



CSR and Firm Performance: An analysis during the COVID-19 pandemic

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Abstract

The COVID-19 pandemic, the most recent global phenomenon, has impacted the economy in many ways and is far more than a health crisis. It has severely affected the global economy and financial markets, with a strong presence at the time of writing. Considering all the restrictions imposed since the beginning of the pandemic, it can be considered a social and human crisis, since it also affects individuals, their social relationships, and their lifestyle. This study attempts to analyze the role that CSR practices, which have the purpose to promote the well-being of stakeholders and their relationships, played on firms' performance during a "social distancing" period and an increase in social isolation. The results show that, during a non-crisis period, before the pandemic, the role of socially responsible practices benefit European companies, with a positive relationship between CSR and firm performance. However, during the COVID-19 pandemic, an increase in CSR practices has a negative impact on companies' performance and allows to mitigate the stock return volatility.

Keywords: COVID-19 pandemic, Corporate Social Responsibility practices, Trust, Financial Performance

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Resumo

A pandemia COVID-19, o fenómeno global mais recente, afetou a economia de várias maneiras e é muito mais do que uma crise na saúde. Este vírus afetou severamente a economia global e os mercados financeiros, com uma forte presença no momento em que este estudo foi escrito. Considerando todas as restrições impostas desde o início da pandemia, pode ser também considerada uma crise social e humana, pois também atinge os indivíduos, as suas relações sociais e seu estilo de vida. Este estudo procura analisar o papel que as práticas de RSE, que têm como objetivo promover o bem-estar das partes interessadas e das suas relações, desempenharam no desempenho das empresas durante um período de “distanciamento social” e aumento do isolamento social. Os resultados mostram que, num período económico mais estável, antes da pandemia, o papel das práticas socialmente responsáveis beneficia as empresas europeias, com uma relação positiva entre a RSE e a performance das empresas. No entanto, durante a pandemia COVID-19, o aumento das práticas de RSE tem um impacto negativo no desempenho das empresas e permite mitigar a volatilidade do retorno das ações.

Palavras-chave: Pandemia COVID-19, práticas Responsabilidade Social e Empresarial, Confiança, Performance Financeira

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I. Introduction

Corporate Social Responsibility (CSR) has been a much-debated topic for the last decade, but the concept has not been uniformly defined. There are divergent perspectives about its potential and effectiveness (Dima Jamali Ramez Mirshak, 2007). Dahlsrud (2006) identified and analyzed 37 different definitions of CSR. All definitions agree that companies should meet the expectations of society when planning their strategies (Gossling & Vocht, 2007). According with Carroll's (1979), CSR is the "social responsibility of a business which includes the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time". This concept defended by Carroll's is the one that best addresses the purpose of the CSR, because it mentions a "set of four responsibilities that creates an infrastructure that helps to delineate in some detail and to frame or characterize the nature of businesses' responsibilities to the society of which it is a part" (Carroll, 2016).

CSR becomes part of the core business and begins to be studied not only to obtaining competitive advantages or improving their image and reputation. It becomes a fundamental point for promoting policies and practices that improve stakeholders' welfare, such as providing employee benefits, investing in environment-friendly production processes, and organizing initiatives to help the poor in less-developed communities. Nowadays, corporations have a very active role in developing activities and setting goals that go beyond profit maximization. Indeed, Corporate Social Responsibility, a term frequently used to describe such stakeholder-oriented behaviors, has increasingly become a mainstream business activity (Kitzmueller and Shimshack, 2012). Nonetheless, this concept suffered some changes over time and its impact is a frequently discussed topic, although there is still no consensus conclusion about its impact on firm's financial performance.

The interest in this study arose from the curiosity about the motivation to invest in CSR practices and at what extent this type of initiative changes the corporate environment, the relationship between stakeholders or the employee's commitment. Initially, the doubt was more focused on the interest to understand whether the investment in Corporate Social Responsibility activities has an impact on the company's performance. After some investigation, more questions arose: "Assuming the relationship between these two variables is positive, will it remain positive during periods of crisis?". Thus, the period of instability considered for this study is the most recent crisis all of us still lived, COVID-19 pandemic. The choice of this period of crisis is considered "bold", since it is not just a period of economic instability for companies and countries, it is a human crisis, which affected each of us individually, the world,

our relationships, jobs, our lifestyle and no one was immune to this pandemic. COVID-19's scope of impact has reached the world like never seen before, and all industries have suffered changes, some have benefited, such as technology and media, others not, including industries which represent the heartbeat of most economies, for example tourism or food services, among others. This relationship that is attempted to be measure in this study is even more unexpected when it is related to practices that precisely defend and promote the well-being of individuals and better interactions among stakeholders.

The COVID-19 pandemic had severely constricted global economic activities. Although the pandemic has a precedent in other crises, none of these have affected the world the way Covid did. Countries were forced to adopt lockdown measures because of the highly infectiousness nature of the virus. This type of decisions causes negative impacts on aggregate demand, mainly on consumption and exports, declining sharply the productivity and revenue, which inevitably led to performance decline. However, according with previous studies, it could be expected that high-CSR firms have registered a mitigating and less negative impact related to the consequences of COVID-19 pandemic (Huayu Shen, Mengyao Fu, Hongyu Pan, Zhongfu Yu & Yongquan Chen, 2020). These facts motivate research into the aspects that influence the responses of countries, firms, and individuals to the pandemic. The unpredictability in the infection cases change the potential trajectory of the economy and strict regulatory interventions of government, such as quarantine and lockdown. Therefore, stock markets reacted negatively to the growth in COVID-19 cases (Ashraf, 2020), and the financial market should respond to these unexpected changes.

CSR helps to build trust, when consumers consider a company moral or its behavior socially responsible and trustworthy, their evaluation of the company may tend to be positive (Brown and Dacin, 1997). However, the pandemic negatively impacted the perception of trust that had been built by institutions (Theo G. van Tilburg and Stephanie Steinmetz, 2020). For that reason, the communion between the trust decline and the costs a company incurs when investing in Corporate Social Responsibility practices and activities (Friedman, 1970), may negatively compromise the relationship between CSR and firm's financial performance. Firm's performance could depend on many factors, but it is increasingly dependent on people, their relationships, and motivations. For this reason, the performance of employees and their commitment will affect the company's performance. Also, Covid measures force people work from home, breaking down the distinction between private and work life, which may also influence their performance. CSR is positively related to organizational commitment and its contribution is at least as great as job satisfaction (Stephen Brammer, Andrew Millington &

Bruce Rayton, 2007). However, firms with high levels of corporate expenditure on social and environmental issues relinquish their strategic advantages to competitors and thus become more susceptible to financial losses and financial distress (Kang, J.H. and Kim D.H, 2010).

This study focuses on the influence that some measures, that promote CSR practices, have on firm financial performance, not only in periods of greater economic stability, pre-crisis, but also in periods when firms suffered by a human, health, economic and extremely impactful global crisis. Europe is the most active and most vocal region when it comes to CSR. For that reason, this study analyzes the STOXX Europe 600 index as representative of all European companies, to understand the relationship between CSR and firm's performance.

The results show that, during COVID-19 pandemic, CSR practices trigger a negative impact on stock returns, OROA and Tobin's Q. It is during economic downturn periods that companies incur higher costs and higher probability to use limited resources, that could have been used to invest in profitable projects, preventing possible financial distress. However, CSR allows to mitigate the stock returns volatility, proving that CSR can also be viewed as an insurance policy, when facing an economic crisis. Despite all the costs incurred by the increase in CSR activities, it is important to consider that there is limited financial data about the COVID-19 pandemic, which could influence the impact of this policy. This study concludes that the costs outweigh the benefits of CSR practices, when only the crisis period is considered.

The remainder of this work goes as follows. Chapter II present a broad overview of the relevant literature. Chapter III describes the sample data and outlines the methodology employed. In Chapter IV the main findings are presented alongside with further discussion. Finally, Chapter V presents the Conclusion.

II. Literature review

A. Corporate Social Responsibility

The Classic View in Finance on modern companies defends the shareholder value maximization, which implies that the most important measure of a company's success is the extent to which it maximizes value for shareholders. Apart from their contractually determined obligations, they have no responsibility to serve the interests of other stakeholders or improve the well-being of society (Friedman 1970).

The origin of CSR may have arisen at the end of the 19th century, as a result of the industrial revolution, originated by the change of the model of artisan work by mass production. This

conversion causes several labor conflicts that have also given rise to numerous social problems that forced companies to take measures (Jenkins 2009). Furthermore, the capitalist model, which advocated profit maximization and self-regulation of markets, exposed negligent actions, leading to the violation of human and labor rights by companies. These situations revolted society, which required more responsible action by companies related to social aspects (Gomez-Carrasco et al. 2016).

Formal writing on social responsibility, it is largely a concept of the 20th century, especially the past 50 years (Carroll, 1999). The most notable example of the changing attitude towards corporate behavior came from Bowen (1953), the father of Corporate Social Responsibility, who defended that “social responsibility is no panacea, but that it contains an important truth that must guide business in the future”. Also, due to the severe economic crisis, some topics and social movements emerged in debate and played an important role in introducing environmental, civil rights, and women's rights issues into companies (Carroll and Shabana 2010). The concern with the impact that both human and company's actions had on the environment began to be increasingly expressed. Due to the growth of these topics and concerns, numerous summits of international organizations were held on human and labor rights (Salvioli, 2000). Initially, in response to these society's concerns, the main purpose of the firm when implementing CSR policies is the improvement of its image and reputation, seeking to obtain social legitimacy to be able to act (Carroll, 2008).

Due to globalization, the context in which businesses operate is constantly changing. It affects stakeholders and legislations that place new expectations on business, leading to a change in the impact that social, environmental, and economic components have on the decision-making process. The evolution of social relationships and interactions between companies and their social groups has driven a change in the company's business model and in its strategy planning (Cornelius et al. 2007; Shnayder et al. 2016). Thus, it is possible to say that CSR concept has strongly emerged in the 2000s, with the integration of this concept in business strategies. For this reason, CSR became an important issue in companies' responses to various social requirements, since it demonstrates that a business takes interest in wider social topics, rather than just those that impact profit margins, assuming social commitments and responsibilities.

Firms began to consider the influence of their operations on stakeholders, in the environment and in the community, generating the trust that allowed them to operate in different markets (Panait et al. 2014). Researchers suggest that trust encourages lower opportunism (Rindfleisch and Moorman, 2003), higher customer loyalty (Agustin and Singh, 2005), greater

commitment (Jap and Ganesan, 2000), more collaborative, cooperative, and interactive exchange relationships (Hibbard, Kumar, and Stern, 2001; Jap and Anderson, 2003), and can have a positive influence on customers behaviors and channel partners.

CSR became an integral part of business strategy for addressing the social and environmental impact of company activities (Luo and Bhattacharya, 2006; Lin et al., 2009). Companies do not only have economic, regulation or legislation concerns, there are also certain responsibilities that extended beyond those obligations. For example, investing in the development of sustainable economic commitment through CSR activities, such as building safe and healthy workplaces, engaging in ethical business practices, or investing in the environment and in the local community (Deng, Kang, and Low 2013). Also, working closely with employees, their families and society, improves their well-being and the interaction with stakeholders.

The investment in this type of activities, that goes beyond legal and regulatory obligations, can contribute to company's competitiveness, because the investment in the employee's welfare can have a direct impact on firm productivity and performance. This concept focuses the attention on the Stakeholder Theory, which states that managers have the responsibility to protect the welfare of the organization and manage the conflicting claims of multiple stakeholders (Evan and Freeman, 1993). Freeman (1984) defines a stakeholder as "any group or individual who can affect or is affected by the achievement of the firm's goals". In this case, people who directly contribute to the firm's productivity and performance must be considered its greatest "assets". For that reason, conflicts between them must be well managed and their needs must be met, so that they contribute in the most positive way for the firm's growth.

According with the European Commission, the Corporate Social Responsibility concept first appeared on the European Union agenda in 2001, in the Green Paper, that aims to launch a debate on how the European Union could promote CSR at European and international level. Since then, an increasing number of European companies recognize their social responsibility impact more clearly and consider it as part of their identity. The European Union is concerned with CSR as it can be a positive contribution to the strategic goal decided in Lisbon: "to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion". Moreover, Corporate Social Responsibility is an essential contributor to Europe's employment and social agenda, the pursuit of more and better jobs. CSR is also an important driver of better global governance, reinforcing existing policy tools such as legislation and social communication.

B. Firm performance and CSR

The relationship between CSR and the firm performance has been a much-debated topic. Its impact is not consensual among scholars, with divergence regarding its impact, whether negative, positive, or neutral. Friedman (1970) found a negative relationship between both variables. He believed that firms only invest in CSR activities to increase the economic profit for shareholders. Barnea et al. (2010) and Groening et al. (2013), also found a negative relationship, due to the high costs arising from socially responsible activities, firms may use valuable limited resources that could have been used to invest in profitable projects. Other authors have found no relationship at all between social activities and firm performance (Hillman and Keim, 2001; Aupperle et al. 1985). However, there are also studies that defend that CSR positively affects firm performance, such as Alafi & Hasoneh (2012), Galbreath & Shum (2012), Luo & Bhattachary (2006), Margolis et al. (2008), Shen & Chang (2008). Garriga and Mele (2004) reviewed of all 52 earlier surveys about the correlation between CSR and company performance and showed that more socially responsible companies had better economic results. However, it is difficult to test their direct relationship accurately, because there are several factors that influence this relationship.

Empirical evidence suggests that the impact can be influenced by some outcomes of CSR, representing indirect factors, such as customer satisfaction, reputation, and competitive advantage (Mulki & Jaramillo, 2011; Salmones, Perez, & Bosque, 2009). Brown et al. (1997) argues that the impact of CSR on firm performance is conclusively positive, due to the increase in company reputation, whereas Dhaliwal et al. (2011) defend that the positive relationship is caused to decreases in lawsuits costs or a boost in customer loyalty. Despite the diversity of conclusions of previous studies, it is important to consider that the results also depend on the sample under study and that it may vary when studying different countries and industry sectors.

Within the CSR concept, it is important to distinguish the economic context, financial interest of creating a business, and the social or ethical behaviors, that goes beyond financial issues and are the main factor influencing organization's survival (Nejati & Ghasemi, 2012). Furthermore, there are a variety of definitions of CSR, most of them focus on voluntary firms' actions to improve social or environmental conditions (Aguilera, Rupp, Williams, & Ganapathi, 2007).

Edmans (2011) shows that the customer satisfaction and employees' motivation is positively correlated to stock returns. Socially responsible behavior can act to reduce a firm's exposure to risk (Gosfrey, 2004) and increase the present value of a firm's future cash flow,

being consistent with maximizing the wealth of the equity holders. Consequently, an increasing number of external stakeholders are also looking at the social responsibilities of corporations when it comes to their investments (Barnett and Salomon, 2006).

And, what about the future? It is expected that organizations will increase their socially responsible practices and progressively relate them to its activity and business strategy, either by the development of social awareness or by pressure from stakeholders.

C. Value of CSR in periods of Crisis

The concept of crisis is described as a sequence of unexpected events caused by internal or external causes, that can threaten the business and the environment. Despite the potential negative impacts that crisis brings to the firm performance and its survival, there is also a positive side, which is the opportunity for firms to rethink their policies and to challenge themselves. Crisis allow firms to create tools to avoid negative consequences in future downturns, becoming more resilient in the future (H Huang, Y Ye, 2021).

Empirical evidence suggests that investments in CSR can be viewed as an insurance policy, mitigating negative consequences when the economy faces a severe crisis of trust and confidence. Lins, Servaes and Tamayo (2017) found that high-CSR firms experience fewer losses, higher profitability, increased growth, higher sales per employee and more debt capacity, requiring a shorter recovery time from attacks, comparing with Low-CSR firms. Consumer sensitivity increases in times of crisis, their perception of a company that invest in CSR activities could positively affect their product consumption. Furthermore, stakeholders are more willing to provide better opportunities and support socially responsible firms, that displayed more attention and cooperation with them in the past, whether a negative shock. Is during an unexpected decline in the general level of trust that CSR initiatives strength the way external stakeholders analyzes their investments. As the investment information may not be credible, they will look for metrics such as social capital ratings that speak to a firm's values and integrity, placing a valuation premium on more reliable and honorable firms (Lins, Servaes and Tamayo, 2017).

CSR matters in times of crisis, mainly if firms face volatile scenarios, it can help build trust and social capital. According with Woolcock (2000) "social capital refers to the norms and networks that facilitate collective action" and is viewed as an enabler of cooperation. It can lead to positive outcomes, which include the reduction of the need for formal contract in the presence

of information asymmetry, reducing the transaction costs and consequently improving the allocation of resources (Lins, Servaes and Tamayo, 2017).

Trust is a particular level of the “subjective probability with which an agent assesses that another agent or group of agents will perform a particular action, both before he can monitor such action and in a context in which it affects his own action” (Gambetta, 2000). The business arrangements represent much of the interaction between stakeholders and the firm. However, during a low confidence period, these contracts could be seen as incomplete and not honored by either party. Because of that, most commercial transactions rely to some degree on trust (Arrow (1972), Putnam (1993), La Porta et al (1997), and Guiso, Sapienza, and Zingales (2004, 2008)).

One potential solution to strengthen the connection between stakeholders is through CSR activities, which represents a sign of commitment to satisfy the contracts and a motivation for stakeholders, to support the operations and the firm during a period of economic downturn (Deng, Kang, and Low 2013). Social capital could promote these interactions by strengthening trust, cooperation (Putnam, 1993), and by reducing the need of formal contracts (Knack and Keefer, 1997).

The period to represent the economic downturn is the most recent global economic crisis, originated by the COVID-19 pandemic. COVID-19 is an infectious disease caused by the SARS-CoV-2 virus. The disease was first identified in December 2019 in Wuhan, China. The first case detected outside China was in Thailand in January 2020, and it spread rapidly around the world. The World Health Organization (WHO) declared it a Public Health Emergency of International Concern on January 30, named the disease COVID-19 on February 11, and classified COVID-19 as a pandemic on March 11. The total number of confirmed cases around the world has been growing at a historically high speed, and it reached more than 271 million cases worldwide at the end of November 2021. The global economic crisis triggered by the COVID-19 pandemic is different from past crises, with respect to its cause, scope, and severity. Former chair of the US Federal Reserve, Ben Bernanke, stressed that while financial imbalances and risks grew over many years to produce the 2007–2009 global financial crisis, the public health emergency, that emerged in 2019, was caused by a viral pandemic that severely constricted global economic activity (Bernanke, 2020).

III. Data and Methodology

A. Sample and Descriptive Statistics

Due to the impact that the unprecedented health crisis, COVID-19 pandemic, has around the world, as well as the dramatic consequences it has brought to the economy, there is a growing number of studies about this topic. Over recent years, the debate about the Corporate Social Responsibility concept has spread very rapidly across Europe as part of the intense debate about sustainability and globalization. CSR is important for the sustainability, competitiveness, and innovation of European Union economy and enterprises. For that reason, it would be interesting to study what is the impact of a recent much-debated topic during the most recent period of economic downturn in Europe.

STOXX Europe 600 represents the reference sample for European companies. The companies of this index are the largest 600 companies for capitalization in the European market and they came from 17 European countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom. It represents 8 economic sectors, 44 industry categories, and 95% of the capitalization of these markets. Therefore, it can be considered representative of this index of European companies, clearly with regard to large listed companies.

All data information under analysis is obtained from the Thomson Reuters Datastream database, which covers company, financial and economic data from all major markets in the world. It was used to obtain both corporate financial data and corporate social performance data. Corporate Social Responsibility Strategy scores from Refinitiv reflects a company's practices to communicate that it incorporates the economic, social, and environmental dimensions in its day-to-day decision-making processes. The CSR Strategy score is one of the 10 categories that compose the final ESG score, which reflects the company's ESG performance based on publicly reported information. Thomson Reuters ESG Scores were designed to transparently and objectively measure a company's relative ESG performance across ten themes (resource use, emissions, innovation, workforce, human rights, community, product responsibility, management, shareholders, and CSR strategy), based on company reported data. CSR scores are scaled from 0 to 100, a higher CSR rating means the firm does better in practicing CSR.

According to Spiller (2000), there are six different groups of stakeholders that affect or are affected by company's decisions, which are the community, environment, employees, customers, suppliers, and shareholders. Each stakeholder addresses specific responsibilities. Regarding the community perspective, support for education, job training programs or community volunteer programs are examples of key business practices of CSR. From an Environmental perspective, the key business practices include the waste management and energy conservation. Learning and development opportunities or equal employment opportunities are considered CSR practices from the employees' perspective. On the other hand, consumers consider that environmentally and socially responsible product composition are key business practices for CSR. On the supplier's side, one practice example is the development and maintenance of long-term purchasing relationships. Finally, from a shareholders' perspective, clear long-term business strategy and open communication with the financial community are considered essential CSR practices.

Even if recent evidence showed sporadic first cases in Europe since the end of 2019, the first detected coronavirus case in Europe was officially announced on February 21st, 2020, in Northern Italy. Because of that reason, the period of crisis is defined from March 2020 until December 2020.

In Table I are presented the main variables used in this analysis. The entire timespan is from 2017 to 2020. Stock prices results are presented during the entire period of analysis. Accounting data and performance variables are measured at year-end. Financial firms were removed from the sample, because financial firms are heavily regulated and comparisons with other firms are thus non-trivial. This study is based on a sample of 493 European firms.

Table I - Summary Statistics

The sample comprises 493 firms. *CSR* is measured using CSR Strategy scores, which ranges from 0 to 100. *Return* is the natural logarithm of daily return over the period under analysis. *Market Capitalization* is in millions of euros. *Size* is the total assets in millions of euros. *Long-Term Debt* is computed as long-term debt divided by assets. *Short-Term Debt* is computed as debt in current liabilities divided by assets. *Leverage* is the long-term debt plus debt in current liability divided by total assets. *Cash Holdings* is computed as cash and marketable securities divided by assets. *Profitability* is computed as operating income divided by assets. *Book-to-Market* is computed as book value of equity divided by market value of equity. *Operating ROA* and *Tobin's Q* (total assets minus equity book value plus equity market value divided by total assets) refer to performance measures.

	Mean	Std. Dev.	Skewness	Kurtosis	p25	Median	p75
Returns	0.053	0.111	0.212	3.633	-0.01	.0051	0.123
CSR	63.243	27.28	-0.723	2.51	44.9	72.5	84.91
Market Capitalization	17867538	26912183	3.245	14.862	4290046	8135126	18284526
Long-Term Debt	0.222	0.148	0.536	3.083	0.116	0.208	0.313
Short-Term Debt	0.271	0.142	0.603	3.196	0.172	0.251	0.357

Leverage	0.425	0.19	-0.034	2.521	0.283	0.428	0.56
Cash Holdings	0.11	0.108	2.181	8.982	0.038	0.081	0.142
Profitability	0.06	0.071	0.577	7.801	0.027	0.052	0.087
Book-to-Market Value	3.915	3.891	2.503	11.448	1.55	2.78	4.83
Size Assets	15.844	1.506	-0.01	2.709	14.813	15.864	16.887
OROA	0.085	0.081	0.704	7.24	0.045	0.076	0.118
Tobin's Q	1.906	1.83	2.622	10.969	0.853	1.29	2.282
Historical Volatility	1.684	0.699	0.731	7.827	1.259	1.649	2.078

B. Methodology

The focal point of this study is to understand the role that CSR practices play on the performance of companies during an economic downturn. The period chosen to represent the economic downturn is the most recent global crisis, COVID-19 pandemic.

Initially, a cross-sectional regression was performed, in order to understand the impact of the CSR score on company's performance during the crisis period.

$$Returns_i = b_0 + b_1CSR_i + b_2X_i + IndustryDummies + e_i$$

$Returns_{jt}$ refers to daily returns from March 2020 to December 2020, CSR_i corresponds to economic, social, and environmental dimensions in firm's day-to-day decision-making processes, represented in a scale from 0 to 100. In previous studies (Lins, Servaes and Tamayo (2017)), the data about CSR is obtained before the period of crisis, in order to guard against the possibility that firms may change their CSR policies in anticipation of the crisis ahead. However, due the COVID's unpredictable nature that become so viral worldwide in a short period of time, it was difficult that firms could have changed their policies, predicting a crisis. It is considered the CSR Strategy score for the corresponding period under analysis. X_i is the vector of control variables and $Industry Dummies$ is the control variable for industry fixed effects.

An additional model is estimated in order to take into account the period before COVID-19 pandemic, since it is a period of greater stability, both economic and social. It allows to investigate whether the relation is unique to periods of low trust or is common to most periods and, comparing both scenarios, it is possible to better interpret its impact on performance. To analyze the CSR impact during the COVID-19 period, a difference-in-differences model is

estimated, including firm and time fixed effects. The empirical results were obtained using Stata. For this panel, it is estimated the following model:

$$Return_{i,t} = b_0 + b_1 CSR_{t,j} \times Crisis_t + b_2 CSR_{t,j} + b_3 X_{i,t} + FirmFixedEffects + YearFixedEffects + e_{i,t},$$

$$Performance_{i,t} = b_0 + b_1 CSR_{t,i} \times Crisis_t + b_2 CSR_{t,i} + b_3 X_{i,t} + FirmFixedEffects + YearFixedEffects + e_{i,t},$$

To represent the temporary period of economic crisis it is defined a dummy variable, *Crisist*, which takes the value 1 for period March 2020 to December 2020 and the value 0 for the other periods tested, which are the years before COVID-19 pandemic, 2017, 2018 and 2019. This variable is considered relevant to the study since it examines a period in which the markets reacted strongly to shocks in the value of companies. *Time fixed effects* are specified at the yearly level. *Firm fixed effects* control for time-invariant omitted risk factors, removing omitted variable biases.

The same regression model is performed for different dependent variables. The first analysis take in consideration *Returns_{i,t}*, and the second is about *Performance_{i,t}*, which refers to firms' financial performance, using two dependent variables, Operating Return on Assets (operating income divided by total assets) and Tobin's Q ratio (total assets minus equity book value plus equity market value divided by total assets). The last analysis performed use the dependent variable idiosyncratic risk to understand how CSR practices also influence the volatility of stock returns. The Idiosyncratic Risk variable is obtained as the standard deviation of the daily residuals from the market model estimated using daily excess returns.

IV. Empirical Results

A. Stock Returns

Before analyzing the impact that CSR practices have on returns and performance, it is essential to understand the evolution of CSR scores over the years included in the sample, which are 2017, 2018, 2019 and 2020. In Table II, it is possible to confirm that this topic has been much debated in recent years and CSR practices are increasingly present in companies, reaching a variation of over 10% from 2017 to 2018, and a positive relative yearly variation, above 3.50%, since then. Panagiotopoulos (2021) proves that this crisis could be transformed into a chance for corporations to realize their social role and improve their CSR footprint with the

learnings of the pandemic, underlining possible advantages of these urgent CSR actions that could be incorporated into the usual CSR policy of the European firms.

Table II – Evolution of CSR scores from 2017 to 2020. This table presents the mean of the CSR scores of all the firms of the STOXX Europe 600 index, during the last 4 years, 2017 to 2020 and its relative yearly variation, in %.

Scores	Average	Relative Variation (%)
CSR 2017	56.81	--
CSR 2018	62.63	10.23%
CSR 2019	64.93	3.68%
CSR 2020	68.07	4.83%

Table III reports the results from the cross-sectional baseline model. All models include industry dummies (defined at the two-digit SIC level, which indicate the industry group), since some industries may be more likely to invest in CSR than others. As a starting point, the first specification examines solely Return as a function of CSR. In order to avoid biases in the results, due to the omitted variables that happen to be correlated with the CSR, in columns (3), (4) and (5), the results are controlled for the company's financial health and other characteristics of the company that have been proven to affect the returns. Some variables are selected to measure a firm's financial health and its ability to resist a severe downturn in the economy.

The proxies used are *Cash Holdings* (cash and marketable securities divided by assets), *Leverage* (Long-term debt plus debt in current liabilities divided by total assets), and *Profitability* (operating income divided by assets). In addition to these variables, there are others that may also be important for stock returns (Daniel and Titman (1997)), such as *Size* (natural logarithm of total assets) and *Book-to-Market* (book value of equity divided by market value of equity). Finally, since corporate risk and growth opportunities may affect stock returns as well (Goyal and Santa-Clara (2003)), other variable selected as control is firm's *Historical Volatility* (standard deviation of the daily residuals from the market model estimated using daily excess returns, Thomson Reuters' Refinitiv and Kenneth French's website), which aims to undo the potential relationship between price volatility and returns in the stock market. Analyzing the results in Table III, it is possible to identify a negative relationship between Returns and the investment in Corporate Social Responsibility practices, during the considered crisis period, COVID-19 pandemic. On the one hand, according to previous research, CSR practices would be expected to help companies improve their performance, mainly if firms face volatile scenarios, since it can help build trust and social capital. On the other hand, it is during crisis

that companies incur higher costs and, in some cases, financial distress. For that reason, during economic downturn periods, investing in these practices could have a negative influence on company's returns, since it involves significant costs and access to limited resources, that could have been used to invest in profitable projects, preventing the financial distress.

Table III - Crisis-Period Returns and CSR. This table presents the regression estimates of stock returns during the crisis-period as a function of the continuous measure of CSR and control variables. All variables, except CSR, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	Returns (1)	Returns (2)	Returns (3)	Returns (4)	Returns (5)
CSR	-0.00113*** (0.00022)	-0.00101*** (0.00023)	-0.00072*** (0.00023)	-0.000772*** (0.00023)	-0.00055** (0.00024)
Leverage			-0.128*** (0.0406)	-0.124*** (0.0406)	-0.125*** (0.0403)
Cash Holdings			0.0785 (0.0507)	0.0827 (0.0507)	0.0581 (0.0505)
Profitability			0.335*** (0.0734)	0.309*** (0.0749)	0.0303 (0.0876)
Historical Volatility				-0.0153 (0.0092)	-0.0242** (0.0099)
Market-to-Book					0.00502*** (0.00151)
Size Assets					-0.0161*** (0.00486)
Industry dummies	No	Yes	Yes	Yes	Yes
N	474	462	462	462	448
R squared	0.0524	0.107	0.187	0.192	0.232

In Table IV, the previous model is re-estimated, but now using CSR quartile dummies as the explanatory variables. In order to investigate the impact that CSR activities has on stock returns at very low or very high levels, firms' scores are split into quartiles. According to Table IV, during COVID-19 period, companies that invest more in Corporate Social Responsibility practices have a greater negative increase in returns compared to companies less committed to these types of activities. During period of crisis, when financial resources become more valuable, the CSR overinvestment costs can outweigh its conflict-resolution benefits (B. Buchanan, 2018). Without sufficient monitoring and external corporate governance, the implementation of CSR programs is a waste of valuable firm resources and results in a decrease in firm value during low trust periods. However, as Porter and Kramer (2002) highlight,

companies must change their focus towards the social setting in which they act and interact. Economic, social and environment goals with a long-term perspective are not independent or in conflict although they can be contradictory in the short-term. In other words, due to the increase in CSR scores, there is a greater allocation of resources by companies to carry out this investment. It is possible to see the long-term economic and social goals connected with the investments in Corporate Social Responsibility practices performed previously. Thus, during periods of economic shock, high-CSR companies, which have already invested heavily in CSR in the past, should not allocate more resources, essential for their survival.

Table IV – Relationship between Crisis-Period Returns and CSR into quartiles. This table presents the regression estimates of stock returns, during crisis, as a function of measures of CSR into quartiles and control variables. It reports the results using dummy variables for CSR quartiles, with *CSR2* set to one if the firm is in the second CSR quartile and zero otherwise, *CSR3* set to one if the firm is in the third CSR quartile and zero otherwise, and *CSR4* set to one if the firm is in the fourth CSR quartile and zero otherwise. All variables, except *CSR*, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	Returns (1)	Returns (2)
CSR2	-0.0265* (0.0159)	-0.0312** (0.0151)
CSR3	-0.0406** (0.0171)	-0.0305* (0.0162)
CSR4	-0.052*** (0.015)	-0.0422*** (0.0146)
Control Variables	No	Yes
Industry dummies	No	Yes
N	492	465
R squared	0.025	0.219

The evidence so far indicates that CSR negatively affect stock returns during the period when overall trust in corporations, institutions, and financial markets declined. In Table V, information from previous years is also included in the analysis, from 2017 to 2020, with the purpose to analyze what is the relationship between these two variables considering a longer and more stable economic period. Table V indicates that the impact of the increase in the CSR score had positive effects over the past few years for companies listed on the STOXX Europe 600, even though this positive relationship is not statistically very robust.

Table V –Returns and CSR. This table presents the regression estimates of stock returns as a function of measures of CSR, during the last 3 years, 2017 to 2020, in order to investigate the relationship between investment in CSR and Returns in the long-term perspective. All variables, except *CSR*, are winsorized at the 1st and 99th percentile levels. Standard errors are robust

to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	Returns (1)	Returns (2)	Returns (3)	Returns (4)
CSR	0.000518* (0.000269)	0.000561** (0.000276)	0.000637** (0.000269)	0.00038 (0.00028)
Leverage		-0.0619 (0.0388)	-0.0467 (0.0373)	-0.0871** (0.0359)
Cash Holdings		0.0688 (0.068)	0.0524 (0.0666)	0.0134 (0.0658)
Profitability		0.246** (0.121)	0.178 (0.121)	0.154 (0.112)
Historical Volatility			-0.0479** (0.00883)	-0.0459*** (0.00916)
Market-to-Book				0.0133*** (0.00236)
Size Assets				0.0299 (0.0186)
Fixed Effects	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes
N	1850	1801	1801	1763
R squared	0.279	0.284	0.307	0341

The impact of the CSR scores was tested during all the years under analysis, in order to understand the general impact that these practices have on returns. In this analysis, using control variables, except Market to Book Value and Size of Assets, with fixed effects and time fixed effects, it is evident that the increase in the CSR score has a positive impact on Returns. In other words, it is possible to say that investing in these practices is beneficial for company's performance. The next analysis has the goal to investigate whether the relationship between CSR scores and Returns is unique to periods of low trust or is common to most periods, comparing the period before and during COVID-19 pandemic. A difference-in-difference regression is defined, which allows comparing changes in outcomes over time, for socially responsible companies. Also in this case, in Table VI, high-CSR firms had a negative impact on company's returns, during 2020, compared to a period of greater economic stability. However, contrary to what is observed for the low trust period, using control variables, CSR improves returns when the analysis does not consider only the year of crisis.

Table VI – Returns Inside and Outside the Crisis - This table presents the regression estimates of the difference-in-differences analysis for stock returns, using a panel of daily data from 2017 to 2020. *Crisis* is a dummy variable set to one from 2020 and

zero otherwise. All variables, except *CSR*, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	Returns (1)	Returns (2)
CSR	0.0240* (0.0134)	0.0267* (0.016)
CSR*Crisis	-0.0996*** (0.0278)	-0.0866*** (0.028)
Crisis	0.0932*** (0.0275)	0.0990*** (0.0299)
Fixed Effects	Yes	Yes
Time fixed effects	Yes	Yes
Control Variables	No	Yes
N	1968	1813
R squared	0.271	0.343

Table VII shows the results considering the treatment groups of firms that have CSR score above the top quartile. The results presented are statistically non-significant and, for that reason, no conclusions can be developed regarding this analysis, using Returns as the dependent variable.

Table VII – Returns Inside and Outside the Crisis for top CSR firms - This table presents the regression estimates of the difference-in-differences analysis for stock returns, using a panel of daily data from 2017 to 2020. The treatment group is firms with a CSR score in the top quartile, where *CSRTopQ* is a dummy variable set to one for these firms and zero otherwise. *Crisis* is a dummy variable set to one from 2020 and zero otherwise. All variables, except *CSR*, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	Returns (1)	Returns (2)
CSRTopQ	-0.00914 (0.00979)	0.00893 (0.0102)
CSRTopQ*Crisis	-0.013 (0.0125)	-0.0084 (0.0117)
Crisis	0.00758 (0.00811)	0.0103 (0.0137)
Fixed Effects	Yes	Yes
Time fixed effects	Yes	Yes
Control Variables	No	Yes
N	1968	1815
R squared	0.261	0.337

The results obtained in this section are in line with assumptions made by Brammer and Millington (2008) and Awais et al. (2015) who support the notion that firms have a competitive disadvantage when they invest in CSR, as they bear costs which should be borne by the government or individuals (Friedman, 1970). Another reason that could explain the negative coefficients during COVID-19 pandemic period may be related to the Stakeholder Theory. This theory holds that a company should protect the interests of all stakeholders, who can affect or are affected through the activities of a company to achieve its mandatory organizational goals and voluntary social welfare motives (Freeman, 1984). However, the pandemic, also considered a social crisis, made it more difficult for companies to find the balance to protect the interests of their stakeholders.

Despite the firm's efforts and their CSR practices to reduce the negative consequences that the pandemic brought, its dimension hit them negatively and, consequently, negatively affect the performance of the companies. For example, it is reported that hundreds of millions of part-time/full-time jobholders worldwide lost their jobs, frontline employees directly working with important sectors during the pandemic, such as pharmacies or transportation, have higher chances of being exposed to the virus, affecting their workplace safety. Moreover, the worsen hits of the COVID-19 pandemic make it more difficult to respond to every order and maintain the faithful relationship between a company and its consumers.

In this regard, philanthropic CSR seems like one of the avenues to handle the critical situation and helps companies overwhelmed the adverse effects of the crisis as long-term positive benefits are frequently recognized (Appel Mahmud, Donghong Ding, and Md. Morshadul Hasan). Despite all the negative impacts mentioned about the pandemic, it also allowed the adoption of new attitudes that will make society more sustainable and with a greater spirit of mutual help. Thus, in a critical period like the COVID-19 pandemic, employers and employees should build a stronger relationship. Firms should adopt employee-protecting policies to run business operations smoothly. Trust is a crucial rope to tie the mutual interests of business and community, and empathy is important for establishing trust (Boadi et al., 2019). Consequently, when facing periods of economic or social downturn, companies' moral duty is to assist their best communities through their philanthropic actions (e.g., feeding the hungry or donating medical equipment).

B. Operating Performance

In this section, the main point is to study the effect of CSR on operating performance during the COVID-19 pandemic. The findings are reported in the following tables. The performance variables under study are Operating Return on Assets, computed as operating income divided by assets, and *Tobin's Q*, measured as total assets minus equity book value plus equity market value divided by total assets. In Table VIII it is possible to observe the interaction between CSR and the operating performance variables, Operating Return on Assets and Tobin's Q, during all period under analysis (2017-2020). The relationship is positive for both variables, when control variables are included, indicating that the investment in CSR practices exhibit higher profitability for companies, during a larger and more stable period. The differences-in-differences model, which allows to measure the impact of the economic shock experienced recently, will also be analyzed for OROA and Tobin's Q.

Table VIII –Operating performance and CSR. This table presents the regression estimates of Operating Return on Assets and Tobin's Q, as a function of measures of CSR during 2017 to 2020, in order to investigate the relationship between CSR practices and these performance variables during all sample under analysis. All variables, except CSR, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	OROA (1)	OROA (2)	Tobin's Q (1)	Tobin's Q (2)
CSR	0.000044 (0.00011)	0.0000768* (0.000046)	0.00221* (0.0018)	0.00235* (0.0013)
Control Variables	No	Yes	No	Yes
Fixed Effects	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes
N	1840	1801	1841	1792
R squared	0.145	0.203	0.058	0.11

Table IX confirms that, during periods of crisis, high-CSR firms exhibit a negative impact on both performance variables. Moreover, investing in such activities triggers high costs, which in turn lead to lower net incomes and lower ROA. The results show that the increase in CSR, in companies committed with these practices, has a significantly negative impact in OROA and Tobin's Q from the pre-crisis to the crisis period. From the results, it is possible to understand that, during low trust periods, when firm's financial resources become more valuable and the expected return on investment falls, agency conflicts, especially overinvestment concerns, could become more severe (Johnson et al., 2000; Bernanke et al., 1999).

Table IX – OROA and Tobin's Q Inside and Outside the Crisis - This table presents the regression estimates of the difference-in-differences analysis for Operating Return on Assets and Tobin's Q, using a panel of daily data from 2017 to 2020. *Crisis* is a dummy variable set to one from 2020 and zero otherwise. All variables, except *CSR*, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	OROA (1)	OROA (2)	Tobin's Q (1)	Tobin's Q (2)
CSR	-0.00855 (0.00622)	-0.00834 (0.00653)	0.271* (0.141)	0.161 (0.126)
CSR*Crisis	-0.0240* (0.0145)	-0.0261* (0.0148)	-0.799** (0.319)	-0.622*** (0.213)
Crisis	-0.00965 (0.0144)	-0.00616 (0.0155)	0.839** (0.327)	0.666*** (0.233)
Fixed Effects	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes
Control Variables	No	Yes	No	Yes
N	1960	1905	1922	1814
R squared	0.116	0.148	0.073	0.46

The last analysis performed corresponds to the impact suffered by firms with CSR scores in the top quartile. According to the results in the first column of Table X, socially responsible firms perform worse Operating Return on Assets, even during periods of economic stability. On the other hand, when looking at the results of the dependent variable Tobin's Q, in column 2, it is possible to conclude that, similar to the effect that CSR has on Returns, the CSR impact on Tobin's Q variable during downturn periods, is also negative for high-CSR firms. The relative importance of the overinvestment effect increases following the onset of the COVID-19 pandemic.

Table X - OROA and Tobin's Q Inside and Outside the Crisis. This table presents the regression estimates of the difference-in-differences analysis for Operating Return on Assets and Tobin's Q, using a panel of daily data from 2017 to 2020. *The treatment group is firms with a CSR score in the top quartile, where CSRTopQ is a dummy variable set to one for these firms and zero otherwise.* *Crisis* is a dummy variable set to one from 2020 and zero otherwise. All variables, except *CSR*, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	OROA (1)	Tobin's Q (2)
CSRTopQ	-0.0102* (0.00544)	-0.0602 (0.0691)
CSRTopQ*Crisis	0.000286 (0.0069)	-0.197*** (0.0614)

Crisis	-0.0298*** (0.00713)	0.175* (0.0969)
Fixed Effects	Yes	Yes
Time fixed effects	Yes	Yes
Control Variables	Yes	Yes
N	1905	1814
R squared	0.144	0.45

C. Idiosyncratic Risk

Stock returns and operating performance are not the only metrics that allow to assess the performance of companies. Through the variable Idiosyncratic risk, which is the standard deviation of the daily residuals from the market model estimated using daily excess returns, it is possible to see if the investment in CSR policies allows to reduce the volatility of Returns, and thus act as insurance against firm risk, during undesirable events.

According to the results in Table XI, CSR practices help to mitigate the risk suffered by firms during periods of economic downturn. This result is considered as an advantage of CSR investment, since the pandemic brought uncertainties at all levels, as well as a negative shock in society trust and confidence. For this reason, CSR matters in times of crisis, since it can help build trust and social capital when firms face volatile scenarios. Thus, it is possible to confirm what empirical evidence suggests in previous studies, investments in CSR can be viewed as an insurance policy, mitigating negative consequences of risk exposure when the economy faces a severe crisis of trust.

Table XI – Idiosyncratic Risk and CSR during crisis- This table presents the regression estimates of stock returns volatility as a function of CSR and control variables. All variables, except CSR, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	Idiosyncratic Risk (1)	Idiosyncratic Risk (2)
CSR	-0.00340*** (0.00114)	-0.00328*** (0.00117)
Control Variables	No	Yes
Industry dummies	No	Yes
N	474	462
R squared	0.019	0.148

To analyze the relationship between high-CSR firms and Idiosyncratic Risk, the differences-in-differences model was designed, whose treatment group is companies with CSR scores in the top quartile. According to the results in Table XII, it is possible to say that firms with the highest CSR scores are exposed to less Idiosyncratic risk during periods of low trust and confidence, Covid crisis.

Table XII – Idiosyncratic Risk Inside and Outside the Crisis - This table presents the regression estimates of the difference-in-differences analysis for stock returns volatility, using a panel of daily data from 2017 to 2020. The treatment group is firms with a CSR score in the top quartile, where *CSRTopQ* is a dummy variable set to one for these firms and zero otherwise. *Crisis* is a dummy variable set to one from 2020 and zero otherwise. All variables, except *CSR*, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

	Idiosyncratic Risk (1)	Idiosyncratic Risk (2)
CSRTopQ	-0.0448 (0.0491)	0.0135 (0.0414)
CSRTopQ*Crisis	-0.0589 (0.055)	-0.0947* (0.0546)
Crisis	0.893*** (0.0356)	1.066*** (0.0561)
Fixed Effects	Yes	Yes
Time fixed effects	Yes	Yes
Control Variables	No	Yes
N	1905	1814
R squared	0.144	0.45

D. Robustness

In this section, other analyses are considered to determine whether the main findings are robust. The first focus of this study takes in consideration the CSR scores of the corresponding year under analysis. In previous studies, CSR scores are obtained before the COVID-19 pandemic, in order to guard against the possibility that firms may change their CSR policies in anticipation of the crisis ahead. Due the COVID's unpredictable nature that become so viral worldwide in a short period of time, it was very difficult that firms could have changed their policies, predicting a crisis. However, as shown in Table II, there has seen a considerable increase in practices of corporate social responsibility over recent years. In order to avoid biased results due to investments in CSR practices made in 2020 just with the goal to improve its performance, the next analysis will consider the CSR scores from the previous year from the selected timespan. In the case of the crisis-period returns, the CSR score used are from one year

before the beginning of the pandemic, using the same model described in Methodology. In Panel A from Table XIII, the replicated models consider crisis-period returns, which confirms the negative effect of investing in CSR in periods of greater economic instability. Panel B of Table XIII and Table VI show results considering the same model but using scores from different years, 2019 and 2020, respectively. Comparing both tables, the effect of CSR remains negative, but the increase in socially responsible activities in 2020 made the impact less negative, during periods of economic downturn.

Table XIII – Returns and Lagged CSR – Panel A presents the cross-sectional regression analysis for crisis-period returns, corresponding to Returns from 2020, using lagged CSR scores. Panel B presents the results for estimates of the difference-in-differences analysis for stock returns. *Crisis* is a dummy variable set to one from 2020 and zero otherwise. All variables, except *CSR*, are winsorized at the 1st and 99th percentile levels. Standard errors are robust to heteroscedasticity and presented in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

Panel A: Crisis-period Returns

	Returns (1)	Returns (2)
CSR	-0.00112 *** (0.000212)	-0.0006*** (0.000224)
Control Variables	No	Yes
Industry dummies	Yes	Yes
N	464	456
R squared	0.125	0.227

Panel B: Returns inside and outside crisis

	Returns (1)	Returns (2)
CSR	0.0266** (0.0135)	0.0280** (0.0139)
CSR*Crisis	-0.116*** (0.0232)	-0.0911*** (0.0235)
Crisis	0.110*** (0.0229)	0.0942*** (0.0243)
Fixed Effects	Yes	Yes
Time fixed effects	Yes	Yes
Control Variables	No	Yes
N	1376	1327
R squared	0.318	0.363

E. Limitations

During this study, some limitations were found. Firstly, the main limitation is related to the strong presence of the pandemic. At the time of writing, the future surrounding COVID-19 pandemic was uncertain. In 2020, the period considered to represent the crisis period in this analysis, society witnessed the virus appearance, its quick and easy contagion and all the first measures that were taken to control it, such as lockdown or social distance. However, 2020 only represented the beginning of a period that seems to have no end date.

The coronavirus is constantly changing, and new variants are expected to occur. At the end of 2020, two new variants were detected, Alpha and Beta. But it was in 2021 that three more variants appeared, Gamma, Delta, which spreads more easily than other variants, and the most recent, Omicron, which may spread more easily than other variants, including Delta. Thus, all the results obtained in this study do not truly correspond to the “definitive” impact that the COVID-19 pandemic had on the firm’s performance. The pandemic has evolved, as the government measures taken to control it, which have been adjusting according to the existence of new variants and their contagion capacity. As 2020 was the first year of the pandemic, it was the year of the greatest economic shock and the one that required grater adaptation efforts, as companies were not prepared for the appearance of a virus with consequences that led to the reformulation of their business strategy.

Second, the data are limited. The correlations are based on fewer observations, and the results are only preliminary and subject to change. Due to the limited information available, the post-crisis period was not considered. However, available information for post-crisis could be very useful in the analysis, as it could allow to understand how the high-CSR firms would recover from this downturn period, through all the practices they adopted and implemented during this period of health, social and economic crisis.

V. Conclusion

The management of a global health crisis is a very complex challenge, that implies large-scale coordination, involving interdisciplinary and multidisciplinary approaches. However, crisis have the positive side of allowing individuals, companies, and organizations to develop mechanisms that they will consider in future decision-making processes. It is important to be able to identify opportunities and, above all, to be able to learn from these situations of loss, mitigating negative consequences from future crisis. Companies can enhance their reputation

and contribute to alleviating the negative impacts of the global health crisis by implementing some initiatives, such as Corporate Social Responsibility activities. CSR is usually encouraged to improve and sustain long-term corporate financial performance (Feng et al., 2018; Flammer, 2013). However, according with instrumental stakeholder theory (Jones, 1995), investing in CSR during difficult times could be controversial. To prove that the investment in CSR has a controversial effect when is made during periods of crisis, an analysis was carried out using companies that invest in CSR and companies with CSR above the top quartiles as a treatment group, measuring the impact of CSR on performance during the pandemic.

The result shows a positive influence on Returns and Tobin's Q ratio when these companies invest in CSR during a non-crisis period and a negative impact on Returns, Tobin's Q and Operating Return on Assets during crisis period. On the one hand, socially responsible behavior can act to reduce a firm's exposure to risk (Gosfrey, 2004) and increase the present value of a firm's future cash flow, being consistent with maximizing the wealth of the equity holders. On the other hand, CSR activities often incur substantial extra costs, which can compromise the financial well-being of companies under the influence of industrial crisis or natural disasters. CSR affects firm value through two mechanisms with opposite effects. CSR benefits firm value by resolving the conflict between managers and stakeholders while it can destroy firm value because of overinvestment.

According with the results obtained above, considering a stable economic period, represented by the three years prior to the COVID-19 pandemic, CSR practices has a positive impact on the firm's financial performance, using stock returns and Tobin's Q as dependent variables. However, when is considered only the COVID-19 pandemic period in the analysis, it is possible to observe a negative impact with the increase in Corporate Social Responsibility commitment. This conclusion differs from previous research mentioned during this study, that defended that CSR matters mainly in times of crisis. However, the pandemic gave rise to a crisis with a different level of complexity comparing with past crisis, as it impacted society's economic, social, and mental health as never before. For that reason, during this study, it was possible to understand that the expected impact could be different from previous studies. Furthermore, it is a period that does not yet have an end date and the sensitivity of consumers is still being studied. During 2020, responsible companies show worse performance results, namely on stock returns, OROA and Tobin's Q, comparing with low-CSR firms.

In the future, it is expected an increase in CSR activities, as employees will increasingly demand that their work be aligned with their personal values. However, there is a nonlinear

relation between CSR and stock returns, showing a U shape pattern between them (Farah T., Li J., Li Z., & Shamsuddin A., 2021). It is essential to bear in mind that the cost involved in investing in these activities should not outweigh the benefits it will have in firm's performance.

To conclude, achieving success with CSR is often a long-term process, taking years for the investment to recover and pay off financially, since CSR helps to build trust and build customer's trust is a long-term process. The longer commitment provides a better opportunity for fully integrating a CSR vision into all aspects of operations (Porter and Miles, 2013), since infrastructure and operational investments take time to mature. Thus, a complete CSR integration takes time for all employees to understand and 'get on board.' However, in today's more complex business models, short-term losses may be tolerable for strategic CSR policy to succeed.

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