

FAMILY FIRMS' RESILIENCE DURING THE COVID-19 PANDEMIC: EVIDENCE FROM FRENCH FIRMS

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Abstract

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The purpose of this paper was to comprehend what are the characteristics that allow companies to be more resilient to cope with the crisis caused by the COVID-19 pandemic. More specifically, we explore the relationship between families' involvement in corporate ownership and leadership and financial performance. Using a sample of 226 French-listed firms during the period from January 24 to April 27, 2020, we found that firms controlled by family shareholders showed higher stock market performance than their non-family in the pandemic period. This finding is stronger in the case of the first family firms' generation where the founder still holds the position of executive chef, president or general manager. Contrary to our expectations, family firms perform better when led by a professional chief executive officer (CEO). Overall, our results add to previous research by illustrating how family ties influence a firm's response to external shocks.

Keywords: Family Firms, CEOs, Generation, Financial Performance, COVID-19

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1. INTRODUCTION

Besides its impact on public health, the COVID-19 pandemic, which is suddenly and abruptly spread around the world, has caused a real global economic shock, thus constituting one of the most viral crises (Ali et al., 2020). The pandemic has caused profound economic distress which will generate considerable economic risks because its influence on the financial markets and the global economy which began in March 2020, can persist for years. Many companies have found major difficulties in coping with the impact of this pandemic to guarantee their survival and so that they can continue their activities (Bartik et al., 2020).

Although the majority of companies worldwide have been affected by COVID-19, recent studies show that there is significant heterogeneity in its impact due to company characteristics (Carletti et al., 2020). The impact of COVID-19 on firms varies by industries, financial markets, and economies. For example, companies belonging to labor-intensive sectors have not been deeply affected by COVID-19 since they can reduce their costs more easily. While small and medium-sized enterprises have been the most affected because of their relatively vulnerable financial situation (Brown et al., 2020). Other studies, such as those by Fahlenbrach et al. (2021), have shown that companies that rely on equity financing more than debt have not been

affected by COVID-19 which shows the important role of financial flexibility during times of crisis.

Another line of research began to develop and explore the role of organizational and governance characteristics in mitigating the severity of COVID-19 (Salvato et al., 2020). For example, companies with strong relationships with these employees show better resilience during the COVID-19 pandemic (Shan & Tang, 2022). Because these employees can work under pressure and accept other work arrangements, and subsequently, maintain work efficiency.

Recent evidence from this literature implies that the presence of families in firms played a significant role as well (Ding et al., 2021). However, it is still indistinct what characteristics of family involvement were most important, what performance measures were most essential, and what processes were at work. In this article, we focus on the role of ownership structure. More specifically, we explore the controlling shareholder effect in the aftermath of the COVID-19 pandemic. Our study tries to provide new explanations on the role of family vs. non-family ownership since they are not owned and managed in the same way. As a result, understanding whether and how this type of ownership affected the reaction to the COVID-19 shock is helpful for determining the pandemic's overall effects on firms.

Thus, to study the effect of family ownership on financial performance during the COVID-19 pandemic, we use a sample of 226 French companies listed on the stock exchange. For our study, France constitutes an interesting laboratory because it was among the countries which were deeply affected by COVID-19. Moreover, it is among the countries that have adopted policy measures to prevent the spread of the virus.

Our results show that the cumulative abnormal returns of family firms are significantly higher than that of non-family firms. Thus, family firms have shown a greater capacity to resist the COVID-19 pandemic because of their long-term vision and social capital as well as their policy.

In addition to analyzing the impact of family firms compared to non-family firms on financial performance, we separately study the performance of family firms led by a family member and those led by professional chief executive officers (CEOs). Our results indicate that family firms led by outside CEO perform better than those led by a family member. Moreover, we analyze the performance of first-family firms' generation with those of second/later generations. Our results indicate that first-generation family firms are more efficient.

Therefore, our research adds to the growing literature on firms' resilience by showing that family firms have more capacity to withstand periods of crisis. To our knowledge, no study has explored the impact of family ownership on the performance of French companies during the COVID-19 pandemic.

Our study is very important because, according to recent research, the consequences of the COVID-19 pandemic can exceed the last financial crisis. Therefore, it is very important to know the determinants that constitute a strong point for companies and which can allow companies to overcome the current crisis. In addition, our study

may help reduce the market uncertainty caused by COVID-19. According to our results, family ownership is one of the factors that allow the company to resist crises.

The remainder of this study is organized as follows. Section 2 provides a literature review and hypotheses development. The research methodology is discussed in Section 3. In Section 4, we report the empirical findings. Afterward, we offer a discussion of the results. Finally, we conclude this study in Section 6.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Resilience research shows that family firms have a greater capacity compared to non-family firms to take advantage of recovery opportunities and organize themselves effectively following unexpected negative shocks. According to a recent analysis produced by Cr dit Suisse Research Institute (2021), family firms have superior profitability and growth rates during and after periods of crisis than non-family firms. Also, research produced by KPMG (2021) emphasizes the superior performance of family firms in times of crisis. Salvato et al. (2020) indicated that family firms were more resilient than non-family firms in weathering crises, and Amore et al. (2021) observed that family firms' market values lost less than non-family firms during the pandemic. This is explained by the greater longevity of family firms that can span several generations (Fernandez Perez & Colli, 2013; Miller & Le Breton-Miller, 2005). Family owners always have the will to keep their firms in good shape to pass it on to their descendants and that is why they are primarily concerned with their reputation, are very attached to their firms, and prefer strategic decision-making.

This longevity is the result of the inherent capacity of firms to cope with sudden shocks such as disaster events, financial crises, and other unfavorable events, allowing them to survive for long periods without losing their activity (Chrisman et al., 2011). Indeed, the characteristics of family firms can prove to be invaluable during the pandemic period because they make it possible to signal that these firms have an additional motivation to react effectively to guarantee their sustainability. In addition, family firms can take advantage of their highly developed relational networks which will facilitate access to banking resources (D'Aurizio et al., 2015) and the political sector. Finally, family firms have a higher level of employee productivity and a lower level of debt financing costs.

The first basic prediction we test is that financial performance after the unfavorable event is higher for family firms than non-family firms, indicating their greater resilience. Hence, our first hypothesis is:

H1: Family firms show higher financial performance during the COVID-19 pandemic than non-family firms.

Family firms, in addition to having a more efficient structure, would perform better during the crisis period if the owner acts as executive chef, president, or general manager than if he/she comes from outside (Amore et al., 2022). Family CEOs often have a great deal of power and influence in family

firms (Amore et al., 2021). This is explained by the fact that these firms have stronger relationships with their employees as well as with other external stakeholders (Bach & Serrano-Velarde, 2015; Mullins & Schoar, 2016). According to a recent study of Brazilian family firms, employees tended to believe that their employers are more concerned about their well-being compared to non-family firms (Christensen-Salem et al., 2021). Also, the study of Shan and Tang (2022) on Chinese family firms indicates that, after the shock of the COVID-19 crisis, employee satisfaction helped them to maintain market valuations better than non-family firms. Thus, family firms with a strong presence of owners in management increase efficiency and productivity, and subsequently, these firms perform better than other firms as they tend to grow faster than others, and in times of market turbulence, they are no less stable, their employees are more loyal and less likely to leave the company (Lee, 2006).

Indeed, when involved in management, the family members have a longer-term vision of their firms, they make more conservative investment choices, ensure efficient management of their resources and aim for the commitment of their employees. These choices would promote better performance compared to non-family firms.

Thus, based on previous studies which assume that family firms in which the family is involved in the management obtain better performance, we, therefore, propose the following hypothesis:

H2: During the COVID-19 pandemic, the performance of family firms led by a family member is better than that led by professional CEO.

In addition, the presence of the founding families allows an advantageous position to the family view that the changes required by the shock of COVID-19 necessitate the rapid taking of difficult and courageous decisions and a lot of discretion and experience among leaders (Le Breton-Miller & Miller, 2021). This allows him/her to better control his/her firm and to seek the best human resources to run it. Thus, conflicts between owners and managers are reduced and the performance of the firm is maximized. Due to the concentration of

ownership, family members would also have more power than other shareholders to achieve their goals. Also, companies with more active involvement in management tend to have better financial performance (Anderson & Reeb, 2003; Burkart et al., 2003).

The long-term presence of families in the company would also confer an advantage since they can know more about the performance of the employees and have longer-term investment horizons (James, 1999; Carlock, 2009). Fama and Jensen (1983) point out that family firms have an advantage in controlling the performance of employees and managers, which leads to increased employee confidence and management efficiency.

Thus, the last hypothesis of our research is established as follows:

H3: During the COVID-19 pandemic, the performance of family firms in the first generation is better than that of the second or later generation.

3. RESEARCH METHODOLOGY

Our sample is composed of French firms listed on Euronext. We chose to work on the French context because France is the eighth most bereaved country in the world and the third in Europe after the United Kingdom and Italy, is living at the pace of the COVID-19 pandemic. Figure 1 illustrates the progression of contaminated cases and deaths in France. Since the first official cases were recorded in France on January 24, 2020, the number of new cases and new deaths of COVID-19 have increased steadily until the end of March 2020. In total, the number of deaths that occurred between January 1 and April 30, 2020, amounted to 238,271, equivalent to a daily excess mortality of 33% compared to the average values for the years 2000 to 2019. On average, 2,120 deaths were recorded each day according to civil status compared to 1,590 between 2000 and 2019, which is an unprecedented increase in deaths over 70 years of age.

Figure 1. Curve of hospitalizations in France (First wave: March 15–June 15)



Source: Géodes — Santé publique France (<https://geodes.santepubliquefrance.fr/>).

On March 12, 2020, the President of the Republic announces the closure of nurseries, schools, colleges, high schools, and universities. All companies will be able to defer the payment of contributions and taxes due in March without penalty. An “exceptional and massive” partial unemployment mechanism is envisaged. Employees are encouraged to practice teleworking. The Ministry of Health is requesting the deprogramming of elective surgical interventions. Two days later, the closure of all “non-essential” public places is announced and the Prime Minister Edouard Philippe proposes new measures to fight the COVID-19 epidemic. On Monday, March 16, in a new speech, the President of the Republic announced measures to drastically restrict individual travel under penalty of a fine and a closure of European Union (EU) borders. More and more companies are partially or shutting down their activity. Pension reforms are suspended and the second round of municipal elections is postponed. The next day, at noon, France switches to confinement. At this moment, the toll is 148 dead and 6,633 confirmed cases.

This is why, in our study, we chose to work over the period from January 24 to April 27, 2020, to test the stock market performance of 226 French firms belonging to the CAC All-Tradable Index. Thus, we used the dependent variable *Cumulative abnormal returns (CAR)* as the most recent studies that worked on this period (Albuquerque et al., 2020; Amore et al., 2022; Ramelli & Wagner, 2020; Souffargi & Boubaker, 2023). The cumulative abnormal returns represent the sum of the abnormal returns over time:

$$CAR = \sum_{t=-55}^{15} AR_t \quad (1)$$

The daily abnormal return is the difference between the observed return and the expected return on a stock. To calculate abnormal returns, we use daily returns for the period 2017 to 2019.

Table 1. Variable definition

<i>Variable</i>	<i>Measurement</i>
<i>Dependent variable</i>	
<i>Cumulative abnormal returns (CAR)</i>	The sum of the abnormal returns
<i>Explanatory variables</i>	
<i>Family firms dummy</i>	Coded 1 for a family firm and 0 otherwise
<i>State-controlled dummy</i>	Coded 1 for firm controlled by state and 0 otherwise
<i>Controlled by a financial company dummy</i>	Coded 1 for a firm controlled by a financial company and 0 otherwise
<i>Controlled by a foreign company dummy</i>	Coded 1 for a firm controlled by a foreign company and 0 otherwise
<i>Family firms led by a family CEO dummy</i>	Coded 1 for family firm led by a family CEO and 0 otherwise
<i>Family firms' generation dummy</i>	Coded 1 for the first-generation company and 0 otherwise
<i>Control variables</i>	
<i>Size</i>	The natural logarithm of the book value of total assets
<i>Age</i>	The number of years since a firm's establishment
<i>Leverage</i>	The ratio of the book value of debt to the book value of total assets
<i>Profitability</i>	The ratio of net profits to the book value of assets

To test our hypotheses, we used the variable *Family firms* as our main explanatory variable. It is a dummy variable that takes 1 if the firm is controlled by a family and 0 otherwise. A firm is considered a family if its participation in the firm is the highest compared to the other shareholders and this participation must be higher than 25%.

Besides this variable, we have added several other dummy variables to study their moderating effects on the relationship between *Family firms* and *Cumulative abnormal returns*. The first variable relates to the types of leadership. It is called *Family firms led by a family CEO*, which is equal to 1 if the family firm is managed by a member of the family and 0 otherwise. The second variable is linked to the generation of the family firms. It is called *Family firms' generation*, which is equal to 1 if the family firm is still first generation and 0 otherwise.

In addition, we have added three other variables that are related to types of ownership in order to compare the impact of family firms on stock market performance with other types of ownership. The first variable is *State-controlled*, which is equal to 1 if the firm is controlled by the State and 0 otherwise. The second variable is *Controlled by a financial company*, which is equal to 1 if the firm is controlled by institutions financial and 0 otherwise. Finally, the variable *Controlled by a foreign company* is equal to 1 if the company is controlled by foreign firms and 0 otherwise.

To obtain the necessary information on the ownership structure, we have to trace the complete chain of ownership of each firm to identify the controlling shareholders. Thus, the collection of data concerning the controlling shareholder is manual and it is extracted from the universal registration documents.

Table 2. Sample composition

Panel A: Ownership type		
Family firms	53.5%	121
Non-family firms	46.5%	105
All	100%	226
Panel B: Family firms' leadership		
Family firms led by a family CEO	71.1%	87
Family firms led by outside CEOs	28.9%	35
All	100%	121
Panel C: Family firms' generation		
First	53.2%	68
Second/Later	43.8%	53
All	100%	121

Note: Panel A of this table illustrates the number of family firms compared to non-family firms. A firm is considered a family firm if it holds at least 25% of the capital. Panel B illustrates family firms controlled by a family member versus those controlled by a professional CEO. Panel C distinguishes between first-generation family firms and second/late-generation family firms. A family firm is first-generation if its founder occupies the position of CEO or the chairman of the board of directors.

As indicated by Panel A of Table 2, our sample is made up of 53.5% of family firms against 46.5% of non-family firms. Therefore, out of 226 firms, 121 firms are considered family firms. Panel B shows that 71.1% of family firms are led by a family member. Panel C shows that 53.2% of family firms are still the first generation, that is to say, their founders still hold the position of CEO or president.

For the control variables, we used the variable *Size*, which is defined as the logarithm of the book value of the total assets. The variable *Age* is equal to the number of years since the establishment of the firm and not since its introduction on the stock market. The variable *Leverage* is computed as

the book value of debt divided by the book value of total assets. Finally, the variable *Profitability* is defined as the ratio between net profits and the book value of assets.

4. RESEARCH RESULTS

4.1. Summary statistics

Tables 3 and 4 present the descriptive statistics of the *Cumulative abnormal returns* and of the control variables.

Table 3. Summary statistics

<i>Variable</i>	<i>No. of observations</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>P25</i>	<i>P75</i>
<i>CAR</i>	15,142	-0.0677	0.2177	-0.1702	0.03882
<i>Size</i>	8,173	15.0801	2.1234	13.5190	16.7345
<i>Age</i>	15,142	57.7920	52.0894	24	69
<i>Profitability</i>	6,998	-1.4523	27.3195	-7.51	10.02
<i>Leverage</i>	8,039	0.34733	0.1894	0.2215	0.4676

Table 4. Correlation matrix

<i>Variable</i>	<i>CAR</i>	<i>Family firms</i>	<i>Age</i>	<i>Profitability</i>	<i>Size</i>	<i>Leverage</i>
<i>CAR</i>	1					
<i>Family firms</i>	0.1796	1				
<i>Age</i>	0.0966	0.0686	1			
<i>Profitability</i>	0.1989	0.2630	0.1263	1		
<i>Size</i>	0.0280	-0.3236	0.1885	0.1131	1	
<i>Leverage</i>	0.2356	0.2779	0.0229	0.2853	0.2074	1

Note: Panel A of this table presents the descriptive statistic for each variable used in our empirical study. Panel B presents the correlation matrix of these variables. Our sample consists of 226 firms for the period from January 24 to April 27 (15,142 observations). All our variables are defined in Section 3, as well as in Table 1.

4.2. Cross-sectional study

First, we conduct a cross-sectional study of cumulative abnormal returns for the period from the end of January to the end of April. In Table 5, our main explanatory variable is *Family firms*. It is a dummy variable that takes 1 if the firm is controlled by a family and 0 otherwise. The first column of

Table 5 shows that the impact of family firms on returns is not significant. However, this impact turns positive and significant when taking into account the accounting characteristics of firms as indicated in columns 2, 3, and 4. Column 5, which contains all the control variables, indicates that family firms have yields that are 3% higher with significance at the 1% threshold.

Table 5. Family firms and financial performance

Variable	(1)	(2)	(3)	(4)	(5)
	CAR	CAR	CAR	CAR	CAR
L.CAR	0.952*** (0.007)	0.589*** (0.048)	0.733*** (0.049)	0.711*** (0.056)	0.825*** (0.041)
Family firms	0.001 (0.001)	0.126*** (0.020)	0.086*** (0.013)	0.098*** (0.028)	0.034*** (0.010)
Size		0.073*** (0.015)	0.049*** (0.010)	0.064*** (0.016)	0.020*** (0.006)
Age			-0.001** (0.000)	-0.001***	-0.0011** (0.000)
Leverage				-0.184 (0.118)	0.024 (0.099)
Profitability					0.001* (0.000)
Constant	-0.003** (0.001)	-1.193*** (0.234)	-0.791*** (0.151)	-0.940*** (0.265)	-0.333*** (0.105)
Observations	11,752	6,339	6,339	6,235	5,428
Number of id	226	126	126	124	107
Ar1p	0.00	2.02e-08	1.86e-09	2.14e-08	3.72e-08
Ar2p	0.462	0.252	0.0783	0.116	0.207
Hansenp	0.250	0.525	0.525	0.869	0.923
Sarganp	0.250	1.000	0.789	0.556	0.201

Note: This table presents the coefficients and standard deviations of the variables of our model, which is estimated by the generalized method of moments (GMM). The dependent variable is the Cumulative abnormal returns during the period January–April 2020 and the explanatory variable is Family firms. It is a dummy variable that takes 1 if the firm is controlled by a family and 0 otherwise. In the first column, we only test the impact of the variable Family firms. Then, we sequentially add the variable Size in the second column, Age in the third column, and Leverage in the fourth column. Finally, the Profitability variable in the fifth column contains all the other variables. Robust standard errors used are in parentheses. Sargan-Hansen test is an overidentification test built on the hypothesis of no correlation between the instruments and the error term. L.CAR stands for lagged cumulative abnormal returns. Number of id: number of firms; Ar1p and Ar2p: the p-value of Arellano-Bond test in first differences for AR(1) and AR(2), respectively; Hansenp: the p-value of Hansen test; Sarganp: the p-value of Sargan test. ***, **, and * indicate the significance at the 1%, 5%, and 10% levels, respectively.

Now we try to show if the firm's performance during COVID-19 is better when it is run by a family or comes from any type of shareholder structure. In Table 6, we attempt to answer this question by replacing the dummy variable Family firms with a set of variables, namely: Family firms, State-controlled, Controlled by a financial company, and finally, the variable Controlled by a foreign company. The results of Table 6 confirm the previous results

and indicate a positive and statistically significant coefficient at the 1% level of the Family firms variable. Likewise, the coefficient of the Controlled by a financial company variable is positive and significant at the threshold of 10%. On the other hand, the coefficient of the variable Controlled by a foreign company is negative and significant at the 10% level. Also, the coefficient of the State-controlled variable is negative and significant at 1%.

Table 6. Family firms vs. non-family firms

Variable	(1)	(2)
	CAR	CAR
L.CAR	0.921*** (0.034)	0.921*** (0.034)
Family firms	0.131*** (0.043)	0.131*** (0.043)
State-controlled	-0.038* (0.023)	-0.073*** (0.028)
Controlled by a financial company	0.036* (0.020)	
Controlled by a foreign company		-0.036* (0.020)
Size	0.030*** (0.009)	0.030*** (0.009)
Age	-0.000** (0.000)	-0.000** (0.000)
Leverage	-0.356** (0.174)	-0.356** (0.174)
Profitability	-0.001 (0.001)	-0.001 (0.001)
Observations	2,710	2,710
Number of id	53	53
Ar1p	0.000133	0.000133
Ar2p	0.412	0.412
Hansenp	0.314	0.314
Sarganp	0.0547	0.0547

Note: This table presents the coefficients and standard deviations of the variables of our model, which is estimated by the GMM. The dependent variable is the Cumulative abnormal returns during the period January–March 2020. The explanatory variable corresponds to a set of dummy variables that reflect the different types of ownership, namely: Family firms, State-controlled, Controlled by a financial company, and Controlled by a foreign company. Robust standard errors used are in parentheses. Sargan is an overidentification test built on the hypothesis of no correlation between the instruments and the error term. ***, **, and * indicate the significance at the 1%, 5%, and 10% levels, respectively.

After showing the specific role of family firms in overcoming the crisis caused by the COVID-19 pandemic, we try now to demonstrate if the performance of family firms is affected by whether the company is controlled by a family member or a professional CEO. This is why in the first column of Table 7, we add the dummy variable *Family firms led by a family CEO*.

Apart from the identity of the CEO, which can be a major source of heterogeneity in the performance of family firms, we try to show whether the first family firms' generation exhibit outperformance compared to the second or later family firms' generations.

Table 7. Heterogeneity

Variable	(1)	(2)	(3)	(4)	(5)
	CAR	CAR	CAR	CAR	CAR
L.CAR	0.815*** (0.018)	0.815*** (0.018)	0.820*** (0.094)	0.820*** (0.094)	0.818*** (0.085)
Family firms led by a family CEO	-0.059*** (0.009)				-0.059*** (0.019)
Family firms led by outside CEO		0.059*** (0.009)			
First-generation family firms			0.115** (0.053)		0.090** (0.043)
Second/Later generation family firms				-0.115** (0.053)	
Size	-0.051*** (0.011)	-0.051*** (0.011)	-0.029*** (0.010)	-0.029*** (0.010)	-0.029*** (0.009)
Age	0.000 (0.000)	0.000 (0.000)	0.001** (0.000)	0.001** (0.000)	0.000** (0.000)
Leverage	-0.540*** (0.105)	-0.540*** (0.105)	-0.903** (0.406)	-0.903** (0.406)	-0.598** (0.283)
Profitability	-0.004*** (0.001)	-0.004*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.001** (0.000)
Constant	0.944*** (0.203)	0.885*** (0.200)	0.583*** (0.214)	0.698*** (0.262)	0.568*** (0.186)
Observations	2,770	2,770	2,770	2,770	2,770
Number of id	55	55	55	55	55
Ar1p	3.67e-06	3.67e-06	3.39e-05	3.39e-05	2.20e-05
Ar2p	0.466	0.466	0.448	0.448	0.452
Hansenp	0.521	0.521	0.617	0.617	0.514
Sarganp	0.418	0.418	0.335	0.335	0.443

Note: This table presents the coefficients and standard deviations of the variables of our model, which is estimated by the GMM. The dependent variable is the Cumulative abnormal returns during the period January–March 2020. The explanatory variable of the first column is *Family firms led by a family CEO*. It is a dummy variable that takes 1 if the family firms are managed by family member and 0 otherwise. The explanatory variable of the second column is *Family firms' generation*. It is a dummy variable that takes 1 for a first-generation family firm, i.e., when the founder of the firm occupies the position of a CEO or chairman of the board of directors, and 0 otherwise. Robust standard errors used are in parentheses. Sargan–Hansen test is an overidentification test built on the hypothesis of no correlation between the instruments and the error term. ***, **, and * indicate the significance at the 1%, 5%, and 10% levels, respectively.

4.3. Difference-in-differences analysis

The double difference method (or the difference-in-difference method) is a statistical method used to estimate the effect of treatment and consists in comparing the difference between the control group and the treated group before and after the introduction of the treatment. This method is used in particular in this sub-section, to estimate the effect of COVID-19 on the cumulative abnormal returns of family firms. Thus, we utilize the daily cumulative abnormal returns from January 24 to April 27, 2020. This period is divided into two sub-periods. The first from January 24 to April 16, 2020, is the period before containment. The second is the post-COVID-19 period which runs from April 17, 2020 to April 27, 2020, and which corresponds to the spread of the virus on French territory and the implementation of containment and social distancing measures.

Table 8 illustrates the fundamental results obtained by incorporating just the dummy variable *Post-COVID-19* and its interaction with the dummy variable *Family firms*. The dummy variable *Post-COVID-19* exhibits a negative and significant

coefficient, as expected, showing a steep drop in stock returns in the post-COVID-19 period. The interaction term's coefficient, on the other hand, is positive and statistically significant at the 1% level.

According to the difference-in-differences approach, stock market performance does not depend on the type of firms (i.e., family firms and non-family firms) before the spread of COVID-19. To test for the presence of a psychological effect related to COVID-19, we focus on the period from January 24 to February 16 (i.e., the pre-COVID-19 period). We then construct a dummy variable equal to 0 from January 24 to February 18, and equal to 1 from January 19 to March 16, 2020. This last sub-period corresponds to the placebo COVID-19. Table 9 indicates that the interaction term's coefficient between the placebo COVID-19 and the dummy variable of family firms is positive and significant at the 1% level. The placebo effect is "a psychobiological phenomenon" that results in an improvement in the CAR of family firms. It corresponds to the positive difference between the observed post-COVID-19 result and the predicted post-COVID-19 result.

Table 8. Difference-in-differences analysis results

Variable	(1)	(2)	(3)	(4)
	CAR	CAR	CAR	CAR
Post-COVID-19	-0.114*** (0.0197)	-0.114*** (0.0199)	-0.105*** (0.0243)	-0.105*** (0.00177)
Family firms	0.0103 (0.0128)			
Post COVID-19 × Family firms	0.0365 (0.0277)	0.0365 (0.0279)	0.0365 (0.0280)	0.0365*** (0.00330)
Constant	-0.0309*** (0.00975)	0.152*** (0.00877)	0.176*** (0.0126)	0.176*** (0.0216)
Observations	15,142	15,142	15,142	15,142
R-squared	0.052	0.596	0.618	0.618
Firm fixed effects	No	Yes	Yes	Yes
Day fixed effects	No	No	Yes	Yes
Standard error clustering	Firm	Firm	Firm	Firm-Day

Note: The results which are estimated by the difference-in-differences approach of daily cumulative abnormal returns from January 24 to April 27, 2020, are presented in this table. We include in column 1 the variable Post-COVID-19. It is a dummy variable that takes 1 for the period from February 17 to April 27, 2020, and equals 0 before that time. Also, we include in this column the dummy variable Family firms, as well as their interaction. Firm fixed effects are included in column 2 and Day fixed effects in column 3. In columns 1 to 3, standard errors are clustered by firms, and in column 4, standard errors are clustered by both firms and days. ***, **, and * indicate the significance at the 1%, 5%, and 10% levels, respectively.

Table 9. Performance before COVID-19

Variable	(1)
	CAR
Family firms × Dummy placebo	0.200*** (0.000)
Observations	4,294
R-squared	0.771
Firm fixed effects	Yes
Day fixed effects	Yes
Standard error clustering	Firm-Day

Note: The results, which are estimated by the difference-in-differences approach of daily cumulative abnormal returns from January 24 to April 27, 2020, are presented in this table. Our main explanatory variables are the Dummy placebo, which is a dummy variable that equals 1 from January 24 to February 16, 2020, and 0 before that time, as well as the Family firms and their interaction. Firm fixed effects and day fixed effects are also included in the specification. Firms and days are clustered in standard errors. ***, **, and * indicate the significance at the 1%, 5%, and 10% levels, respectively.

We explore now, as in the previous sub-section, the heterogeneity of the previous results according to the leadership of the family firms and their generation. Panel A of Table 10 shows that the coefficient of the interaction term between dummy Post-COVID-19 and the dummy variable of the Family firms led by a family CEO is negative and significant at the 5% level (column 1). Panel B of Table 10 shows that despite the direct effect of first-

generation family firms being positive, the coefficient of the interaction term (i.e., between the variables First-generation family firms and Post-COVID-19) is negative and statistically significant. The same applies to the Second/Later-generation family firms variable. Its direct effect is negative while the coefficient of the interaction term is positive and statistically significant.

Table 10. Heterogeneity (Part 1)

Variable	Panel A			
	(1)	(2)	(3)	(4)
	CAR	CAR	CAR	CAR
Post-COVID-19	-0.0171 (0.0366)	-0.104*** (0.0225)	-0.00481 (0.0417)	-0.109*** (0.0244)
Family firms led by a family CEO	-0.0171 (0.0165)			
Family firms led by a family CEO × Post-COVID-19	-0.0874** (0.0430)		-0.104** (0.0521)	
Family firms led by outside CEO		0.0171 (0.0165)		
Family firms led by outside CEO × Post-COVID-19		0.0874** (0.0430)		0.104** (0.0521)
Constant	-0.0101 (0.0131)	-0.0272*** (0.0101)	-0.0224*** (0.00814)	-0.0224*** (0.00814)
Observations	8,040	8,040	8,040	8,040
R-squared	0.058	0.058	0.057	0.057
Firm fixed effects	No	Yes	Yes	Yes
Day fixed effects	No	No	Yes	Yes
Standard error clustering	Firm	Firm	Firm	Firm-Day

Table 10. Heterogeneity (Part 2)

Variable	Panel B			
	(1)	(2)	(3)	(4)
	CAR	CAR	CAR	CAR
Post-COVID-19	-0.0274 (0.0259)	-0.117*** (0.0272)		
First-generation family firms	0.00274 (0.0159)			
Second/Later-generation family firms		-0.00586 (0.0161)		
First-generation family firms × COVID-19	-0.0936** (0.0376)		-0.120*** (0.0309)	-0.121*** (0.0275)
Second/Later-generation family firms × COVID-19		0.0895** (0.0376)	-0.0290 (0.0294)	-0.0274 (0.0261)
Constant	-0.0239** (0.0104)	-0.0180 (0.0122)	-0.0224*** (0.00814)	0.171*** (0.0123)
Observations	8,040	8,107	8,040	8,040
R-squared	0.055	0.050	0.055	0.604
Firm fixed effects	No	Yes	Yes	Yes
Day fixed effects	No	No	Yes	Yes
Standard error clustering	Firm	Firm	Firm	Firm-Day

Note: The results, which are estimated by the difference-in-differences approach of daily cumulative abnormal returns from January 24 to April 27, 2020, are presented in this table. In the first column of Panel A, we include the dummy variable Post-COVID-19, which takes 1 for the period from February 17 to April 27, 2020, and 0 before this period, the dummy variable Family firms led by a family CEO, which takes 1 if the family firms are managed by a family member and 0 otherwise, the dummy variable Family firms led by outside CEO, which takes 1 if the family firms are managed by professional CEO and 0 otherwise, and the interaction between post-COVID-19 and CEO dummies. We include firm fixed effects in column 2. We also include day fixed effects in column 3. Standard errors are clustered by firms in columns 1 to 3 and by both firms and days in column 4. The dummies for family or professional CEOs are replaced with dummies distinguishing between First-generation family firms (that takes 1 when the founder of the firm occupies the position of a CEO or chairman of the board of directors and 0 otherwise) and Later-generation family firms (that takes 1 when the founder is not in such positions and 0 otherwise) in Panel B of this table. Standard errors are clustered by firms in columns 1 to 3, and by firms and days in columns 4 in both Panel A and Panel B. ***, **, and * indicate the significance at the 1%, 5%, and 10% levels, respectively.

5. DISCUSSION OF THE RESULTS

5.1. Family firms and financial performance

Our first hypothesis (*H1*), which states that family firms are characterized by superior stock market performance compared to non-family firms is confirmed. This is explained by the more efficient management which results from the family nature of firms.

Family firms are essentially characterized by four main axes that promote better performance: the reduction of the costs of control and incentive for managers, the long-term intergenerational orientation, the homogeneity of the value system, and, finally, the interweaving of two social systems that feed on each other, the family and the company.

5.2. Family firms vs. non-family firms

The stock market performance is higher in family firms than in firms controlled by financial companies during the COVID-19 period. This performance turns negative in firms controlled by foreign institutions. Also, we obtain a negative performance in firms controlled by the state. In conclusion, family firms can weather a pandemic compared to other types of firms.

5.3. Family firms' leadership and generation

We notice that despite the idea that family firms run by a family member are characterized by their long-term vision and their main objective, which is the continuity of the firms which leads them to behave as guardians of the company (Miller et al., 2008; Eddleston et al., 2012), our results do not seem to support *H2*, which states that the positive

relationship between family firms and stock market performance is stronger when the family firm is run by a family member.

However, our third hypothesis (*H3*), which states that first-generation family firms outperform second-generation or later-family firms, seems to be corroborated. This is explained by the appearance of family conflicts in family firms when there is a process of succession. These conflicts between families are created from the lack of ability or interest of the offspring of one of the founders to replace them, or the competition between several descendants to achieve the first position in the company. Therefore, these conflicts between families will decrease the stock market performance of companies.

5.4. Difference-in-differences analysis

The results of the difference-in-differences analysis imply that, during the COVID-19 pandemic, family firms withstand better than non-family firms. This finding is only confirmed where we cluster residuals by firm and day. Overall, the results obtained corroborate the outperformance of family firms during a pandemic period. Also, the analysis of performance before COVID-19 confirms the previous hypotheses. In addition, the family firm led by outside CEOs exhibits a more pronounced performance. This confirms our previous results.

6. CONCLUSION

The recent crisis of the COVID-19 pandemic has elevated many important questions, such as what types of firms can withstand crises? Growing research to begin to explore the determinants and characteristics of the companies that make a company more solid, efficient and subsequently

have the capacity to overcome the negative consequences engendered by COVID-19. We adhere to this line of research by examining the performance of French family and non-family firms during the period from January 24 to April 27, 2020. As our results show, family firms outperformed non-family firms during the COVID-19 pandemic. Thus, family firms are more resilient to cope with unwanted events.

Specifically, family ownership promotes and maintains performance when the family firm is a first family firm generation and led by a professional CEO. These results add to the existing evidence on the determinants that made firms resilient to external shocks.

However, there are three main limitations to our research. First, besides the firms' characteristics studied in our article, namely: the nature of ownership, family leadership, and family firms' generation, there are many other firms' characteristics that must be studied to see their role during the period of the COVID-19 pandemic and which will allow us to better understand the other characteristics that allow companies to cope with the COVID-19 pandemic and guarantee their survival. Among these characteristics we can mention, for

example, the presence of a second large family shareholder, multiple family members, family direct control, and cash-flow/voting rights wedge. Second, we did not divide the companies in our sample according to their sector of activity. It would be interesting to know if the performance of family firms during the COVID-19 pandemic differs from one sector to another and if there is a sector where family firms are the most efficient and most resilient in the face of the shocks of COVID-19. Finally, our study is limited to the first wave of COVID-19 while there are four other waves. Thus, studying the impact of the firm characteristics during the five waves will improve our understanding of the resilience of family firms. It will allow us to see the degree of adaptation of companies to the persistence of the COVID-19 pandemic.

To summarize, research into the resiliency of family firms is only now gaining scholarly interest. More study is clearly needed to acquire a more complete picture of family firm resilience and how firm characteristics affect financial performance during times of crisis. We hope that this paper encourages family firms' researchers to investigate this important relevant and fascinating subject.

REFERENCES

1. Albuquerque, R., Koskinen, Y., Yang, S., & Zhang, C. (2020). Resiliency of environmental and social stocks: An analysis of the exogenous COVID-19 market crash. *Review of Corporate Finance Studies*, 9(3), 593-621. <https://doi.org/10.1093/rcfs/cfaa011>
2. Ali, M., Alam, N., & Rizvi, S. A. R. (2020). Coronavirus (COVID-19) — An epidemic or pandemic for financial markets. *Journal of Behavioral and Experimental Finance*, 27, Article 100341. <https://doi.org/10.1016/j.jbef.2020.100341>
3. Amore, M. D., Bennesen, M., Le Breton-Miller, I., & Miller, D. (2021). Back to the future: The effect of returning family successions on firm performance. *Strategic Management Journal*, 42(8), 1432-1458. <https://doi.org/10.1002/smj.3273>
4. Amore, M. D., Pelucco, V., & Quarato, F. (2022). Family ownership during the COVID-19 pandemic. *Journal of Banking & Finance*, 135, Article 106385. <https://doi.org/10.1016/j.jbankfin.2021.106385>
5. Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance*, 58(3), 1301-1328. <https://doi.org/10.1111/1540-6261.00567>
6. Bach, L., & Serrano-Velarde, N. (2015). CEO identity and labor contracts: Evidence from CEO transitions. *Journal of Corporate Finance*, 33, 227-242. <https://doi.org/10.1016/j.jcorpfin.2015.01.009>
7. Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E., Luca, M., & Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations. *Proceedings of the National Academy Sciences*, 117(30), 17656-17666. <https://doi.org/10.1073/pnas.2006991117>
8. Brown, R., Rocha, A., & Cowling, M. (2020). Financing entrepreneurship in times of crisis: Exploring the impact of COVID-19 on the market for entrepreneurial finance in the United Kingdom. *International Small Business Journal*, 38(5), 380-390. <https://doi.org/10.1177/0266242620937464>
9. Burkart, M., Panunzi, F., & Shleifer, A. (2003). Family firms. *Journal of Finance*, 58(5), 2167-2201. <https://doi.org/10.1111/1540-6261.00601>
10. Carletti, E., Oliviero, T., Pagano, M., Pelizzon, L., & Subrahmanyam, M. (2020). The COVID-19 shock and equity shortfall: Firm-level evidence from Italy. *The Review of Corporate Finance Studies*, 9(3), 534-568. <https://doi.org/10.1093/rcfs/cfaa014>
11. Carlock, R. S. (2009). *Why the best family businesses plan* (INSEAD Working Paper No. 2009/63/EFE/WICFE). <https://doi.org/10.2139/ssrn.1517239>
12. Chrisman, J. J., Chua, J. H., & Steier, L. P. (2011). Resilience of family firms: An introduction. *Entrepreneurship Theory and Practice*, 35(6), 1107-1119. <https://doi.org/10.1111/j.1540-6520.2011.00493.x>
13. Christensen-Salem, A., Mesquita, L. F., Hashimoto, M., Hom, P. W., & Gomez-Mejia, L. R. (2021). Family firms are indeed better places to work than non-family firms! Socioemotional wealth and employees' perceived organizational caring. *Journal of Family Business Strategy*, 12(1), Article 100412. <https://doi.org/10.1016/j.jfbs.2020.100412>
14. Crédit Suisse Research Institute. (2021). *Family 1000: Post the pandemic*. Crédit Suisse. <https://www.credit-suisse.com/media/assets/corporate/docs/about-us/research/publications/cs-family-1000-post-the-pandemic.pdf>
15. D'Aurizio, L., Oliviero, T., & Romano, L. (2015). Family firms, soft information and bank lending in a financial crisis. *Journal of Corporate Finance*, 33, 279-292. <https://doi.org/10.1016/j.jcorpfin.2015.01.002>
16. Ding, W., Levine, R., Lin, C., & Xie, W. (2021). Corporate immunity to the COVID-19 pandemic. *Journal of Financial Economics*, 141(2), 802-830. <https://doi.org/10.1016/j.jfineco.2021.03.005>
17. Eddleston, K. A., Kellermanns, F. W., & Zellweger, T. M. (2012). Exploring the entrepreneurial behavior of family firms: Does the stewardship perspective explain differences? *Entrepreneurship Theory and Practice*, 36, 347-367. <https://doi.org/10.1111/j.1540-6520.2010.00402.x>
18. Fahlenbrach, R., Rageth, K., & Stulz, R. M. (2021). How valuable is financial flexibility when revenue stops? Evidence from the COVID-19 crisis. *The Review of Financial Studies*, 34(11), 5474-5521. <https://doi.org/10.1093/rfs/hhaa134>

19. Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics*, 26(2), 301-325. <https://doi.org/10.2139/ssrn.94034>
20. Fernandez Perez, P., & Colli, A. (2013). *The endurance of family businesses: A global overview*. Cambridge University Press.
21. James, H. S. (1999). Owner as manager, extended horizons and the family firm. *International Journal of the Economics of Business*, 6(1), 41-55. <https://doi.org/10.1080/13571519984304>
22. KPMG. (2021). *Empowering the future of family business: A four-part article series of research-based practical insights*. <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2021/06/empowering-the-future-of-family-business.pdf>
23. Le Breton-Miller, I., & Miller, D. (2021). Family businesses under COVID-19: Inspiring models — Sometimes. *Journal of Family Business Strategy*, 13(2), Article 100452. <https://doi.org/10.1016/j.jfbs.2021.100452>
24. Lee, J. (2006). Family firm performance: Further evidence. *Family Business Review*, 19(2), 103-114. <https://doi.org/10.1111/j.1741-6248.2006.00060.x>
25. Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run*. Harvard Business School Press.
26. Miller, D., Le Breton-Miller, I., & Scholnick, B. (2008). Stewardship vs stagnation: An empirical comparison of small family and non-family business. *Journal of Management Studies*, 45(1), 51-78. <https://doi.org/10.1111/j.1467-6486.2007.00718.x>
27. Mullins, W., & Schoar, A. (2016). How do CEOs see their roles? Management philosophies and styles in family and non-family firms. *Journal of Financial Economics*, 119(1), 24-43. <https://doi.org/10.1016/j.jfineco.2015.08.011>
28. Ramelli, S., & Wagner, A. F. (2020). Feverish stock price reactions to COVID-19. *Review of Corporate Finance Studies*, 9(3), 622-655. <https://doi.org/10.1093/rcfs/cfaa012>
29. Salvato, C., Sargiacomo, M., Amore, M. D., & Minichilli, A. (2020). Natural disasters as a source of entrepreneurial opportunity: Family business resilience after an earthquake. *Strategic Entrepreneurship Journal*, 14(4), 594-615. <https://doi.org/10.1002/sej.1368>
30. Shan, C., & Tang, D. Y. (2022). The value of employee satisfaction in disastrous times: Evidence from COVID-19. *Review of Finance*. Advance online publication. <https://doi.org/10.2139/ssrn.3560919>
31. Souffargi, W., & Boubaker, A. (2023). The effects of rising terrorism on a small capital market: Evidence from Tunisia. *Defence and Peace Economics*, 34(3), 323-342. <https://doi.org/10.1080/10242694.2021.2007338>