IESE

University of Navarra

FINANCE IN FAMILY BUSINESS

Alvaro Vilaseca*

RESEARCH PAPER No 287BIS
April, 1995

* Doctoral Candidate, IESE

Research Division
IESE
University of Navarra
Av. Pearson, 21
08034 Barcelona - Spain

FINANCE IN FAMILY BUSINESS

Abstract

This paper is an exploratory study of financial issues in family businesses such as capital structure, investment behavior and attitude towards risk, and dividend policy. The paper also analyzes the way these dimensions are related to performance. The most important findings are that family firms have low debt/equity levels, especially those that hold an important position in their industry. The industry leaders tend to have lower financial performance than the rest. When the differences in performace are analyzed, the debt/equity ratio emerges as a highly relevant factor, and it therefore seems advisable to encourage family businesses with very low debt/equity levels to adopt a strategy of debt-financed growth and change.

FINANCE IN FAMILY BUSINESS

I. Introduction

One stream of research in the Family Business field sets out to identify differences between family businesses (FBs) and non-family businesses (NFBs) in such areas as size, behavior and performance (Daily and Dollinger, 1992. Gallo and Estapé, 1992, 1994. Gallo and García Pont, 1988. Leach, 1990. Lyman, 1991. Ward, 1983). This comparative research shows that in view of the differences between the two types of firm, the way business problems are evaluated and the solutions that are applied should be different as well.

There is another stream of research that builds on the implicit assumption that FBs have certain unique features and must therefore be studied as a group. The purpose is to achieve a better understanding of the strategy, behavior and performance of FBs (Aronoff and Ward, 1991).

As far as financial issues are concerned, there is no conclusive evidence of differences between FBs and NFBs. Consequently, it is risky to make assumptions about whether such differences exist or not.

This paper reports the results of exploratory research into the way financial issues are handled in FBs. The dimensions studied are: capital structure, investment behavior and attitude towards risk, and dividend policy. There is also an analysis of how these dimensions are related to performance.

The survey was conducted by the Family Business Chair at IESE during 1992 and covered firms that in one way or another had connections with the Family Business Chair. For this reason the firms cannot be considered a random sample. The sample consists of the FBs that answered a questionnaire sent to more than 1,000 such firms in Spain. The questionnaires were sent by mail and 104 replies were received.

The main findings of the research are:

– In general, FBs have low debt/equity levels, especially those that have a leading position in their industry.

– There is a link between the size of a firm and the complexity of its financial practices. Larger FBs tend to work with a larger number of financial institutions and to use a greater variety of financial-products for their financing.

–   The FBs that have leading industry positions have lower financial performance (measured in ROS and ROE) than those that have lower positions.

–   It seems advisable to encourage FBs with very low debt to equity levels to adopt a strategy of debt-financed growth and change. This is because when the differences in performance are analyzed, the debt/equity ratio emerges as a highly relevant factor.

II. The Data

Table 1 shows the positioning data on the FBs in the sample: company age, size, industry and performance. The oldest firm was founded in 1792, and 43% of the sample was at least in the third generation (see Figure 1).

The firms as a whole have a turnover of nearly 500 billion pesetas (approximately 3.05 billion US dollars), representing an average of approximately five billion pesetas per firm (see Figure 2).

The total number of employees of the firms in the sample is 31,742, while 51.02% of the sample firms have at least 100 employees (see Figure 3).

Table 1. General Data

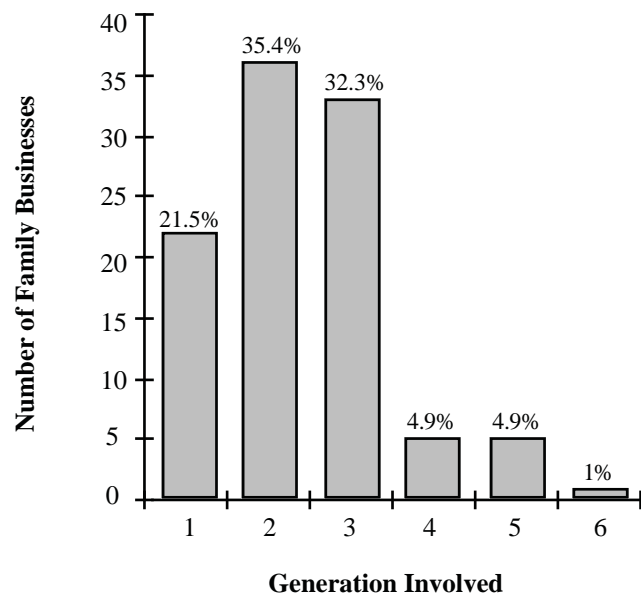| Indicator	Total	Average
Number of FBs in the Sample	104	
Age of Firm		48 years
Annual Sales (in billion pesetas.)	472.63	4.92
Number of Employees	31742	324
Agriculture, Forestry and Fishing	3 (3%)	
Manufacturing	62 (62%)	
Construction	2 (2%)	
Services	33 (33%)	
Return on Sales (ROS)		8.81%
Return on Equity (ROE)		27.50%
Debt / Equity Ratio		0.9478

Figure 1. Generation Distribution


Figure 2. Sales Distribution
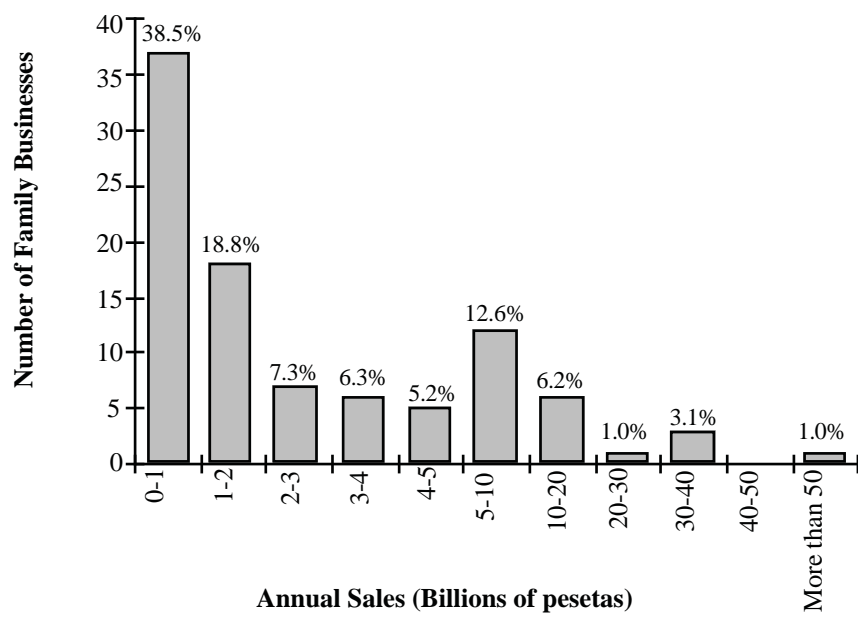
Figure 3. Employee Distribution
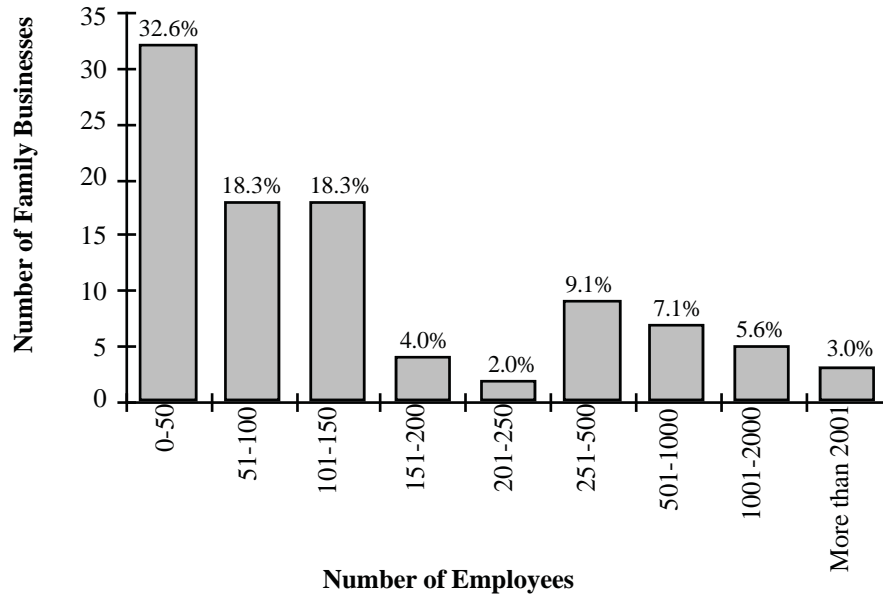
58.51% of the firms in the sample are among the top ten in their industry (market share criterion). Table 2 shows the industry position of the FBs in the sample.

Table 2. Industry Position of FBs in Sample

	1-10	10-50	50-100	> 100	Total
Agriculture, Forestry and Fishing	1	1			*2*
Power Generation	3				*3*
Mining	8	1			*9*
Chemical and Allied Products	4	2		2	*8*
Fabricated Metal Industries	5			1	*6*
Food and Kindred Products	7	4			*11*
Manufactured Products (not Food)	15	8		1	*24*
Construction			1	1	*2*
Wholesale and Retail	5	6	2		*13*
Transportation and Communication	1	2	1		*4*
Hotels and Other Services	6	3		3	*12*
Number of FBs	*55*	*27*	*4*	*8*	*94*
Percentage	*58.51*	*28.72*	*4.25*	*8.52*	*100*

As far as the debt/equity level (see Figure 4) is concerned, 27.4% of the FBs finance themselves with equity only. The mean debt/equity ratio for the sample is less than 1 (debt equal to equity). The debt to equity mean reported by the Bank of Spain during the same period for a sample of 4,702 firms was 1.53.

Figure 4. Debt / Equity Level

Debt / Equity Ratio
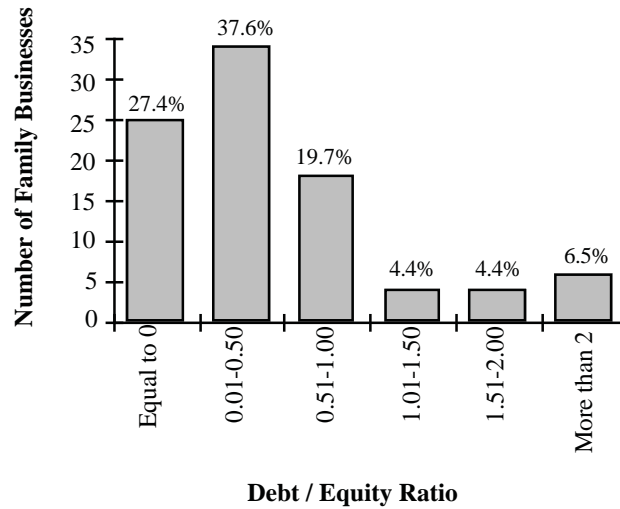
With regard to performance, measured by ROS and ROE (Figures 5 and 6), there are very few FBs that have losses. The mean ROS for the sample is 8.81%. Some FBs achieve up to 45% ROS. The mean ROE for the sample is 27.50%. Some firms achieve 280% ROE.
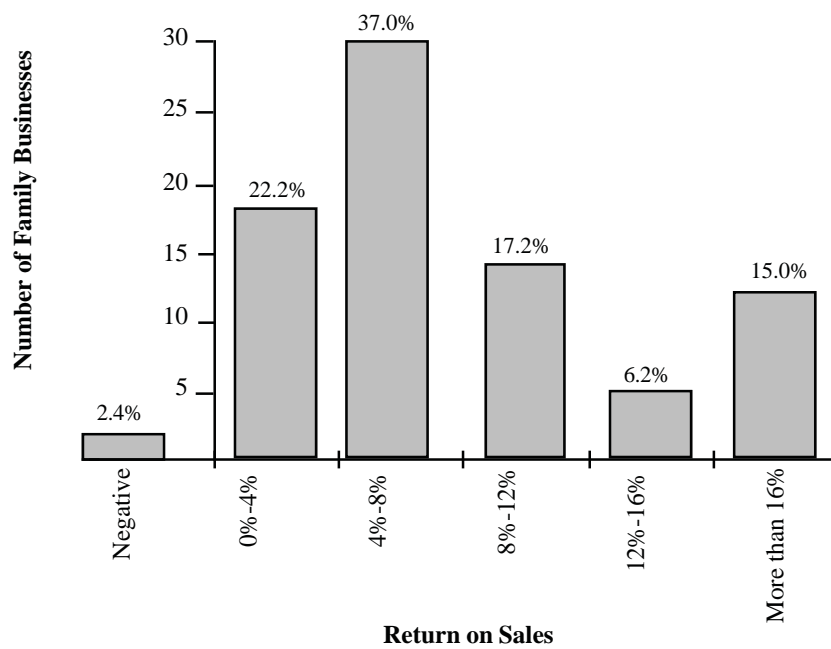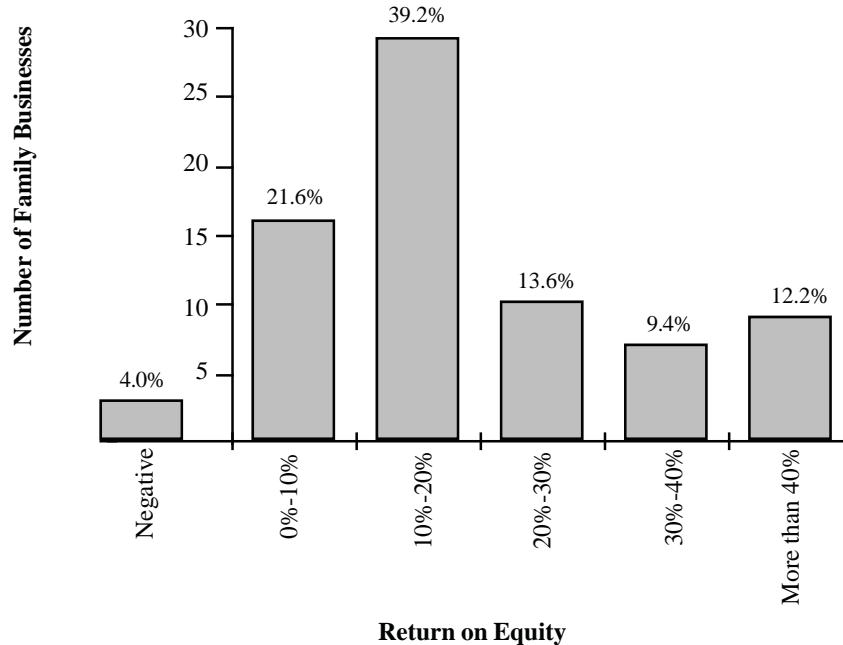
Figure 5. Return on Sales Distribution

Return on Sales

Figure 6. Return on Equity Distribution

III. Capital structure, financial policies and performance of FBs

Correlation analysis was used to discover relationships between capital structure, financial policy and performance variables. In order to analyze the statistical significance of these relationships, linear regressions were performed between each pair of variables, using «p» parameters associated with the «F» parameters (see Table 3).

This section of the paper is divided into three parts. First, there is an analysis of the debt level of the FBs in the sample and its relationship with the other variables. The aim of this is to identify the factors that have a strong relationship with debt level.

Second, the paper investigates the financial policies of the FBs. On the one hand, there is an analysis of the commercial links between FBs and financial institutions, focusing on the number of financial institutions that the firms work with and the number of different financial products they purchased from these institutions. On the other hand, there is an examination of the relationship between the dividend policy of the FBs in the sample and other variables in order to identify the criteria that the FBs used to determine their dividend policy.

Finally, the paper looks at the relationship between the performance variables (ROS and ROE) and other variables, with the aim of identifying the variables that have the greatest impact on the FBs' performance.

Debt level

In addition to the low debt/equity level mentioned above, FBs' future objectives for capital structure deserve to be highlighted. Most of the firms in the sample aim to maintain or even reduce their debt/equity level.

 – Medium-term objectives of the FBs that have no debt (27.4% of the sample):

No debt acquisition	90.91%
Debt acquisition	9.09%

 – Medium-term objectives of the FBs that have debt (72.6% of the sample):

Reduce the debt level	58.18%
Maintain the debt level	25.45%
Increase the debt level	16.36%

Looking at Table 3 and focusing on the relationship between the debt/equity variable and other variables, it can be seen that the only statistically significant relationship is with the ROE variable. This is logical; given that the debt/equity mean of the FBs in the sample is low, as this ratio increases (assuming that the rate of interest on the debt is lower than the ROA), so too will the ROE.

Table 3. Correlation between Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Debt / Equity Level	100																
2. Industry	-9.4	100															
3. Industry Position	-16.8	-24.2^a	100														
4. Generation	9.3	-23.2^a	12.4	100													
5. Company Age	14.2	-20.3^a	0.9	83.2^c	100												
6. Return on Sales (ROS)	-11.7	18.7^a	-37.3^c	-8.8	-14.9	100											
7. Return on Equity (ROE)	63.1^c	12.5	-17.8	-0.5	-2.5	26.5^a	100										
8. log$_e$ (Sales)	-8.1	-8.5	33.7^b	22.1^a	20.3^a	-25.4^a	-18.9^a	100									
9. log$_e$ (Assets)	-2.8	-17.9	22.8^a	32.5^b	31.8^b	-10.2	-28.2^a	87.7^c	100								
10. log$_e$ (Employees)	-6.4	-14.9	37.2^c	35.9^c	35.4^c	-33.5^b	-14.4	85.2^c	75.4^c	100							
11. NFI	13.4	8.1	11.9	13.3	10.3	-14.8	-6.0	35.8^c	38.1^b	36.5^b	100						
12. VFP	8.3	6.2	22.9^a	12.8	6.4	-12.0	-0.5	39.2^c	41.7^c	26.6^c	24.8^a	100					
13. Dividend / Profit	-8.9	-8.9	-0.2	19.9	2.1	15.8	-2.3	8.4	16.6	1.0	-7.9	13.6	100				
14. Asset Turnover	1.2	10.0	5.1	-15.4	-7.0	-23.8^a	9.9	19.2	-19.7	6.6	-9.4	14.9	-18.8	100			
15. Sales / Employee	-5.2	11.8	-19.0^a	-19.3	-20.6^a	20.8^a	5.2	12.0	5.1	-32.9^b	-10.1	20.3^a	18.2	13.7	100		
16. Equity / Employee	-11.3	5.9	-23.2	-18.5	-19.9	32.1^b	-6.2	-1.4	19.3	-34.8^b	-6.7	16.0	10.8	-20.0	70.1^c	100	
17. Investment Risk	5.9	4.0	-15.2	-0.4	7.7	-4.8	-13.7	15.9	27.6	13.7	20.3^a	-6.1^a	10.8	-7.5	-10.1	-6.1	100

a: $p < 0.10$ b: $p < 0.01$ c: $p < 0.001$

Notes:
Debt /Equity Level:	Debt / Equity ratio
Industry Position:	According to Market Share
log$_e$ (Sales):	Annual Sales natural logarithm
log$_e$ (Assets):	Net Assets natural logarithm
log$_e$ (Employees):	Number of Employees natural logarithm
NFI:	Number of Financial Institutions that the family business is related to
VFP:	Number of Different Financial Products purchased by the family business
Asset Turnover:	Sales / Net Assets
Investment Risk:	Risk mean perceived by the family business for total investments

It can also be seen that there is no statistically significant relationship between FB variables such as industry, generation and company age, and the debt/equity variable. This means that the same low level of debt will be found in any FB, regardless of the other factors that usually influence capital structure. This contrasts with the generally accepted view that a higher debt/equity level will be found, for example, in the construction and service industries.

However, one finds significant differences in debt/equity level according to industry position. Table 4 shows the mean debt/equity ratio of the FBs in the sample grouped according to industry position. It can be seen that the leading firms have a lower debt level than those in lower positions, which have nearly double the mean of the total sample.

Table 4. Debt/Equity Mean according to Industry Position

Position	General	1-10	10-50	50-100	>100
Mean	1.10	0.53	2.13	1.37	1.70

One explanation for this could be that the FBs that have attained a leading industry position do not need to grow in the short term. They therefore follow the «natural» tendency to have a low debt level, as confirmed by this study. At the same time, the firms lower down in the industry ranking acquire debt in order to improve their position.

As Table 3 shows, there is no statistically significant correlation between the «generation» variable and the «debt/equity» variable. However, when the analysis is done taking only the second, third and fourth-generation FBs, it can be seen that not only does the correlation increase (the coefficient is 28.8%), but it also becomes statistically significant ($p < 0.05$). That is to say that first-generation FBs do not follow any clear debt/equity policy, but once an FB has gone beyond the first generation, it tends to increase its debt/equity level.

Financial Policies

Several questions aimed at identifying possible financial policies of FBs were included in the questionnaire. Firms were asked to give the number of financial institutions they work with, as well as the different types of financial product they purchase.

The first financial policy issue is the «Number of Financial Institutions». Table 3 shows that the number of financial institutions has a strong positive correlation with the size variables (sales, assets, employees). That is, as FBs grow in size, they tend to work with more banks. This is understandable since a firm that is growing has to invest in assets, which usually signifies additional financial needs. Also, most financial institutions tend to work with firms that have reached a significant size and therefore the firms eventually have dealings with a larger number of institutions.

An increase in sales implies an increase in accounts receivable and inventories. And an increase in the number of employees could be due to an increment in fixed assets (plant and machinery). In short, every growth of investment needs to be financed. Generally, in

order to obtain the extra funds, firms need to enter into relations with more financial institutions, unless the growth need is slow in time and can be financed out of the net cash flow generated by the firm.

The positive correlation between the number of financial institutions and the average risk of investments (risk as perceived by the FBs in the sample) has a limited statistical significance ($p < 0.10$). This relation can be explained: As long as a FB runs higher risks due to an aggressive investment policy, banks need to hedge the risk that the firm represents for them. FBs take this into account by working with a variety of financial institutions.

The second financial policy to be analyzed is the «Variety of Financial Products». This is the number of different kinds of financial product that FBs purchase from financial institutions.

As with the number of financial institutions, it can be seen that the correlation between the «variety of financial products» and the «size» variables (sales, assets, employees) are statistically significant and positive. This means that as an FB grows, it starts to use a greater variety of financial products. The reasoning here is similar to that used for the number of financial institutions: greater size goes hand in hand with a greater need for (and possibility of obtaining) long-term loans to finance fixed assets. At the same time, the firm has to obtain larger credit lines to finance growth in production, export credits, factoring, etc.

The strong correlation between the average perceived risk of the investments and the variety of financial products (see Table 3) is not very easy to explain. A greater variety of financial products does not reduce the risk of the investments. Nevertheless, the minus sign does have some logic to it. When an FB's risk level exceeds a reasonable limit, the financial institutions will tend to hedge. If this is not possible, they will start to curtail their relationship with the firm by non-renewal of certain product contracts.

Another statistically significant relationship is that between the «sales/employee» and the «variety of financial products» variables. This positive correlation may be due to the fact that an increase in the «numerator» (sales) is obtained by allowing a delay in payments by customers, which leads to a greater number of financial operations. It also could be because the «denominator» (number of employees in the firm) is reduced by making larger investments in plant and machinery, or by focusing the firm on services. In either case, a greater number of different kinds of operation tends to be needed.

Dividend Policy

A very important point concerning dividend policy can be deduced from Table 3. It can be seen that the variables that usually have a major influence on a firm's dividend policy do not have any strong influence on policy-making in the FBs in the sample.

What is particularly striking is that there is no strong correlation between dividends and ROS and/or ROE, since dividends are usually referred to as a percentage of ROS or ROE. The higher the ROS or ROE, the more reason there is to pay higher dividends. Nevertheless, the FBs in the sample do not follow this line.

The lack of clear criteria for dividend policy is contrary to the «laws of the market». It can leads FBs to fall into a «trap» that is typical of this type of firm (Davis and Tagiuri, 1982): family members that do not work in the business may consider selling their stock

because it is unprofitable or come into confrontation with the managers, thus destroying the harmony and unity of family and firm.

In addition, the lack of clear criteria for dividend policy may cause problems when the FB needs additional financing, either through an increase of equity, an increase of external participation, an Initial Public Offering, or the simple negotiation of a long-term loan.

Performance

Table 3 shows a strong correlation between the «sales», «assets» and «employees» variables on the one hand, and the «industry position» variable on the other. It is well known that as a firm secures a larger market share, it usually also increases in size.

On the other hand, Table 3 shows a strong and negative correlation between the «ROS» variable and the «industry position» variable. The statistical significance shown by the «p» parameter ($p < 0.001$) reflects the negative trend that when a FB reaches a leading industry position, the ROS decreases. Also, the correlation between the «ROE» and the «industry position» variables, although not statistically significant, follows the same negative tendency. It can therefore be said that when the FBs in the sample attain a leading position in their industry, their performance deteriorates.

Considering 1) the relationship between ROS and industry position, 2) the change in the mean debt/equity level depending on industry position (as shown in Table 4), and 3) the statistically significant relationship between the «debt/equity» and «ROE» variables, it is fair to conclude that the FBs in the sample have different capital structure policies depending on their industry position, and that these policies have a negative impact on their performance.

On the other hand, industry position is related to size. It is commonly accepted that size can be the basis for a lower/better cost structure, owing to economies of scale, and that this is why large firms can achieve a higher profitability (Buzzel, Gale and Sultan, 1975). Also, if a firm has grown by means of related diversification, it can achieve economies of scope, which also translate into higher profitability (Rumelt, 1974, 1982). Nevertheless, contrary to this general opinion, in our sample larger firms do not mean higher profits. This may be due to the fact that managing a large FB requires appropriate management systems; in particular, management control systems and structure redesign to give autonomy of decision-making to a greater number of people. As has already been demonstrated (Davis and Stern, 1980. Davis and Tagiuri, 1989), FBs have difficulties on both these scores.

Debt level and performance

In order to clarify the impact that the debt level has on the performance of the FBs in the sample, a simple linear regression between these two variables has been analyzed (see Table 5).

Table 5. Linear Regression

Dependent variable is: **ROE**
104 cases in total, of which 32 are missing

R squared = 39.9%   R squared (adjusted) = 39.0%
s = 35.27 with 70 – 2 = 68 degrees of freedom

Source	Sum of Squares	df	Mean Square	F-ratio
Regression	56053.7	1	56053.7	45.1
Residual	84597.5	68	1244.08	

Variable	Coefficient	s.e. of Coeff	t-ratio	prob
Constant	17.6346	4.490	3.93	0.0002
Debt/Equity	9.64484	1.437	6.71	≤ 0.0001

According to Table 5, both variables are highly dependent (p $\leq$ 0.0001) and their relationship is very strong (t = 6.71). In addition, the R^2 is close to 40%, which means that the debt level explains 40% of the difference in ROE.

The regression in itself does not examine the direction of dependence or the possible causal relationship between the variables. Consequently, it does not imply either that a higher debt/equity ratio leads to a higher ROE or that a FB that has a high ROE is likely to have a higher debt/equity level since banks would offer more financial alternatives.

The Modigliani and Miller theory (1958) indicates that up to a certain debt level (assuming that the interest rate is lower than the ROA), a larger debt level will lead to a higher ROE. The above regression analysis provides empirical evidence to support this theory and shows the direction of the relationship.

It is also important to consider the coefficient value (9.64484) of the dependent variable (debt/equity). This means that when the debt/equity ratio is increased by one unit, the ROE will increase 9 points. For example, if a FB (with similar characteristics to those in the sample) that has no debt and a ROE of 18% increases its debt/equity ratio to 1 (debt and equity are equal) –which is usually considered acceptable– it will increase its ROE by 50% (i.e. to 27%).

IV. Implications

Assuming that a firm's strategy is driven by growth and change, and given that one of the most commonly cited reasons for the failure of FBs to grow and change is the lack of financial resources, the present study demonstrates that the debt level of FBs can be increased considerably before reaching a level that is usually considered reasonable.

It therefore seems advisable to encourage FBs with a very low debt/equity level to adopt a strategy of debt-financed growth and change, given that an analysis of performance variations shows the debt/equity ratio to be an important factor.

As far as FBs' dividend policy is concerned, there is a need for clear and stable criteria. In the medium and long term, the pursuit of growth and change strategies could be financed through increases in capital, the involvement of external institutional shareholders, or initial public offerings, if these possibilities are available.☐

References

Aronoff, C. and Ward, J.L. (1991). *Family Business Sourcebook.* Detroit: Omnigraphics.

Buzzell, R.D., Gale, B.T. and Sultan, R. (1975). «Market Share: A Key to Profitability.» *Harvard Business Review,* 53 (January-February), 97-106.

Daily, C.M. and Dollinger, M.J. (1992). «An Empirical Examination of Ownership Structure in Family and Professionally Managed Firms.» *Family Business Review,* 5 (3), 117-135.

Davis, J. and Tagiuri, R. (1982). «Bivalent Attributes of the Family Firm.» In Aronoff, C.E. and Ward, J.L. (Eds.), *Family Business Sourcebook.* Detroit: Omnigraphics.

Davis, J. and Tagiuri, R (1989). «The Influence of Life Stage on Father-Son Work Relationships in Family Companies.» *Family Business Review,* 2 (1), 47-74

Davis, P. and Stern, D. (1980). «Adaptation, Survival and Growth of the Family Business.» *Human Relations,* 34 (4), 207-224

Gallo, M.A. and Estapé, M.J. (1992). «Family Business Among the Top 1,000 Spanish Companies.» IESE, Research Department, Nº231.

Gallo, M.A. and Estapé, M.J. (1994). «The Family Business in the Spanish Food and Beverage Industry.» IESE, Research Department, Nº265.

Gallo, M.A. and García Pont, C. (1988). «The Family Business in the Spanish Economy.» IESE, Research Department, Nº144.

Leach, P. (1990). «Managing the Family Business in the UK», Sloy Hayward.

Lyman, A.R. (1991). «Customer Service: Does Family Ownership Make a Difference?» *Family Business Review,* 4 (3), 303-324**.**

Modigliani, F. and Miller, M.H. (1958). «The Cost of Capital, Corporation Finance and the Theory of Investment.» *American Economic Review,* 48 (June).

Rumelt, R.P. (1974). «Strategy, Structure and Economic Performance.» Harvard Business School, Division of Research.

Rumelt, R.P. (1982). «Diversification Strategy and Profitability.» *Strategic Management Journal,* 3 (October-December), 359-369.

Ward, J.L. (1983). «The Impact of Private Ownership on Marketing Strategy and Performance: A First Look at the PIMS Data Base.» Loyola University, Chicago.

IESE

DOCUMENTOS DE INVESTIGACION - RESEARCH PAPERS

No.	TITULO	AUTOR

D/ 268 Alliance networks in European banking.
June 1994, 26 Pages

García Pont C.

D/ 269 Las relaciones laborales en Alemania.
Junio 1994, 61 Págs.

Gómez S.
Pons Mª

D/ 270 Las relaciones laborales en Francia.
Junio 1994, 66 Págs.

Gómez S.
Pons Mª

D/ 271 La estructura interna de la empresa en la visión de Coase.
Julio 1994, 19 Págs.

Argandoña A.

D/ 272 Teaching business ethics using the case method.
July 1994, 17 Pages

Argandoña A.

D/ 273 Weak form market efficiency: A comparison between the Spanish and the U.S. stock markets.
July 1994, 39 Pages

Martínez Abascal E.
Pregel G.

D/ 274 Investing in Russia.
July 1994, 36 Pages

Taylor G.

D/ 275 Aspectos éticos en la consultoría de búsqueda de directivos.
Septiembre 1994, 16 Págs.

Melé D.
Roig B.

D/ 276 Factores determinantes del ahorro.
Septiembre 1994, 88 Págs.

Argandoña A.

D/ 277 Spain and the European social charter.
September 1994, 33 Pages

Argandoña A.

IESE

DOCUMENTOS DE INVESTIGACION - RESEARCH PAPERS

No.	TITULO	AUTOR
D/ 278	Technology management in Spain. October 1994, 14 Pages	Riverola J. Muñoz-Seca B.
D/ 279	Códigos de conducta empresarial: ¿Pueden contribuir al desarrollo ético de los empleados? Octubre 1994, 14 Págs.	Melé D.
D/ 280	Las relaciones laborales en Italia. Noviembre 1994, 61 Págs.	Gómez S. Pons M.
D/ 281	Training the next generation of owners and managers: A possible key role for directors in family businesses. November 1994, 17 Pages	Tomaselli S.
D/ 282	Los servicios: El binomio privatización- desregulación. El caso de la educación. Diciembre 1994, 15 Págs.	Argandoña A.
D/ 283	Las relaciones laborales en el Reino Unido. Diciembre 1994, 75 Págs.	Gómez S. Pons Mª
D/ 284	Isomorphic pressures on identity: The case of learning partnerships with business schools. December 1994, 21 Pages	Enrione A. Knief C. Mazza C.
D/ 285	Control and incentives in organizational design. January 1995, 22 Pages	Ricart J.E. Rosanas J.M.
D/ 286	Asset-based competition and industry structure: Recapturing the early concepts of strategic groups. January 1995, 29 Pages	Enrione A. García Pont C.
D/ 287	Finanzas en empresas familiares. Enero 1995, 19 Págs.	Vilaseca A.