wants to fill that gap and we feel that a multi-industry sample of family firms provides a general perspective of the consequences of opening the capital to the public and give us interesting opportunities to identify the consequences for firms after going public Using conventional multivariate pre-versus post initial public offerings (IPO) and direct sales (DS) comparisons, we research those consequences on performance changes in closely-held firms after the going public process.

This study is organised as follows. Section 2 provides the theoretical and empirical research on the process of going public for the closely-held companies. Data and sample collection we employ are described in Section 3. Section 4 describes the methodology, empirical proxies and testable predictions. Section 5 presents the empirical results for the full sample and for all sub-samples. Section 6 presents the summary and conclusions.

## 2. LITERATURE REVIEW

The relationship of agency is one of the oldest and commonest codified modes of social interaction and it is directly related to the performance behaviour of firms after going public. We can say that an agency relationship has arisen between two or more parties when one, designated as the agent, acts for, on behalf of, or as a representative of the other, designated the principal, in a particular domain of decision problems. Agency theory has brought the roles of managerial decision rights and several external and internal monitoring and bonding mechanisms to the forefront of theoretical discussions and empirical research.

Agency costs arise when the interests of the firm's managers are not aligned with those of the firm's owner and take the form of preference for on-the-job perks and entrenched decisions that reduce shareholder wealth. The magnitude of these costs is limited by how well the owners and delegated third parties, such as banks, monitor the actions of the outside managers.

Conflicts of interest between corporate insiders, such as managers and controlling shareholders, on the one hand, and outside

investors, such as minority shareholders, on the other hand, are central to the analysis of the modern company. The insiders who control corporate assets can use these assets for a range of purposes that are detrimental to the interests of the outside investors. In other words, they can divert corporate assets to themselves, through outright theft, dilution of outside investors through share issues to the insiders, excessive salaries, asset sales to themselves or other corporations they control at favourable prices or transfer pricing with other entities they control.

Agency costs should be lower at firms where a single family controls more than 50 percent of the firm's equity. At a small, family company where a single family controls the firm, the controlling family also fulfils the monitoring role that large blockholders perform at publicly traded corporations. Agency costs should increase with the number of nonmanager shareholders. As the number of shareholders increase, the free-rider problem reduces the incentives for limited-liability shareholders to monitor. With less monitoring, agency costs increase. Also, agency costs should be higher at firms managed by an outsider.

One of the principal remedies to agency problems is the law. The corporate and other law gives outside investors, including shareholders, certain powers to protect their investment against expropriation by insiders. These powers in the case of shareholders range from the right to receive the same per share dividends as the insiders, to the right to vote on important corporate matters, including the election of directors, to the right to sue the company for damages.

Okamura and Cowling (2002) prove the poor operating performance of Japanese IPO companies. At the same time, Kim, Kitsabunnarat and Nofsinger (2004), look at the emerging market of Thailand and conclude that the magnitude of the decrease in performance after flotation is much significant in Thailand than in the US. That is, literature agrees that a significant decline in operating performance is related to the going public decision; the tendency of new IPO's to underperform in the long run is one of the less well-understood tendencies.

One of the major hypotheses explicating such post-issue underperformance is the consequence of changing ownership. Going public increases agency problems by the dispersion of ownership. It is assumed that agency cost increases as the conflict between managers and shareholders become worse since ownership becomes disperse after the IPO.

The pros and cons of going public are the same for both strategies presented above, but they will carry different weights depending on the company ultimate goal. According to Anderson and Reeb (2003), the pros are as follows:

1. The principal advantage of going public is that it provides an immediate influx of capital;
2. If the company stock performs well in the aftermarket (if it is listed), the company can raise more cash later through additional equity offerings;
3. Public companies tend to be more valuable than comparable private companies due to an increased liquidity and, as public companies, can

win costumers, secure financing or expand to other markets.

4. Going public gives the company the opportunity to offer vendors, suppliers and employees stock or stock options, giving these individuals a stake in the company's success.

5. The stock market also provides a managerial discipline device, both by creating the danger of hostile takeovers and by exposing the market's assessment of managerial decisions;

6. Finally, going public the companies' shareholders find an easy way to liquidate some of their investment, simply by selling stock. In the meantime, their stock can be used as collateral to secure personal loans.

Having seen the pros, the cons of going public are as follows:

1. Going public absorb far more of management's time, energy, and effort. The energy drain goes on for months and is far more than an inconvenience;

2. As new shareholders are added, the shareholder power to control the company is diluted. Although control of a company typically is not lost by going public, future offerings could cause loss of control.

3. Related to a loss of control is a reduction in flexibility. The main shareholder will have to include the new shareholders and directors in many decisions;

4. In addition to the cost of investor and public relations, the company may face some additional costs as a public company;

5. Fluctuations in the stock market (if the company is listed) will affect the company's value;

6. Stock sales by insiders are limited, which restricts the ability to get out of the business. Therefore, the IPO's advantages as an exit strategy for insiders can be restricted significantly.

### 3. DATA AND SAMPLE COLLECTION

Our empirical work is done for family companies that fully or partially open their capital to outside investors through an Initial Public Offering or Direct Sale. We select firms that have their initial share public offering and have, at least, three annual observations of operational, social and financial data in the years N-5 to N-1 and in the period N+1 to N+5, where the year of going public is defined as year N.

In all cases, we required directly from the firms: (1) the offering prospectus for their initial offer, which invariably presents several years of pre going public financial data, as well as details about the public offer itself, and (2) the annual reports from the post going public periods. Most of the companies we approached fully or partially complied with our requests. In multiple cases, we supplemented financial statements sent to us with secondary sources, namely, commercial banks, Bank of Portugal and Euronext Lisbon databases. We also had personal contacts with managers of some of the firms. In the case of doubts about some aspects of the firms, we also made several phone call contacts. In a few cases, we had an interview with the chief financial officer (CFO). Our data includes twenty-five firms that went public. Therefore, our data span a

larger time period than any other initial public offering study in Portugal. Table 1 provides descriptive information on these companies included in our database: the name of the company, type of industry, the date and the percentage of capital that was sold at the date of the sale.

**Table 1.** Sample of family firms going public

<i>Company</i>	<i>Industry</i>	<i>Date</i>
Água do Luso	Water	2010
Amieiros Verdes	Textile	2000
Auto - Industrial	Automobile Retail	2007
Banco Comercial dos Açores	Banking	2006
Caima	Cellulose and Paper	2008
Cofina	Media and Cellulose	2008
Compta	Telecommunication and Information Systems	2005
Dom Pedro	Tourism	2006
Engil	Construction	1999
Est. Jerónimo Martins	Retailing	1999
Estoril Sol	Tourism	2001
F. Ramada	Cellulose and Paper	2003
Finibanco	Banking	2008
Lisgráfica	Graphic Industry	2008
Mota & Companhia	Construction	2007
Orey Antunes	Transportation	2002
Papelaria Fernandes	Commerce	2001
Pararede	Telecommunication and Information Systems	2009
Sacor Marítima	Transportation	1999
Salvador Caetano	Automobile Retail	2002
Soares da Costa	Construction	2001
Sonae Imobiliária	Immovable Property	2007
Soporcel	Cellulose and Paper	2009
Teixeira Duarte	Construction	2007
Telecel	Telecommunication	2006

#### 4. METHODOLOGY, EMPIRICAL PROXIES AND TESTABLE PREDICTIONS

In the first part of the methodology, we use the Wilcoxon test for measuring post-operational and financial performance. In the second stage of empirical testing, we develop the Kruskal-Wallis methodology for testing the significant differences between the subsamples.

##### 4.1. The Wilcoxon signed rank test for measuring post-operational and financial performance

Family company holders expect that the going public process will be the solution for the problems that most family-owned enterprises face today, such as, low operating efficiency, low profitability, low output, weak capital structure, etc. They expect that with fresh capital and new owners, companies will become financial healthier. We first compute empirical proxies for each company for the three years before to the available years after the sale of capital through the IPO. We then compute median and means of each variable for the pre going public period (years N-5 to N-1) and post going public periods (years N+1 to N+5). The year of the IPO, year N, is excluded from the analysis because it includes both the months before and the months after going public. The date of the sale is the date on which the traditional owners, stockholders, sold a certain

amount of shares for the first time. Having computed pre-and post going public means and medians, we use the Wilcoxon signed-rank test, as one of the methods of testing for significant changes in the variables. This procedure tests whether the means and the median difference in variable values between the pre and post going public samples is zero. The Wilcoxon signed rank test, also known as the Wilcoxon matched pairs test, is a non-parametric test used to test the means and the median difference in paired data. This test is the non-parametric equivalent of the paired t-test. The test is based on the magnitude of the difference between the pairs of observations.

##### 4.2. The Kruskal-Wallis test for analysing the significant differences between the subsamples

In the second stage of empirical testing, we test for significant differences between each dichotomous subsample pair using Kruskal-Wallis (KW) tests. It is used when there are three or more groups of non-parametric data and is a generalisation of the rank sum test to three or more groups; all observations are ranked regardless of the treatment group. Ranks are handled as in the rank sum test. The KW test was used to compare the several performance indicators for each pair of subsamples of the sub-sampling criteria. With the null hypothesis that the pair of sub-samples from possibly different populations actually originates similar populations, it was interpreted that the rejection of the null hypothesis implies that statistic evidence exists for differences among the sub-samples, therefore, the assumption of the sub-sample criterion; the methodology consists of the non-parametric Kruskal-Wallis test.

##### 4.3. Subsamples, empirical proxies and testable predictions

The primary objective of this study is to test whether family companies improve their financial and operational performance after going public. In the first stage of empirical testing, in order to pursue this primary objective to examine the post going public behaviour of firms, we study the following performance areas: profitability (return on sales), operating efficiency (sales efficiency), capital investment (real capital expenditure to sales), real output (real sales), employment (total employment), dividend policy (dividend to sales), activity levels (sales to total assets), short-term financial equilibrium (cash and banks to short-term debt) and capital structure (total debt to total assets). The subsamples are presented in Table 2.

Having computed pre-and post-going public means and medians, we used the Wilcoxon signed-rank test, as one of the methods of testing for significant changes in the variables. We test the following hypotheses for the going public process: (1) it decreases a firm's profitability, (2) it decreases a firm's operating efficiency, (3) it increases its capital investment spending, (4) it increases its output, (5) it decreases employment, (6) it increases its payout ratio, (7) it decreases its activity levels (8)

it improves its short run financial equilibrium, (9) and it improves its capital structure.

**Table 2.** Subsample table

FIRM	COMPETITION		CONTROL		CEO		STRUCTURE		METHOD		MANAGEMENT		RESTRUCTION	
	C	NC	NaC	FC	SCEO	DCEO	CS	NoCS	IPO	DS	SM	NoSM	R	NoR
Água do Luso	X		X		X		X		X			X	X	
Amieiros Verdes	X		X		X			X	X		X			X
Auto-Industrial	X		X			X		X		X			X	
B C A	X		X		X			X	X		X		X	
Caima		X		X	X			X		X				X
Cofina	X			X		X		X	X		X		X	
Compta	X		X			X		X		X	X			X
Dom Pedro		X	X			X		X		X		X		X
Engil	X			X	X			X	X		X			X
Est.J. Martins	X		X		X			X	X		X		X	
Estoril Sol		X	X			X	X			X	X			X
F. Ramada	X		X		X			X	X		X			X
Finibanco	X			X		X		X		X	X			X
Lisgráfica	X		X			X		X	X			X		X
Mota & Companhia	X		X			X	X			X	X		X	
Orey Antunes		X	X			X		X	X			X	X	
Papelaria Fernandes		X	X		X		X			X	X			X
Pararede	X			X	X			X	X		X		X	
Sacor Marítima	X		X			X		X	X		X			X
Salvador Caetano	X			X		X	X			X		X		X
Soares da Costa	X		X			X		X		X		X		X
Sonae Imobiliária	X		X			X	X		X		X			X
Soporcel		X		X		X	X			X	X			X
Teixeira Duarte	X			X		X		X		X	X			X
Telecel		X		X		X	X		X		X			X
<b>TOTAL</b>	<b>18</b>	<b>7</b>	<b>16</b>	<b>9</b>	<b>9</b>	<b>16</b>	<b>8</b>	<b>17</b>	<b>13</b>	<b>12</b>	<b>19</b>	<b>6</b>	<b>8</b>	<b>17</b>

NOTES: [C - Competitive market; NC - No Competitive Market]; [NaC - National control; FC - Foreign control]; [SCEO - Same Chief Financial Officer; DCEO - Different Financial Officer]; [CS - Concentrated structure after the IPO; NoCS - No concentrated structure after the IPO]; [IPO - Initial Public Offering; DS - Direct sale]; [SM - With shareholders in management; NoSM - Without shareholders in management]; [R - With Restructurings before privatization; NoR - Without Restructurings before privatization]

Table 3 presents a summary of testable predictions, including: in the first place, the performance areas. We examine for changes resulting from the going public decision. In the second place, we include the financial indicators used for each performance area. Among them, to establish the predicted relationship, we chose the

indicator with the best characteristics to get the best knowledge of each area of performance. In addition, we added the predicted changes in the financial indicators after the going public process, based on our beliefs on the post going public performance. The results of the full sample are presented in Table 4.

**Table 3.** Description of testable predictions

Characteristics	Proxies	Predicted Relationship
Profitability	Return on Sales (ROS) = Net Income / Sales	ROSA < ROSE
Operating Efficiency	Sales Efficiency (SALEFF) = Sales / Total Employment	SALEFFA < SALEFFB
Capital Investment	Real Capital Expenditure to Sales (RCESA) = Real Capital Expenditure / Sales	RCESAA > RCESAB
Output	Real Sales (SAL) = Nominal sales/Consumer price index	SALA > SALB
Employment	Total Employment (EMPL) = Total Number of Employees	EMPLA < EMPLB
Dividend Policy	Dividend to Sales (DIVSAL) = Dividend/Sales	DIVSALA > DIVSALB
Activity Levels	Sales to Total Assets (STA) = Sales/Total Assets	STAA < STAB
Short Term (ST) Equilibrium	Cash and Banks to ST Debt (CBTSTD) = Cash and Banks/ST Debt	CBTSTDA > CBTSTDB
Capital Structure	Total Debt to Total Assets (TDTA) = Total Debt/Total Assets	TDTAA < TDTAB

We next present the empirical proxies for each determinant predicted to affect post-IPO performance. We will describe how we expect each variable to impact the newly-going public firm's financial and operating performance. In addition to

analysing the full sample of closely-held firms, we also cut out our full sample into several dichotomous subsamples, as in the following sections.

**Table 4.** Summary of results from tests of predictions for the full sample of all closely-held firms going public

VARIABLES	N	Mean Before (Median)	Mean After (Median)	Mean Change (Median)	Z-statistics for difference in Means (After - Before)	Z-statistics for difference in Medians (After - Before)	Percentage of firms with improved performance: Mean (Median)	Z-statistics for significant performance (Mean)	Z-statistics for significant performance (Median)
PROFITABILITY									
Return on Sales (ROS)	25	0.29 0.22	0.19 0.17	-0.10 -0.05	2.823*	1.780*	66.00% 68.00%	2.109*	2.225*
OPERATING EFFICIENCY (%)									
Sales Efficiency (SALEFF)	25	1.64 1.32	1.35 0.99	-0.29 -0.33	3.121*	2.109*	69.00% 61.00%	2.223*	2.230*
CAPITAL INVESTMENT									
Real Capital Expenditure to Sales (RCESA)	25	1.12 0.98	1.45 1.17	0.33 0.19	2.009*	1.641	65.00% 66.00%	2.792*	2.772*
REAL OUTPUT									
Real Sales (SAL)	25	1.11 1.01	2.49 2.34	1.38 1.33	2.904*	2.832*	68.00% 64.00%	3.242*	3.101*
EMPLOYMENT									
Total Employment (EMPL)	25	1011 893	915 843	-96.00 -50.00	0.892	0.654	56.00% 52.00%	2.987*	2.765*
DIVIDEND POLICY									
Dividend to Sales (DIVSAL)	25	0.01 0.01	0.04 0.02	0.03 0.01	2.621*	2.423*	66.00% 60.00%	2.908*	2.656*
ACTIVITY LEVELS									
Sales to Total Assets (STA)	25	0.57 0.53	0.49 0.42	-0.08 -0.11	1.665*	1.778*	66.00% 60.00%	3.038*	2.776*
SHORT TERM EQUILIBRIUM									
Cash and Banks to ST Debt (CBTSTD)	25	0.65 0.19	0.31 0.08	-0.35 -0.11	1.440	0.013	36.00% 38.00%	2.566*	3.127*
CAPITAL STRUCTURE									
Total Debt to Assets (TDTA)	25	0.52 0.43	0.57 0.49	0.05 0.06	1.605	1.578	38.00% 44.00%	3.059*	2.934*

\*rejection of H0 at five percent level of significance

This table presents empirical results for our full sample of closely-held firms going public. This table presents the results of the Wilcoxon rank sum Test (with its Z-statistic) – that is used as a test for significance for change in mean and median values – for each empirical proxy. Presenting the number of useable observations, the mean and the median values of the proxy before and after closely-held firms going public and their change in the proxy's value after versus before those firms going public and the correspondent test of significance of the mean and median change. The three final columns elements are the percentage of firms whose values of empirical proxy change as predicted and the respective test of significance of this change

#### 4.3.1. Competitive versus non-competitive analysis

Several researchers are convinced that the organisational structure of competitive and the non-competitive markets are well different (Table 5). The explanation for separating the sample into competitive and non-competitive industries is understandable since the competitive and the non-competitive markets have specific function rules. According to D'Souza and Megginson (1999), competitive firms are defined as “those that are subject to international product market competition, and non-competitive firms as those that are relatively free of product market competition”. We expect that, in general, considering the different performance variables, companies in competitive markets are in a good position to get better results than companies integrated into non-competitive markets. Of the 25 companies for which we have data, 18 firms (72 percent) are operating in competitive industries.

#### 4.3.2. Foreign versus national allocation of control analysis

It is relevant to investigate the influence of foreign investment and management know-how on post going public operational and financial performance, as compared to the post going public performance of national investments (Table 6). Smith *et al.* (1997) reported a significantly positive relationship between profitability and foreign ownership and a significantly negative relationship between leverage and foreign ownership.

We perform the Kruskal-Wallis test to determine the effect of private ownership and foreign allocation of control on performance. We expect the greatest performance behaviour will result from going public in which foreign private owners gain control of the firm. In other words, we expect that foreign allocation of control will lead to performance changes after going public much more pronounced than in the case of national allocation of control. We are convinced that the same results would be observable for the Portuguese family companies that opened their capital going public

through IPO or DS. In our sample, sixteen firms (64 percent) out of twenty-five companies had a national allocation of control and nine firms (36 percent) had a foreign allocation of control after privatisation.

**Table 5.** Comparisons of performance changes after going public for companies operating in competitive industries and companies operating in no competitive industries

VARIABLES	N	Mean Before (Median)	Mean After (Median)	Mean Change (Median)	Z-statistics for difference in Means (After-Before)	Z-statistics for difference in Medians (After-Before)	Percentage of firms with improved performance (Mean (Median))	Z-statistics for significance performance (Mean)	Z-statistics for significance performance (Median)	KW Results for differences between subsamples for mean		
										Mean Rank		KW test
										C	NC	
<b>PROFITABILITY Return on Sales</b>												
Competitive	18	0.24 0.13	0.17 0.12	-0.07 -0.01	1.945*	2.092*	65.56% 64.44%	1.793	1.521	11.78	12.77	0.19
No Competitive	7	0.35 0.26	0.21 0.18	-0.14 -0.08	1.998*	2.099*	59.14% 59.14%	1.776*	1.856*			
<b>OPERATE. EFFICIENCY Sales Efficiency</b>												
Competitive	18	1.66 1.33	1.42 1.11	-0.24 -0.22	2.323*	2.453*	66.67% 66.67%	1.106	1.465	12.12	13.65	0.343
No Competitive	7	1.59 1.27	1.25 0.89	-0.34 -0.38	2.454*	2.421*	65.71% 72.50%	1.908*	2.543*			
<b>CAPITAL INVESTMENT Real Cap.Exp.to Sales</b>												
Competitive	18	1.09 0.87	1.51 1.22	0.42 0.35	0.904	1.102	60.00% 54.44%	2.459*	2.521*	12.56	13.71	0.187
No Competitive	7	1.19 1.05	1.39 1.14	0.20 0.09	0.845	1.041	44.29% 44.29%	1.876	2.091*			
<b>REAL OUTPUT Real Sales</b>												
Competitive	18	0.97 0.81	2.81 2.59	1.84 1.78	2.157*	2.201*	68.89% 63.33%	2.516*	2.408*	12.61	14.00	0.672
No Competitive	7	1.17 1.09	2.28 2.16	1.11 1.07	2.197*	2.197*	65.71% 65.71%	2.201*	2.201*			
<b>EMPLOYMENT Total Employment</b>												
Competitive	18	1007.00 899.00	939.00 877.00	-68.00 -22.00	0.283	0.355	55.56% 50.00%	2.805*	2.666*	12.72	14.71	0.789
No Competitive	7	1089.00 834.00	899.00 807.00	-190.00 -27.00	0.169	0.154	57.14% 57.14%	2.129*	2.026*			
<b>DIVIDEND POLICY Dividend to Sales</b>												
Competitive	18	0.01 0.01	0.06 0.03	0.05 0.02	1.160	1.363	51.11% 44.44%	1.290	1.445	12.67	13.86	0.717
No Competitive	7	0.01 0.00	0.03 0.01	0.02 0.01	1.521	0.674	51.43% 42.86%	1.232	1.604			
<b>ACTIVITY LEVELS Sales to Total Assets</b>												
Competitive	18	0.53 0.56	0.51 0.44	-0.02 -0.12	2.089*	2.461*	26.67% 22.22%	2.604*	2.8 d26*	13.22	12.00	0.563
No Competitive	7	0.69 0.58	0.44 0.37	-0.25 -0.21	2.183	2.177*	35.71% 35.71%	2.201*	2.201*			
<b>SHORT TERM EQUILIBRIUM Cash and Banks to ST Debt</b>												
Competitive	18	0.61 0.16	0.35 0.12	-0.26 -0.04	1.342	1.659	36.67% 35.56%	1.121	1.226	13.44	11.43	0.329
No Competitive	7	0.69 0.12	0.27 0.05	-0.42 -0.07	0.169	0.352	28.57% 28.57%	1.573	1.483			
<b>CAPITAL STRUCTURE Total Debt to Assets</b>												
Competitive	18	0.53 0.43	0.56 0.45	0.03 0.02	1.453	1.320	38.89% 38.89%	1.336	1.409	12.03	11.66	0.299
No Competitive	7	0.43 0.39	0.61 0.51	0.18 0.12	1.666	1.547	41.43% 37.14%	1.723	1.457			

\*rejection of H0 at five percent level of significance

This table presents comparisons of performance changes for companies operating in competitive industries and companies operating in no competitive industries. The table presents the results of the Wilcoxon rank sum Test (with its Z-statistic) - that is used as a test for significance for change in mean and median values between before and after those firms going public - and of the Kruskal-Wallis test between competitive and no competitive firms - in mean terms and in median terms respectively (statistic mentions the 'p' value using the chi-squared approximation) - for each empirical proxy and each subsample of the pair. This table presents the number of useable observations, the mean and the median values of the proxy before and after the closely-held firms going public, their change in the proxy's value after versus before those firms going public, the respective test of significance for the mean and median change, the mean rank of the KW test between competitive and no competitive subsamples and the respectively statistic 'p' value for mean and median comparison.

**Table 6.** Comparisons of performance changes after going public for companies with greater or equal to 50% of capital in national hands versus companies with less than 50% of capital in national hands

VARIABLES	N	Mean Before (Median)	Mean After (Median)	Mean Change (Median)	Z-statistics for difference in Means (After-Before)	Z-statistics for difference in Medians (After-Before)	Percentage of firms with improved performance Mean (Median)	Z-statistics for significance (Mean)	Z-statistics for significance (Median)	KW Results for differences between subsamples for mean		
										Mean Rank		KW test
										NaC	FC	
PROFITABILITY Return on Sales												
National Allocation	16	0.33 0.24	0.14 0.16	-0.19 -0.08	2.102*	2007*	66.25%	2.434*	2.347*	13.45	14.56	0.323
Foreign Allocation	9	0.23 0.27	0.19 0.22	-0.04 -0.05			1.244					
OPERATING EFFICIENCY Sales Efficiency												
National Allocation	16	1.69 1.43	1.35 0.99	-0.34 -0.44	2.232*	2.453*	68.75%	2.495*	2.934*	18.17	10.09	0.008*
Foreign Allocation	9	1.66 1.26	1.43 0.99	-0.23 -0.27			1.192					
CAPITAL INVESTMENT Real Capital Expenditure to Sales												
National Allocation	16	1.16 1.04	1.33 1.14	0.17 0.10	1.552	1.533	51.25%	2.023*	1.826	11.89	13.77	0.843
Foreign Allocation	9	0.95 0.79	1.59 1.19	0.64 0.40			2.138*					
REAL OUTPUT Real Sales												
National Allocation	16	1.17 1.19	2.12 2.09	0.95 0.90	1.980	1.897	61.25%	2.180*	2.059*	11.09	18.39	0.043*
Foreign Allocation	9	1.03 0.87	2.74 2.49	1.71 1.62			2.565*					
EMPLOYMENT Total Employment												
National Allocation	16	1019.00 895.00	929.00 866.00	-90.00 -29.00	0.547	0.632	50.00%	2.521*	2.521*	12.22	14.39	0.479
Foreign Allocation	9	999.00 907.00	899.00 829.00	-100.00 -78.00			0.457					
DIVIDEND POLICY Dividend to Sales												
National Allocation	16	0.02 0.01	0.06 0.04	0.04 0.03	0.776	0.157	52.50%	2.803*	2.023*	12.53	13.83	0.671
Foreign Allocation	9	0.01 0.01	0.03 0.03	0.02 0.02			0.123					
ACTIVITY LEVELS Sales to Total Assets												
National Allocation	16	0.61 0.78	0.43 0.59	-0.18 -0.19	2.109*	2.012*	25.00%	2.826*	2.101*	17.12	11.12	0.039*
Foreign Allocation	9	0.49 0.49	0.46 0.47	-0.03 -0.02			0.415					
SHORT TERM EQUILIBRIUM Cash and Banks to ST Debt												
National Allocation	16	0.73 0.26	0.27 0.06	-0.46 -0.20	1.862	1.207	38.75%	1.409	1.784	12.49	13.28	0.454
Foreign Allocation	9	0.57 0.13	0.49 0.11	-0.08 -0.02			0.296					
CAPITAL STRUCTURE Total Debt to Assets												
National Allocation	16	0.47 0.46	0.62 0.54	0.15 0.08	1.329	1.652	50.00%	2.490*	2.756*	13.16	14.50	0.340
Foreign Allocation	9	0.53 0.41	0.56 0.46	0.03 0.05			1.343					

\*rejection of H0 at five percent level of significance

This table presents comparisons of performance changes for companies with greater or equal to fifty percent of capital in national hands (National Allocation) versus companies with less than fifty percent of capital in national hands (Foreign Allocation). The table presents the results of the Wilcoxon rank sum Test (with its Z-statistic) - that is used as a test of significance for change in mean and median values between before and after going public - and the Kruskal-Wallis test companies with National Allocation and companies with Foreign Allocation - in mean terms and in median terms respectively (statistic mentions the 'p' value using the chi-squared approximation) - for each empirical proxy and each subsample of the par. The table presents the number of useable observations, the mean and the median values of the proxy before and after privatization, the ir change in the proxy's value after versus before going public, the respective test of significance for the mean and median change, the mean rank of the KW test between National and Foreign subsample and the respectively statistic 'p' value for mean and median comparison.

#### 4.3.3. Change in Chief Executive Officer (CEO)

We also observe various post going public changes in a firm's CEO (Table 7). Of the firms for which we have CEO and Board of Directors data, several of them changed their CEOs after going public. There is not much investigation on the influence of a change in CEO after the going public decision of the family company. Anderson and Reeb

(2003) documented that family firms with the same family member CEO after going public, exhibit superior firm performance relative to a different CEO after the going public process, since, for them CEO stability is crucial to get a better performance. The same authors concluded that CEOs who are family members (founders) exhibit a positive relation to accounting profitability measures.



We expect that changes in CEO will negatively impact the degree of post going public performance. We perform the Kruskal-Wallis test to assess the impact of changes in CEO on post going public improvements. Therefore, we divide the sample into

firms that had a new CEO after going public and firms with existing CEO continuing after going public. In our twenty-five data set, nine firms (36 percent) out of twenty-five, changed CEOs after going public.

**Table 7.** Comparisons of performance changes after going public for firms that had new CEO versus firms with no changes in CEO

VARIABLES	N	Mean Before (Median)	Mean After (Median)	Mean Change (Median)	Z-statistics for difference in Means (After-Before)	Z-statistics for difference in Medians (After-Before)	Percentage of firms with improved performance Mean (Median)	Z-statistics for significance performance (Mean)	Z-statistics for significance performance (Median)	KW Results for differences between subsamples for mean		
										Mean Rank		KW test 'p' value
										DCEO	SCEO	
PROFITABILITY Return on Sales												
CEO Change	9	0.36 0.28	0.22 0.18	-0.14 -0.10	2.009*	2.888*	44.44% 33.33%	1.826*	1.694*	19.89	13.06	0.049*
No CEO Chance	16	0.21 0.16	0.18 0.14	-0.03 -0.02	1.467	1.478	62.50% 56.25%	2.773*	2.666*			
OPERATING EFFICIENCY Sales Efficiency												
CEO Change	9	1.71 1.33	1.33 0.88	-0.38 -0.45	2.836*	2.834*	67.78% 67.78%	2.366*	2.366*	11.00	19.13	0.082**
No CEO Chance	16	1.29 1.34	1.12 1.19	-0.17 -0.15	1.775	1.334	48.75% 45.00%	2.934*	3.059*			
CAPITAL INVESTMENT Real Capital Expenditure to Sales												
CEO Change	9	45.96 0.15	2.85 0.09	-43.11 -0.06	1.007	1.244	33.33% 22.22%	1.604	1.342	11.78	13.69	0.533
No CEO Chance	16	45.47 0.26	92.98 0.22	47.51 -0.03	0.052	0.879	43.75% 43.75%	2.366*	2.366*			
REAL OUTPUT Real Sales												
CEO Change	9	1.16 1.06	2.29 2.19	1.13 1.13	1.342	1.563	56.67% 56.67%	2.180*	2.087*	10.78	18.25	0.058**
No CEO Chance	16	1.09 0.81	2.57 2.49	1.48 1.68	2.989*	2.345*	75.00% 73.75%	2.349*	2.320*			
EMPLOYMENT Total Employment												
CEO Change	9	1017.00 922.00	931.00 866.00	-86.00 -56.00	0.899	0.889	33.33% 33.33%	1.604	1.604	19.63	11.78	0.057**
No CEO Chance	16	977.00 866.00	922.00 831.00	-55.00 -35.00	0.414	0.227	68.75% 62.50%	2.646*	2.472*			
DIVIDEND POLICY Dividend to Sales												
CEO Change	9	0.01 0.01	0.03 0.04	0.02 0.03	2.560*	2.338*	44.44% 43.33%	2.126*	2.004*	17.78	11.69	0.043*
No CEO Chance	16	0.01 0.00	0.01 0.01	0.00 0.01	0.339	0.152	55.00% 50.00%	2.059*	2.521*			
ACTIVITY LEVELS Sales to Total Assets												
CEO Change	9	0.66 0.57	0.46 0.31	-0.20 -0.26	1.362	1.244	33.33% 33.33%	2.604*	2.604*	21.23	13.77	0.076*
No CEO Chance	16	0.55 0.48	0.47 0.46	-0.08 -0.02	0.776	0.776	37.50% 43.75%	2.201*	2.366*			
SHORT TERM EQUILIBRIUM Cash and Banks to ST Debt												
CEO Change	9	0.73 0.26	0.22 0.06	-0.51 -0.20	1.599	1.599	36.67% 36.67%	1.194	1.843	15.44	13.35	0.344
No CEO Chance	16	0.56 0.14	0.39 0.10	-0.17 -0.04	0.722	0.655	40.00% 37.50%	1.377	1.685			
CAPITAL STRUCTURE Total Debt to Assets												
CEO Change	9	0.45 0.38	0.69 0.57	0.24 0.19	1.415	1.389	45.56% 45.56%	2.023*	2.023*	11.88	12.73	0.756
No CEO Chance	16	0.57 0.49	0.56 0.42	-0.01 -0.07	0.109	0.640	33.75% 37.50%	1.366	.201			

\*rejection of  $H_0$  at five percent level of significance

This table presents comparisons of performance changes for firms that had new CEO after closely-held firms going public versus firms with no changes in CEO after closely-held firms going public. The table presents the results of the Wilcoxon rank sum Test (with its Z-statistic) - that is used as a test for significance for change in mean and median values between before and after closely-held firms going public - and of the Kruskal-Wallis test firms that had new CEO versus firms with no changes in CEO after those firms going public - in mean terms and in median terms respectively (statistic mentions the 'p' value using the chi-squared approximation) - for each empirical proxy and each subsample of the par. The table presents the number of useable observations, the mean and the median values of the proxy before and after closely-held firms going public, their change in the proxy's value after versus before those firms going public, the respective test of significance for the mean and median change, the mean rank of the KW test between CEO change and No CEO Change subsample and the respectively statistic 'p' value for mean and median comparison.

**Table 8.** Comparisons of performance changes after going public for firms that have concentrated structure versus firms that have no concentrated structure

VARIABLES	N	Mean Before (Median)	Mean After (Median)	Mean Change (Median)	Z-statistics for difference in Means (After-Before)	Z-statistics for difference in Medians (After-Before)	Percentage of firms with improved performance Mean (Median)	Z-statistics for significance performance (Mean)	Z-statistics for significance performance (Median)	KW Results for differences between subsamples for mean					
										Mean Rank	NoCS	KW test			
										CS	NoCS	'p' value			
PROFITABILITY Return on Sales															
Concentrated Structure	8	0.25 0.21	0.26 0.22	0.01 0.01	0.745	0.232	50.00% 50.00%	1.098	1.156	19.33	14.55	0.049*			
No Concentrated Structure	17	0.32 0.24	0.18 0.06	-0.14 -0.18			0.213						0.166	64.82% 61.44%	
OPERATING EFFICIENCY Sales Efficiency															
Concentrated Structure	8	1.67 1.39	1.46 1.07	-0.21 -0.32	2.150*	2.060*	55.00% 55.00%	2.211*	2.191*				14.13	19.56	0.600
No Concentrated Structure	17	1.34 1.41	0.89 0.98	-0.45 -0.43			2.570*			2.285*	40.59% 42.22%				
CAPITAL INVESTMENT Real Capital Expenditure to Sales															
Concentrated Structure	8	1.01 0.87	1.59 1.27	0.58 0.40	2.280*	2.840*	70.00% 70.00%	2.767*	2.230*	14.50	20.10	0.039*			
No Concentrated Structure	17	1.17 1.08	1.39 1.11	0.22 0.03			2.923*						2.160*	45.29% 47.78%	
REAL OUTPUT Real Sales															
Concentrated Structure	8	0.96 0.89	2.76 2.56	1.80 1.67	2.956*	2.870*	87.50% 75.00%	2.366*	2.201*				16.63	11.29	0.041*
No Concentrated Structure	17	1.12 1.13	2.09 2.11	0.97 0.98			2.195*			2.243*	68.24% 63.33%				
EMPLOYMENT Total Employment															
Concentrated Structure	8	1022.00 899.00	979.00 877.00	-43.00 -22.00	1.140	1.876	60.00% 60.00%	2.826*	2.744*	18.25	11.47	0.030*			
No Concentrated Structure	17	870.00 865.00	779.00 777.00	-91.00 -88.00			0.124						0.324	68.82% 70.00%	
DIVIDEND POLICY Dividend to Sales															
Concentrated Structure	8	0.01 0.00	0.01 0.01	0.00 0.01	0.420	0.280	50.00% 50.00%	2.826*	2.426*				15.00	12.06	0.226
No Concentrated Structure	17	0.01 0.00	0.04 0.05	0.03 0.05			2.206*			2.326*	50.59% 38.89%				
ACTIVITY LEVELS Sales to Total Assets															
Concentrated Structure	8	0.60 0.58	0.55 0.54	-0.05 -0.04	0.560	0.560	37.50% 37.50%	2.604*	2.335*	14.50	12.29	0.232			
No Concentrated Structure	17	0.59 0.56	0.41 0.36	-0.18 -0.20			1.396						1.349	35.29% 38.89%	
SHORT TERM EQUILIBRIUM Cash and Banks to ST Debt															
Concentrated Structure	8	0.55 0.13	0.47 0.11	-0.08 -0.02	0.333	0.489	37.50% 40.00%	1.604	1.565				12.50	15.12	0.310
No Concentrated Structure	17	0.78 0.29	0.26 0.07	-0.52 -0.22			0.434			0.366	44.71% 44.44%				
CAPITAL STRUCTURE Total Debt to Assets															
Concentrated Structure	8	0.53 0.47	0.56 0.51	0.03 0.04	0.128	0.320	40.00% 37.50%	2.023*	2.190	13.25	12.88	0.907			
No Concentrated Structure	17	0.49 0.33	0.59 0.39	0.10 0.06			0.307						0.464	37.06% 34.44%	

\*rejection of H0 at five percent level of significance

This table presents comparisons of performance changes for firms that have concentrated structure versus firms that have a more flexible structure (No Concentrated Structure). The table presents the results of the Wilcoxon rank sum Test (with its Z-statistic) - that is used as a test of significance for change in mean and median values between before and after closely-held firms going public - and of the Kruskal-Wallis test firms that have concentrated structure versus firms that have a more flexible structure - in mean terms and in median terms respectively (statistic mentions the 'p' value using the chi-squared approximation) - for each empirical proxy and each subsample of the par. The table presents the number of useable observations, the mean and the median values of the proxy before and after closely-held firms going public, their change in the proxy's value after versus before those firms going public, the respective test of significance for the mean and median change, the mean rank of the KW test between Concentrated Structure and No Concentrated Structure subsample and the respectively statistic 'p' value for mean and median comparison.

#### 4.3.4. Concentrated versus non-concentrated structure after going public

Changes between firms whose capital is concentrated in a few shareholders (it may be a family) after going public and firms with capital whose dispersion after going public is very high, is also investigated (Table 8). Mikkelsen and Partch

(1989) provide evidence that decreases in ownership concentration of publicly traded firms lower share value. Based on those studies, it is natural to believe that the same will happen with Portuguese companies going public. Firms with very concentrated capital structures after going public, may have different performance levels from those firms with high dispersion of capital after going public; a concentrated structure will happen when

the firm's capital is concentrated in a few shareholders and when, at least, one or a few owners, have more than 50% of capital the firm after going public. We expect that improvement changes in the financial performance will be much more pronounced in concentrated structures than in the case of non-concentrated structures. A firm was assumed with concentrated structure whenever the firm's capital is concentrated in a few shareholders and when, at least, one or a few owners have more than 50% of capital the firm after going public.

We perform the Kruskal-Wallis test to determine the effect of a concentrated structure and non-concentrated structure after going public on post performance. We expect that firms going public that generate the largest concentration of ownership will generate the greatest performance improvements. In our sample, eight firms (32%) out of twenty-five have a concentrated structure after going public and seventeen firms (68%) have a non-concentrated structure after going public.

**Table 9.** Comparisons of performance changes after going public for firms that went public by IPO versus firms that went public by direct sale

VARIABLES	N	Mean Before (Median)	Mean After (Median)	Mean Change (Median)	Z-statistics for difference in Means (After-Before)	Z-statistics for difference in Medians (After-Before)	Percentage of firms with improved performance Mean (Median)	Z-statistics for significance performance (Mean)	Z-statistics for significance performance (Median)	KW Results for differences between subsamples for mean		
										Mean Rank		KW test
										IPO	DS	
PROFITABILITY Return on Sales												
Going Public by IPO	13	0.25 0.20	0.23 0.18	-0.02 -0.02	0.849	0.657	63.85% 56.15%	2.081*	2.157*	18.34	11.77	0.079*
Going Public by Direct Sale	12	0.32 0.17	0.16 0.13	-0.16 -0.04			0.768					
OPERATING EFFICIENCY Sales Efficiency												
Going Public by IPO	13	1.66 1.37	1.57 1.11	-0.09 -0.26	1.852	1.712	61.54% 69.23%	2.521*	2.666*	11.94	12.43	0.698
Going Public by Direct Sale	12	1.57 1.29	1.29 0.97	-0.28 -0.32			2.589*					
CAPITAL INVESTMENT Real Capital Expenditure to Sales												
Going Public by IPO	13	1.07 0.87	1.55 1.27	0.48 0.40	0.232	1.504	46.15% 40.77%	2.201*	2.343*	15.55	12.22	0.144
Going Public by Direct Sale	12	1.16 1.11	1.44 1.16	0.28 0.05			0.456					
REAL OUTPUT Real Sales												
Going Public by IPO	13	1.04 0.77	2.69 2.58	1.65 1.81	2.621*	2.551*	85.62% 76.92%	2.934*	2.803*	18.92	10.31	0.057**
Going Public by Direct Sale	12	1.23 1.19	2.19 2.01	0.96 0.82			2.981*					
EMPLOYMENT Total Employment												
Going Public by IPO	13	1029.00 913.00	927.00 835.00	-102.00 -78.00	0.384	0.392	61.54% 53.85%	2.124*	2.166*	12.31	15.92	0.157
Going Public by Direct Sale	12	965.00 851.00	924.00 832.00	-41.00 -19.00			0.628					
DIVIDEND POLICY Dividend to Sales												
Going Public by IPO	13	0.01 0.01	0.06 0.05	0.05 0.04	2355*	2.762*	49.23% 46.15%	2.010*	2.120*	15.54	10.25	0.613**
Going Public by Direct Sale	12	0.01 0.01	0.02 0.03	0.01 0.02			0.706					
ACTIVITY LEVELS Sales to Total Assets												
Going Public by IPO	13	0.61 0.58	0.57 0.51	-0.04 -0.07	1.013	1.013	30.77% 30.77%	2.326*	2.426*	11.31	14.83	0.244
Going Public by Direct Sale	12	0.47 0.42	0.24 0.18	-0.23 -0.24			1.177					
SHORT TERM EQUILIBRIUM Cash and Banks to ST Debt												
Going Public by IPO	13	0.57 0.16	0.46 0.13	-0.11 -0.03	1.098	1.334	46.92% 41.54%	1.746	1.343	13.77	10.74	0.134
Going Public by Direct Sale	12	0.74 0.25	0.19 0.05	-0.55 -0.20			1.255					
CAPITAL STRUCTURE Total Debt to Assets												
Going Public by IPO	13	0.50 0.47	0.58 0.52	0.08 0.05	0.245	0.594	43.85% 36.15%	2.001*	2.142*	12.08	14.00	0.726
Going Public by Direct Sale	12	0.50 0.31	0.54 0.41	0.04 0.10			0.628					

\*rejection of H0 at five percent level of significance

This table presents comparisons of performance changes for firms that went public by IPO versus firms that went public by Direct Sale. The table presents the results of the Wilcoxon rank sum Test (with its Z-statistic) - that is employed as a test for significance for change in mean and median values between before and after closely-held firms going public - and of the Kruskal-Wallis test firms that went public by IPO versus firms that went public by Direct Sale - in mean terms and in median terms respectively (statistic mentions the 'p' value using the chi-squared approximation) - for each empirical proxy and each subsample of the pair. The table presents the number of useable observations, the mean and the median values of the proxy before and after closely-held firms going public, their change in the proxy's value after versus before those firms going public, the respective test of significance for the mean and median change, the mean rank of the KW test between IPO and Direct Sale subsample and the respectively statistic 'p' value for mean and median comparison.

#### 4.3.5. Firms going public by initial public offering (IPO) and firms going public by direct sale (DS)

When a firm goes public, the large volume of new shares sold, as well as the large volume of existing shares transferred to the new owners, lastingly

shape the firm's ownership structure and thereby influence the firm's value (Table 9). To maximise the revenue raised from the shares sold in the public offering, it is important to design the sale of new shares with the final ownership in mind.

**Table 10.** Comparisons of performance changes after going public firms that have shareholders in management versus firms that do not have shareholders in management

VARIABLES	N	Mean Before (Median)	Mean After (Median)	Mean Change (Median)	Z-statistics for difference in Means (After-Before)	Z-statistics for difference in Medians (After-Before)	Percentage of firms with improved performance Mean (Median)	Z-statistics for significance performance (Mean)	Z-statistics for significance performance (Median)	KW Results for differences between subsamples for mean		
										Mean Rank		KW test
										SM	NoSM	
<b>PROFITABILITY Return on Sales</b>												
Shareholders in Management	19	0.23 0.21	0.24 0.20	0.01 -0.01	1.541	1.433	58.42% 57.89%	2.150*	2.243*	18.21	12.33	0.047*
No Shareholders in Management	6	0.20 0.24	0.09 0.14	-0.11 -0.10	2.878*	2.432*	66.67% 66.67%	2.876*	2.110*			
<b>OPERATING EFFICIENCY Sales Efficiency</b>												
Shareholders in Management	19	1.59 1.47	1.55 1.39	-0.04 -0.08	1.643	1.567	33.68% 43.68%	3.296*	2.803*	15.66	7.67	0.044*
No Shareholders in Management	6	1.76 1.45	1.53 1.17	-0.23 -0.28	2.572*	2.782*	66.67% 63.33%	1.826*	2.023*			
<b>CAPITAL INVESTMENT Real Capital Expenditure to Sales</b>												
Shareholders in Management	19	0.89 0.79	1.59 1.45	0.70 0.66	2.149*	2.757*	72.11% 71.58%	2.100*	2.497*	19.88	12.20	0.068**
No Shareholders in Management	6	1.08 1.13	1.33 1.16	0.25 0.03	2.023*	1.987*	50.00% 50.00%	2.604*	2.309*			
<b>REAL OUTPUT Real Sales</b>												
Shareholders in Management	19	0.88 0.77	2.65 2.63	1.77 1.86	3.260*	3.260*	84.21% 78.95%	3.516*	2.934*	23.68	10.83	0.008*
No Shareholders in Management	6	1.19 1.21	2.01 2.17	0.82 0.96	2.201*	2.201*	50.00% 55.00%	2.201*	2.201*			
<b>EMPLOYMENT Total Employment</b>												
Shareholders in Management	19	1017.00 922.00	914.00 811.00	-103.00 -111.00	2.280*	2.322*	77.89% 72.63%	2.936*	2.711*	19.79	13.67	0.091**
No Shareholders in Management	6	911.00 837.00	877.00 815.00	-34.00 -22.00	1.524	1.314	50.00% 50.00%	2.604*	2.333*			
<b>DIVIDEND POLICY Dividend to Sales</b>												
Shareholders in Management	19	0.01 0.01	0.06 0.05	0.05 0.04	1.764	1.984	68.42% 57.89%	2.180*	2.734*	11.53	16.33	0.043*
No Shareholders in Management	6	0.01 0.01	0.02 0.02	0.01 0.01	2.105*	2.604*	50.00% 45.00%	2.004*	2.102*			
<b>ACTIVITY LEVELS Sales to Total Assets</b>												
Shareholders in Management	19	0.67 0.56	0.58 0.54	-0.08 -0.02	1.127	1.087	36.84% 42.11%	2.366*	2.343*	10.66	17.67	0.038*
No Shareholders in Management	6	0.82 0.73	0.36 0.35	-0.46 -0.38	1.363	1.734	33.33% 33.33%	2.342*	2.342*			
<b>SHORT TERM EQUILIBRIUM Cash and Banks to ST Debt</b>												
Shareholders in Management	19	0.49 0.15	0.38 0.11	-0.11 -0.04	1.342	1.323	52.63% 57.37%	2.803*	2.023*	11.05	18.83	0.093*
No Shareholders in Management	6	0.72 0.29	0.23 0.07	-0.49 -0.22	1.606	1.730	66.67% 60.00%	2.826*	2.209*			
<b>CAPITAL STRUCTURE Total Debt to Assets</b>												
Shareholders in Management	19	0.52 0.42	0.54 0.45	0.02 0.03	1.223	1.768	47.37% 52.11%	2.454*	2.290*	12.11	18.67	0.045**
No Shareholders in Management	6	0.55 0.49	0.62 0.55	0.07 0.06	1.232	1.989	60.00% 65.00%	2.765*	2.890*			

\* rejection of H0 at five percent level of significance

This table presents comparisons of performance changes for firms that have shareholders in management versus firms that do not have shareholders in management. The table presents the results of the Wilcoxon rank sum Test (with its Z-statistic) - that is used as a test for significance for change in mean and median values between before and after closely-held firms going public - and of the Kruskal-Wallis test firms that have shareholders in management versus firms that haven't shareholders in the management - in mean terms and in median terms respectively (statistic mentions the 'p' value using the chi-squared approximation) - for each empirical proxy and each subsample of the pair. The table presents the number of useable observations, the mean and the median values of the proxy before and after closely-held firms going public, their change in the proxy's value after versus before those firms going public, the respective test of significance for the mean and median change, the mean rank of the KW test between Shareholders in Management and No Shareholders in Management subsample and the respectively statistic 'p' value for mean and median comparison.

We address how different methods for the sale of shares fare in establishing the appropriate ownership and maximising revenue. Does it matter that the sale disperses the shares through an IPO? Or is it better to pass on, through a Direct Sale, a block to someone who wants a controlling stake? And if this alternative is advantageous, then how should the company design a sale of shares to maximise expected revenue? There is no much evidence whether the going public method, IPO or DS, has a decision influence on operating and financial performance after going public. Nevertheless, based on Mello and Parsons (1998) investigation, we believe that firms going public by an initial public offering will give them an additional renown, a more favourable image and transparency with consequences on operational and financial performance.

We perform the Kruskal-Wallis test to determine the effect of the IPO and Direct Sale on post going public performance. We expect that by using the method of IPO, in which some or of a family's entire stake in a family company is sold to investors through a public share offering, will positively impact the degree of post going public performance improvement because of several reasons, such as, better image, transparency and credibility. In our sample, thirteen firms (52%) out of twenty-five, went public by IPO and the remaining twelve firms (48%) went public by direct sale.

#### *4.3.6. Firms that have shareholders in management versus firms that do not have shareholders in management*

An initial public offering of common stock, more than any other corporate event, reflects the dilution of an owner/manager's stake. In most agency relationships, the owner will incur non-trivial monitoring costs in order to keep the agent in line. Consequently, the owner faces a trade-off between monitoring costs and forms of compensation that will cause the agent to always act in the owner's interest (Table 10).

The rationale for splitting up the sample into firms that face different degrees of potential agency problems is straightforward. The nature of decisions that maximise the wealth of the firm's shareholders should be different these situations with consequences in the post going public performance. Our motivation for the analysis of these sub-samples is the evidence that management ownership seems to have a crucial role in the operational and financial performance of companies after going public.

Mikkelsen *et al.* (1997) with their univariate analysis, concluded that changes in or levels of the ownership stakes of officers and directors in firms that go public explain some change in performance among firms.

Based on Kutsuna, K., H. Okamura and M. Cowling (2002) study, we expect that performance changes will be much more pronounced when firms have shareholders in management than in the case of firms that do not have shareholders in management. We suspect that this agency problem is more pronounced for closely held firms. We

perform the Kruskal-Wallis test to determine the effect of having shareholders in management and the effect of not having shareholders in management after going public on post performance. In a sample, nineteen out of twenty-five firms (76%) have shareholders in management after going public while six firms (24%) do not have shareholders in management after going public.

#### *4.3.7. Restructuring companies prior to going public versus not restructuring*

Some industries, just prior to going public, restructure through organisational changes and/or acquisitions and divestitures and/or financial restructurings (i.e., debt write-offs). One of the more complex issues in this area involves the interrelated questions of whether to restructure a family company prior to sale (Table 11). We perform the Kruskal-Wallis test to determine the effect of restructuring. We divide the sample into firms that restructured and firms that did not restructure.

Dewenter and Malatesta (2001), on their studies, show relevant improvements on the operational and financial performance of closely held companies, after they open their capital if firms had developed some kind of restructuring before they had gone public. Based on these authors and findings, it is not expectable a different behaviour for the Portuguese family companies after they had gone public. Therefore, we expect that changes on the operational and financial performance will be much more pronounced when firms were restructured prior to sale than in the case of firms that were not restructured prior to sale, well-restructured firm is better prepared to face the marketplace and, consequently, to improve more its operational, social and financial performance than firms that did not restructure before the sale. In our sample, eight out of twenty-five firms (32%) had restructured before going public while seventeen firms (68%) did not restructure before going public.

## **5. EMPIRICAL RESULTS**

In this section, we present and discuss our empirical findings for the full sample of firms going public and for the subsamples. Our empirical work measures the post going public operational, social, financial performance and dividend policy. In global terms, our investigation confirms, on one hand, that, after going public, as it was expected by us, family firms experience significant declines on average (median) levels. By opposition, firms experience increases in capital investment spending, output, and dividend payout, when compared to pre-going public average (median) values. On the other hand, our findings, in opposite to it was expected, show that firms do not experience improvements in average (median) short term equilibrium and in capital structure levels, when compared to the corresponding average pre-going public values. Table 4 summarises the results for the full sample of all closely held companies that went public by IPO or Direct Sale.

**Table 11.** Comparisons of performance changes after going public for firms that were restructured before going public versus firms that were not restructured before privatisation

Variables	N	Mean Before (Median)	Mean After (Median)	Mean Change (Median)	Z-statistics for difference in Means (After-Before)	Z-statistics for difference in Medians (After-Before)	Percentage of firms with improved performance Mean (Median)	Z-statistics for significance performance (Mean)	Z-statistics for significance performance (Median)	RW Results for differences between subsamples for mean					
										Mean Rank	KW test				
										R	NoR	'p' value			
<b>PROFITABILITY Return on Sales</b>															
Restructured	8	0.19 0.12	0.22 0.14	0.03 0.02	1.560	1.280	50.00%	1.826	1.365	19.63	14.88	0.078**			
Not Restructured	17	0.31 0.27	0.15 0.18	-0.16 -0.09			2.622*						2.919*	48.82% 51.18%	2.762*
<b>OPERATING EFFICIENCY Sales Efficiency</b>															
Restructured	8	1.62 1.63	1.56 1.46	-0.06 -0.17	0.840	0.840	45.45%	1.826	2.023*				13.79	12.89	0.687
Not Restructured	17	1.66 1.44	1.45 1.12	-0.21 -0.32			3.148*			3.101*	52.35% 52.35%	3.296*			
<b>CAPITAL INVESTMENT Real Cap.Exp.to Sales</b>															
Restructured	8	0.88 0.77	1.59 1.36	0.71 0.59	2.280*	2.109*	67.50%	2.604*	2.642*	15.25	12.55	0.564			
Not Restructured	17	1.29 1.09	1.34 1.19	0.05 0.10			1.219						1.262	41.18% 39.41%	2.867*
<b>REAL OUTPUT Real Sales</b>															
Restructured	8	0.79 0.90	2.79 1.91	1.99 1.01	1.960*	2.100*	87.50%	2.366*	2.604*				17.19	14.35	0.167
Not Restructured	17	0.77 0.81	1.36 1.28	0.59 0.47			3.385*			3.243*	68.24% 62.35%	2.408*			
<b>EMPLOYMENT Total Employment</b>															
Restructured	8	999.00 913.00	942.00 887.00	-57.00 -26.00	1.980	1.183	55.00%	2.201*	0.447	12.13	14.82	0.171			
Not Restructured	17	1034.00 898.00	901.00 788.00	-133.00 -110.00			1.781						1.828	67.06% 67.06%	2.521*
<b>DIVIDEND POLICY Dividend to Sales</b>															
Restructured	8	0.01 0.01	0.02 0.03	0.01 0.02	0.507	0.944	52.50%	2.023*	2.447*				14.77	12.53	0.542
Not Restructured	17	0.01 0.01	0.01 0.02	0.00 0.01			0.775			0.306	54.71% 47.06%	2.034*			
<b>ACTIVITY LEVELS Sales to Total Assets</b>															
Restructured	8	0.61 0.10	0.37 0.07	-0.24 -0.04	0.680	0.540	35.00%	2.342+	2.461*	12.25	14.76	0.341			
Not Restructured	17	0.62 0.60	0.35 0.37	-0.27 -0.23			0.876						0.592	41.18% 47.06%	2.366*
<b>SHORT TERM EQUILIBRIUM Cash and Banks to ST Debt</b>															
Restructured	8	0.55 0.14	0.46 0.11	-0.09 -0.03	1.565	1.389	47.50%	2.366*	2.343*				14.66	12.77	0.298
Not Restructured	17	0.77 0.24	0.28 0.05	-0.49 -0.19			0.377			0.454	41.18% 35.29%	2.438*			
<b>CAPITAL STRUCTURE Total Debt to Assets</b>															
Restructured	8	0.51 0.44	0.55 0.46	0.04 0.02	1.342	1.908	50.00%	1.826	1.023	12.75	13.71	0.743			
Not Restructured	17	0.53 0.41	0.61 0.59	0.08 0.18			0.879						0.786	47.06% 41.18%	1.521

\* rejection of H0 at five percent level of significance

This table presents comparisons of performance changes for firms that were restructured before closely-held firms going public versus firms that were not restructured before those firms going public. The table presents the results of the Wilcoxon rank sum Test (with its Z-statistic) - that is used as a test for significance for change in mean and median values between before and after closely-held firms going public - and of the Kruskal-Wallis test firms that were restructured before closely-held firms going public versus firms that weren't restructured - in mean terms and in median terms respectively (statistic mentions the 'p' value using the chi-squared approximation) - for each empirical proxy and each subsample of the pair. The table presents the number of useable observations, the mean and the median values of the proxy before and after closely-held firms going public, their change in the proxy's value after versus before those firms going public, the respective test of significance for the mean and median change, the mean rank of the KW test between Restructured and Not Restructured subsample and the respectively statistic 'p' value for mean and median comparison.

We measure *profitability* by the return on sales indicator (ROS - net income to sales). As we expected, profitability decreases significantly after the sale, with the ROS indicator for the full sample of twenty-five companies. The mean (median) in ROS decrease 10% after the sale, jumping from 29% to 19% (22% to 17%). In addition, 66% (68%) represent

the percentage of firms, whose proxy values change as predicted. In global terms, for the full sample of all family firms going public, Wilcoxon tests show that ROS decreases significantly (at the 5 percent level) after the IPO. Most of the subsamples also present significant post going public declines in profitability. Six out of fourteen samples observe a

significant mean decrease, as can be observed by the Z-statistics for differences in means (after-before) while six out of fourteen samples observe a significant median decrease, based on the Wilcoxon test (Z-statistics for differences in medians (after-before)). The majority of the proportion test statistics (mean and median) are significantly positive. The Kruskal-Wallis test shows significant differences, at a 5% significance level, in average and medium levels, in the following subsamples: CEO change in firms, concentration after going public and shareholders in management. Our results are consistent with previous research, namely, Anderson and Reeb (2003).

We measure *operating efficiency* with the sales efficiency (SALEFF - sales to total employment). As we expected, operating efficiency decreases significantly after the sale, with the SALEFF indicator for the full sample of twenty-five companies. The mean (median) in SALEFF decrease 29% after the sale, jumping from 164% to 135% (132% to 99%). In addition, 69% (81%) represent the percentage of firms whose proxy values change as predicted. In global terms, for the full sample of all closely-held firms going public, Wilcoxon tests show that SALEFF decreases significantly (at the 5 percent level) after the IPO. Most of the subsamples also present significant post going public declines in operating efficiency. Eleven out of fourteen samples observe a significant mean decrease, as can be observed by the Z-statistics for differences in means (after-before) while eleven out of fourteen samples observe a significant median decrease, based on the Wilcoxon test (Z-statistics for differences in medians (after-before)). Nevertheless, this is not to say that all subsamples experience the same efficiency decline. As a matter of fact, the Kruskal-Wallis shows indicates that companies with the national allocation of control, firms with CEO change and firms with no shareholders in management after going public, experience the greater efficiency difference in the post going public period. Our results show consistency with those found by Ang *et al.* (2000).

We measure *capital investment* spending with the real capital expenditure to sales indicator (RCESA - real capital expenditure to sales). As we expected, capital investment spending increases significantly after going public, for the full sample of twenty-five companies. The mean (median) in RCESA increase 33% after the sale, jumping from 112% to 145% (98% to 117%). In addition, 65% (66%) represent the percentage of firms whose proxy values changed as predicted. In global terms, for the full sample of all closely-held firms going public, Wilcoxon tests show that RCESA increases significantly (at the 5 percent level) after the IPO.

A great number of the subsamples also present significant post going public increases in capital investment spending. Six out of fourteen samples observe a significant mean increase, as can be observed by the Z-statistics for differences in means (after-before), while six out of fourteen samples observe a significant median increase, based on the Wilcoxon test (Z-statistics for differences in medians (after-before)). The majority of the proportion test statistics (mean and median) are significantly positive. The Kruskal-Wallis test shows significant differences, at a 5% significance level, in average and medium levels, in the following subsamples: firms

with concentrated structures after going public and firms with shareholders in management. Our results are similar to the results of Boubakri and Cosset (1998), among others.

We measure the *real output* with the real sales indicator (SAL - nominal sales to consumer price index). As we expected, real output increased significantly after going public, for the full sample of companies. The mean (median) in SAL increases 138% after the sale, jumping from 111% to 249% (101% to 234%). In addition, 68% (64%) represent the percentage of firms whose proxy values changed as predicted. In global terms, for the full sample of all closely-held firms going public, Wilcoxon tests show that the SAL indicator increases significantly (at the 5% level) after the IPO. A great number of the subsamples also present significant post going public increases in real output. Twelve out of fourteen samples observe a significant mean increase, as can be observed by the Z-statistics for differences in means (after-before), while twelve out of fourteen samples observe a significant median increase, based on the Wilcoxon test (Z-statistics for differences in medians (after-before)). The majority of the proportion test statistics (mean and median) are significantly positive. The Kruskal-Wallis test shows significant differences, at a 5% significance level, in average and medium levels, in most of the subsamples.

We measure *employment* by the total employment (EMPL - total number of employees). As we expected, employment decreases not significantly after the sale, for the EMPL indicator for the full sample of companies. The mean (median) in ROS decrease 96 employees after the sale, jumping from 1011 to 915 employees (893 to 843 employees). In addition, 56 percent (52 percent) represent the percentage of firms whose proxy values change as predicted. In global terms, for the full sample of all closely-held firms going public, Wilcoxon tests shows that EMPL decreases not significantly (at the 5% level) after going public.

Some of the subsamples also present a not very significant total employment decline. Two out of fourteen samples observe a significant mean decrease, as can be observed by the Z-statistics for differences in means (after-before) while two out of fourteen samples observe a significant median decrease, based on the Wilcoxon test (Z-statistics for differences in medians (after-before)). The majority of the proportion test statistics (mean and median) are significantly positive. The Kruskal-Wallis test shows significant differences, at a 5% significance level, in average and medium levels, in the following subsamples: concentration after going public CEO change in firms, and shareholders in management. This means that by portioning our data into these sub-groups, we find there are significant differences between them. Our results confirm the expectations about the consequences on employment after closely held firms become open to the public and are identical to the conclusions developed by Singh and Davidson III (2003).

We measure *dividend policy* by the dividend to sales indicator (DIVSAL - dividend to sales). As we expected, the payout ratio increases significantly after the sale, with the DIVSAL indicator for the full sample of companies. The mean (median) in DIVSAL increase 3% after the sale, jumping from 1% to 4%

(1% to 2%). In addition, 56 percent (52 percent) represent the percentage of firms whose proxy values change as predicted. In global terms, for the full sample of all closely-held firms going public, Wilcoxon tests show that DIVSAL increases significantly (at the 5 percent level) after the IPO. Some of the subsamples also present significant post going public increases in the payout ratio. Six out of 14 samples observe a significant mean increase, as can be observed by the Z-statistics for differences in means (after-before) while six out of fourteen samples observe a significant median increase, based on the Wilcoxon test (Z-statistics for differences in medians (after-before)). The majority of the proportion test statistics (mean and median) are significantly positive. The Kruskal-Wallis test shows significant differences, at a 5% significance level, in average and medium levels, in the following subsamples: CEO change in firms, IPO sale and shareholders in management. Our results in dividend policy for companies going public are closed to those shown by La Porta *et al.* [2000].

We measure *profitability* by the return by the sales to total assets indicator (STA - sales divided by Total Assets). As we expected, activity levels decrease significantly after the sale, with the STA indicator for the full sample. The mean (median) in STA decreases 8% after the sale, jumping from 57% to 49% (53% to 42%). In addition, 66 percent (60 percent) represent the percentage of firms whose proxy values change as predicted. In global terms, for the full sample of all closely-held firms going public, Wilcoxon tests show that STA decreases significantly (at the 5 percent level) after the IPO. Some of the subsamples also present significant post going public declines in profitability. Four out of fourteen samples observe a significant mean decrease, as can be observed by the Z-statistics for differences in means (after-before) while four out of 14 samples observe a significant median decrease, based on the Wilcoxon test (Z-statistics for differences in medians (after-before)). The majority of the proportion test statistics (mean and median) are significantly positive. The Kruskal-Wallis test shows significant differences, at a 5% significance level, in average and medium levels, in the following subsamples: national allocation of control, CEO change in firms and shareholders in management.

We measure short-term equilibrium with the cash and banks to short-term debt indicator (CBTSTD - cash and banks divided by short-term debt). As we expected, short-term equilibrium levels decrease significantly after the sale, with the CBTSTD indicator for the full sample. The mean (median) in CBTSTD decreases 35% after the sale, jumping from 65% to 31% (19% to 8%). In addition, 36 percent (38 percent) represent the percentage of firms whose proxy values change as predicted. In global terms, for the full sample of all closely-held firms going public, Wilcoxon tests show that CBTSTD decreases significantly (at the 5 percent level) after the IPO. The Kruskal-Wallis test shows significant differences, at a 5% significance level, in average and medium levels, such as in shareholders in management

We measure *capital structure* by the total debt to total assets indicator (TDTA - total debt to total assets). As we expected, capital structure is negatively affected by going public, as shown by the

TDTA indicator for the full sample companies. The mean (median) in TDTA increase 5% after the sale, jumping from 52% to 57% (43% to 49%). In addition, 38 percent (44 percent) represent the percentage of firms whose proxy values change as predicted. In global terms, for the full sample of all closely-held firms going public, Wilcoxon tests show that TDTA increases (at the 5 percent level) after the IPO. The Kruskal-Wallis test shows significant differences, at a 5% significance level, in average and medium levels, such as shareholders in management.

## 6. CONCLUSIONS

We investigate the change in the operational, social and financial performance of firms that make the transition from private closely held ownership to public ownership through initial public offerings (IPOs) or direct sales (DSs). The operational, social and financial analysis is concerned in the following areas: profitability, operating efficiency, capital investment, real output, employment, dividend policy, activity levels, short-term equilibrium, and capital structure.

Over the last two decades, we have observed many closely held (family) firms opening their capital to new investors. An event as an IPO or direct sale and its consequences raises many doubts, namely, which will be the future performance of the public firm. Abroad, till now, the investigation known is scarce and ignores the financial side of the firm's performance. In Portugal, there is no work on this field, for these family firms that are sold through an IPO or direct sale. Because of that, our work wants to fill in this gap.

In addition, our investigation adds the contribution to observing the different behaviour of several sub-samples: competitive and no competitive sector, national and foreign allocation of control, CEO change and no CEO change, concentrated and no concentrated structures, going public by IPO or direct sale, shareholders in management and no shareholders in management, firms restructured and firms not restructured before going public. Also, the period of the sample, fifteen years, is sufficiently ample to value the investigation. Finally, our work is the first one with these objectives and mission already developed in Portugal.

Overall, in aggregate terms, the results show that family exhibit superior firm performance relative to no family firms. Using economic, social and financial based measures of firm performance, we find that closely held firms are significantly better performers than no family firms. Our results are statistically significant and robust, with the inclusion of different subsamples and ownership groups and alternative variable measures.

On the economic side, we find that firms going public exhibit a significant decline in post-issue economic performance. Over several years before the sale, until several years after the offering, depending on the available information, the operational and economic performance of firms after going public declined significantly relative to their pre-IPO levels, based on several economic and operational indicators. Despite an increase in capital expenditure and output levels, the pre-IPO performance levels are not sustained, leading to a decline in expectations. Earlier studies have shown



low stock returns for issuing firms for several years subsequent to going public.

The analysis also provides evidence that firms that do not change their CEO, firms that have shareholders in management and firms with concentrated ownership structures after going public, show the less unfavourable results, as far as the economic and operational performance are concerned. Our conclusions found that firms going public exhibit a substantial decline in post-issue operating performance.

On the employment side, on aggregate terms, taken as a whole, our results show a not very significant decline in employment after firms going public that is, our evidence shows a small decline in employment levels. This decline in employment can be only considered relevant for the following subsamples: in first place, when there are shareholders in management and when there is a new CEO after the going public process, suggesting a negative relation between employment and the presence of shareholders in management and the presence of a new CEO after the divestiture.

By last, on the financial side, in aggregate terms, taken as a whole, our results show a certain decline on the financial equilibrium of firms after going public, not only their short-term equilibrium but also their capital structure. The financial situation is directly related to the economic situation, since, after going public, firms become less profitable and less efficient. This decline in profitability and in activity levels has a negative impact on the financial equilibrium of those firms.

In conclusion, taken as a whole, our evidence implies that closely held (family) companies perform better than no family companies. Our findings suggest that continued closely held ownership, in and of itself, is not necessarily a less effective organisation structure. On the contrary, our results are robust and present evidence that the economic, employment and financial situation of firms after going public becomes worst. The family organisation structure reduces agency costs without leading to losses in decision-making efficiency, profitability and financial equilibrium. In addition, the debt exposure typically decreases after the IPO. Such drop appears to be permanent and, because of that, the IPO may be viewed as a mean to rebalance the capital structure.

## REFERENCES

- Aggarwal, R. and J.J. Angel (1999). The rise and fall of the Amex emerging company marketplace. *Journal of Financial Economics*, 52, 257-289.
- Anderson, R.C. and Reeb, D.M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58(3), 1301-1328.
- Ang, J.S., Cole, R.A. and Lin, J.W. (2000). Agency costs and ownership structure. *The Journal of Finance*, 55(1), 81-106.
- Barclay, M. and Holderness, C. (1991). Private benefits from control of public corporations. *Journal of Financial Economics*, 58, 371-396.
- Barry, C., Muscarella, C. and Vetsuypens, M. (1991). Underwriter warrants, underwriter compensation, and the costs of going public. *Journal of Financial Economics*, 29, 113-135.
- Benninga, S., Helmantel, M. and Sarig, O. (2003). The timing of initial public offerings. EFA 2001 Barcelona Meetings.
- Li, B., Megginson, W.L., Shen, Z. and Sun, Q. (2015). Do share issue privatizations really improve firm performance in China? *SSRN Electronic library*. <http://dx.doi.org/10.2139/ssrn.2905649>
- Bolton, P. and von Thadden, E.-L. (1998). Blocks liquidity and corporate control. *Journal of Finance*, 53, 1-26.
- Boubakri, N. and Cosset, J. (1998). The financial and operating performance of newly- privatized firms: Evidence from developing countries. *Journal of Finance*, 53(3), 1081-1110.
- Burkart, M., Gromb, D. and Panunzi, F. (1997). Large shareholders, monitoring and the value of the firm. *Quarterly Journal of Economics*, 112, 693-728.
- Burkart, M., Panunzi, F. and Shleifer, A. (2002). Family firms'. Working Paper, Harvard University.
- Casson, M. (1999). The economics of the family firm. *Scandinavian Economic History Review*, 47, 10-23.
- Chemmanur, Th. J. and Fulghieri, P. (1999). A theory of the going-public decision. *Review of Financial Studies*, 12(2), 249-279.
- Claessens, S., Djankov, S. and Lang, L. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58, 81-111.
- D'Souza, J. and Megginson, W.L. (1999). Sources of performance improvement in privatized firms: A clinical study of the global communication industry. Working Paper, University of Oklahoma.
- DeAngelo, H. and DeAngelo, L. (2000). Controlling stockholders and the disciplinary role of corporate payout policy: A study of the times mirror company. *Journal of Financial Economics*, 56, 153-207.
- Demsetz, H. (1983). The structure of ownership and the theory of the firm. *Journal of Law and Economics*, 25, 375-390.
- Demsetz, H. and Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7(3), 209-233.
- Dewenter, K. and Malatesta, P.H. (2001). Sate-owned and privately-owned firms: An empirical analysis of profitability, leverage, and labor intensity. *American Economic Review*, 91, 320-334.
- Duque, J.C. and Febra, L. (2003). Porque é que as Empresas Portuguesas Lançam Ofertas Públicas Iniciais? Documento de Trabalho n.º 4/2002. Departamento de Gestão, ISEG - Instituto Superior de Economia e Gestão, Universidade Técnica de Lisboa.
- Duque, J.C. and Febra, L. (2003). Porque é que as Empresas Portuguesas Lançam Ofertas Públicas Iniciais? Notas Económicas, Faculdade de Economia da Universidade de Coimbra, 17, Junho.
- Fama, E. and French, K. (1995). Size and book-to-market factors in earnings and returns. *Journal of Finance*, 50, 131-156.
- Fama, E. and Jensen, M. (1983). Separation of ownership and control. *Journal of Law & Economics*, 26, 375-393.
- Field, L. (1998). The IPO as the first stage in the sale of the firm. Working Paper, Penn State University, June.
- Holmstrom, B. and Tirole, J. (1995). Market liquidity and performance monitoring. *Journal of Political Economy*, 101, 678-709.
- Holthausen, R. and Larcker, D. (1996). The financial performance of reverse leverage buyouts. *Journal of Financial Economics*, 42, 293-332.

27. Jain, B.A. and Kini, O. (1994). The post-issue operating performance of IPO firms. *Journal of Finance*, 49, 1699-1726.
28. Jensen, M.C. (1993). The modern industrial revolution, exit, and failure of internal control systems. *Journal of Finance*, 48, 831-880.
29. Kaplan, S. (1989). The effect of management buyouts on operating performance and value. *Journal of Financial Economics*, 24, 217-254.
30. Kin, K.A., Kitsabunnarat, P. and Nofsinger, J.R. (2004). Ownership and operating performance in an emerging market: Evidence from Thai firms. *Journal of Corporate Finance*, 10, 355-381.
31. Kutsuma, K., Okamura, H. and Cowling, M. (2002). Ownership structure pre and post IPOs and the operating performance of JASDAQ companies. *Pacific-Basin Finance Journal*, 10, 163-181.
32. La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2000). Government ownership of banks. *Journal of Finance*, 57(1), 265-301.
33. Lin, J., Cai, F. and Li, Z. (1998). Competition, policy burdens, and state-owned enterprise reform. *American Economic Review*, 88, 422-427.
34. López-de-Silanes, F. (1997). Determinants of privatization prices. *Quarterly Journal of Economics*, 112, 965-1025.
35. Lucas, D. and McDonald, R. (1990). Equity issues and stock price dynamics. *Journal of Finance*, 45, 1019-1043.
36. Macquieira, C. and Zurita, S. (1996). Privatizaciones en Chile: Eficiencia y políticas financieras. *Estudios de Administración*, 3(2), 1-36.
37. McConnell, J. and Servaes, H. (1990). Additional evidence on equity ownership structure and firm performance. *Journal of Financial Economics*, 27, 595-612.
38. Mello, A.S. and Parsons, J.E. (1998). Going public and the ownership structure of the firm. *Journal of Financial Economics*, 49, 79-109.
39. Mikkelsen, W. and Partch, M. (1989). Managers' voting rights and corporate control. *Journal of Financial Economics*, 8, 3-35.
40. Mikkelsen, W., Partch, M. and Shah, K. (1997). Ownership and operating of companies that go public. *Financial Economics*, 44, 281-307.
41. Muscarella, C. and Vetsuypens, M. (1990). Optimal exercise of the over-allotment option in IPO's. *Financial Analysis Journal*, May-June, 76-81.
42. Pagano, M., Panetta, F. and Zingales, L. (1998). Why do companies go public? An empirical analysis. *Journal of Finance*, 53, 27-64.
43. Ritter, J.R. (1991). The long run performance of initial public offerings. *Journal of Finance*, 46, 3-27.
44. Schultz, P. (1993). Unit initial public offerings: a form of staged financing. *Journal of Financial Economics*, 34, 199-229.
45. Shleifer, A. and Vishny, R. (1997). A survey of corporate governance. *Journal of Finance*, 52, 737-783.
46. Singh, M. and Davidson, W. (2003). Agency costs, ownership structure and corporate governance mechanisms. *Journal of Banking and Finance*, 27, 793-816.
47. Smith, A. (1990). Corporate ownership structure and performance: The case of management buyouts. *Journal of Financial Economics*, 27, 143-164.
48. Smith, S.C., Cin, B.C. and Vodopivec, M. (1997). Privatization incidence, ownership forms and firm performance: Evidence from Slovenia. *Journal of Comparative Economics*, 25, 158-179.
49. Stoughton, N.M., Wong, K.P. and Zechner, J. (2001). IPOs and product quality. *Journal of Business*, 74(3), 375-408.
50. Subrahmanyam, A. and Titman, S. (1999). The going public decisions and the development of financial markets. *Journal of Finance*, 54, 1045-1082.
51. Khurshed, A., Paleari, S. and Silvio Vismara, S. (2005). The operating performance of initial public offerings: The UK experience. Università di Bergamo Working Paper. <http://dx.doi.org/10.2139/ssrn.439240>
52. Zingales, L. (1995). Insiders ownership and the decision to go public. *Review of Economic Studies*, 62, 425-448.