

REPUTATION, A PERFORMANCE LEVER? EVIDENCE FROM EURONEXT PARIS

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ABSTRACT

The reputation of the company is certainly its most precious intangible asset but also the most difficult to assess because it incorporates multiple dimensions. Despite the lack of a clear and precise consensus on the definition of reputation, many previous studies have endeavored to analyze the link between reputation and business performance. The results of this previous research generally highlight a positive impact of reputation on performance but also a reciprocal relationship between performance and reputation. Through this research, we seek to explore this link and its reciprocity by studying the large French capitalizations listed on the Paris Stock Exchange. This link is analyzed here in an economic and financial context disrupted by the Covid 19 health crisis. The data on which the econometric tests are carried out are the data for the year 2020. The results confirm that even in such a context of crisis, the reciprocity of the relationship between reputation approached by the Price to Book ratio and economic (ROA) and financial (ROE) performance is maintained, suggesting the existence of a virtuous circle between reputation and performance.

JEL: M30, C21, G30

KEYWORDS: Reputation, Financial Performance, Economic Performance, Price to Book Ratio

INTRODUCTION

Reputation is a concept that is still seeking its definition (Tomak, 2014; Sontaité, Kristensen, 2009; Wartick, 2002;) but its role is considered extremely important for an organization, since it is an element of corporate capital (Gibson et al., 2006). Its impact on a company's overall resources has been highlighted by Boistel (2007), and it is examined as a strategic element since it enables the organization to create a competitive advantage (Greyser, 1996; Maathuis, 1993) that is sustainable since it is difficult to imitate (Boistel, 2008). However, Tauscher (2019) considers that reputation, in highly congested markets, can no longer represent a scarce resource and constitute a source of competitive advantage. Nonetheless, it remains an important source of value for companies. De Marcellis-Warin and Teodoresco (2012) state that reputation is the single most important driver of value creation or destruction within a company. Reputation is an intangible asset, and intangible resources drive organizational performance (Zigan, 2013). This is because they are the rarest and most valuable and therefore difficult to imitate and replace, offering competitive advantage and superior performance to the organization (Brahim and Arab, 2011; Boistel, 2007.). Corporate reputation is considered one of the most important intangible resources (Pires and Trez, 2018) and is seen as a driver of organizational performance (Vance and Angelo, 2007). Pires and Trez (2018) point out that literature is divided on the link between reputation and performance. Some argue that corporate reputation affects organizational performance, while others stipulate that organizational performance affects corporate reputation. For example, Deephouse (2000)

established a link with corporate performance. Roberts and Dowling (2002) have shown that companies with good reputations generally perform better in the long term due to the reputation effect.

The aim of our research is therefore to analyze the links between reputation and performance in a financial context disrupted by the health crisis. To this end, this study focuses on the 149 French companies listed on Compartment A - Euronext Paris (situation in May 2022) and explores the possible reciprocal link between their reputation and their level of economic and financial performance in 2020. We first present an analysis of the literature on the links between performance and reputation, followed by the methodology and finally the discussion and managerial proposals before concluding.

LITERATURE REVIEW

Performance and reputation: an ambiguous link? According to the literature, reputation and performance are reciprocally linked: reputation affects performance and vice versa. The literature states there is a link between an organization's performance and its reputation (Dimov et al., 2007; Fischer and Reuber, 2007; Pollock and Gulati, 2007; Rindova et al., 2007), even if some are not totally convinced, such as Rose and Thomsen (2004), who state that it is plausible that reputation influences performance. In order to understand how reputation affects performance, there are several sources of explanation, each of which belongs to a particular stream of research. Reputation affects company performance through its signaling effect (Taeuscher, 2019). Reputation is an informative signal (Akerlof, 1970) representing a contract guarantee (Cornell and Shapiro, 1987). It consists in informing stakeholders about the quality of unobservable organizational characteristics, and in particular consumers about product quality (Rindova et al., 2010; Jensen and Roy, 2008; Dimov et al., 2007; Rindova et al., 2005). This disseminated information can explain the demand for a company's specific products (Shapiro, 1982), since it reduces consumer uncertainty and consequently increases their probability of purchase (Shapiro, 1982; 1983).

A second source of explanation lies in resource theory (Barney, 1991), which states that reputation is an intangible resource or asset (Rindova et al., 2010; Boyd et al., 2009; Deephouse, 2000; Barney, 1991). Intangible resources can be seen as an element in the creation of competitive advantage and performance (Grant, 1996). This reputational resource helps build a source of competitive advantage (Boistel, 2008) leading to corporate performance (Bergh et al., 2010; Roberts and Dowling, 2002). As Boistel (2007) has shown, this competitive advantage is sustainable because companies do not have the same resources, and reputation management requires prior work that is not visible to competitors, making it virtually impossible to copy in the short term, while at the same time generating positive effects in terms of sales, human resources, and financial gains. As a result, "it is presented as a unique element, difficult to imitate and copy" (Boistel, 2014). Taeuscher (2019) notes this phenomenon as the competitive effect of reputation.

There are other ways of understanding the impact of reputation on corporate performance. The stakeholder's theory initiated by Freeman (1984) stipulates the company cannot neglect its influential stakeholders. There is thus a social contract between the organization and its stakeholders, based on acceptance of society's values and expectations. Reputation is thus a social structure characteristic of our society, constituting an instrument of control representing a dominant collective convention built on what the individual knows (Camic, 1992; Lang & Lang, 1988). Reputation is then the ongoing evaluation of the company by all its stakeholders in terms of the social norms and expectations it generates (Boistel, 2008). As a result, the company and its practices are better accepted, and this has an impact on its performance. Guimaraes (1985) has shown that a company with an excellent reputation can raise more capital on the stock market (up to 20 times) for the same level of profit as a company with a poor reputation, and the better the reputation, the lower the cost of capital to raise.

More pragmatically, since reputation has an impact on customers, performance is undoubtedly positively affected, since reputation makes it possible to create and maintain a more qualitative marketing approach

that promotes greater profitability (Boistel, 2008). Reputation acts on purchase intention (Yoon, 1993), increases confidence in products (Shimp and Bearden, 1982) and enables prices to be raised as soon as products are of high quality (Herbig and Milewicz, 1995), all of which naturally have an impact on company performance. Similarly, there is a correlation between consumer satisfaction and reputation (Andreassen and Lindestad, 1998), the latter helping to build a competitive advantage (Boistel, 1994) that promotes sales and protects products from the competition, since it makes products imperfectly replaceable and imitable (Boistel, 2008). These elements thus contribute to better financial performance if marketing investments do not outweigh the gains. Even so, a company with superior financial performance can positively influence its reputation (McGuire et al., 1990). This is a different signaling effect from the one at the beginning of this paragraph, but it does have an impact on reputation. Rose and Thomsen (2004) found that studies along these lines are few and far between. Their conclusions are more nuanced, as these authors reject the hypothesis that reputation improves performance, but do not reject the hypothesis that company's financial performance affects reputation. Thus, they state that strengthening a company's reputation is not a sure-fire way to achieve financial success.

However, financial market theories indicate that a company's value is built on a combination of realized values and market expectations (Dowling, 2002). Numerous empirical studies have long confirmed this fact. Companies ranked in Fortune achieve better financial performance (Roberts and Dowling, 1997). Fombrun and Shanley (1990) conclude from their study of 292 major US companies that historical performance and other non-economic indices influence reputation. Roberts and Dowling (2002), based on a longitudinal study of the most admired companies (Fortune ranking) from 1984 to 1988, state that companies with good reputations have a higher probability of maintaining superior results over time. There is therefore a relationship between profitability and reputation (Gale, 1987; Buzzell, 1983).

For shareholders, too, reputation is a source of gain, since it appears as a market signal favoring risk reduction (Aaker and Jacobson, 1994). Companies with good reputations increase the duration of financial gains relative to their competitors (Dowling, 2002). Reputation helps to understand the gap between the market value and book value of companies (Pires and Trez, 2018; Vomberg et al., 2015; Boj et al., 2014; Zigan, 2013; Amadiou and Viviani, 2010; Kumar, 2009; Perez and Fama, 2006). Reputation helps a company to survive because of the risk management associated with capital markets, particularly when these become highly volatile and investor behavior is no longer based on rational logic but on fear (Rose and Thomsen, 2004). Thus, an autocorrelation exists between reputation and firm value, "indicating that past values of reputation and firm value affect current values" (Rose and Thomsen, 2004). Michalisin et al (2000) found a relationship between intangible strategic assets (including reputation) and relative return on equity. Barry and Epstein (2000) also showed that companies with the best reputation ratings were the most innovative and scored the highest in terms of management quality.

The Difficulty of Measuring Reputation

Exploring the link between reputation and performance is no easy task, given the difficulty not only of defining reputation, but also of measuring it (Walker, 2010). The difficulty of measurement lies in the intangible nature of reputation (Cravens et al., 2003). Trotta and Cavallaro (2012) identify two categories of reputation measurement. Firstly, the category traditionally used in the literature is based exclusively on a qualitative approach. The authors recall that until 1997, the only reputation score used was Fortune's Most Admired Companies. Since then, the literature has been enriched by other types of reputation scores, the most common of which are the Reputation Quotient by Fombrun and Van Riel (1997), the Reputation Index model by Cravens et al. (2003) and the RepTrak system developed by The Reputation Institute since 2006 (Cherchiello, 2011). However, this qualitative approach is often associated with a subjectivity bias (Trotta and Cavallaro, 2012). The second approach is purely quantitative. It was developed to overcome the main bias of the qualitative approach (Trotta and Cavallaro, 2012; Cherchiello, 2011). The three most common quantitative measures of reputation (Tomak, 2014, Trotta and Cavallaro, 2012; Cherchiello, 2011) explain

each of the three measures of reputation developed based on a quantitative approach: the intellectual capital approach, the marketing approach, the accounting approach.

Tomak (2014) and Cherchiello (2011) indicate that intellectual capital approach is based on the prediction of five dimensions such as trademarks, service marks, copyrights, authorizations, and exclusive rights. The authors point out that, although the values of these intangible elements are traceable in balance sheets, the different accounting practices implemented within companies limit comparisons. They also point out that sudden items are not included in the model, and that this can have an impact on reputation. The marketing approach, according to Tomak (2014) and Cherchiello (2011), reduces reputation to the brand. However, in doing so, this approach neglects a whole series of other dimensions of reputation. Regarding the accounting approach, these same authors stress the need to introduce fair value measurement criteria. In this regard, Pirez and Trez (2018) recall the existence of the two methods generally used in this accounting approach to reputation. The first method, which for the authors is the least relevant, apprehends it through accounting indicators and historical returns. The second method considers the value of shares, on the understanding that this is directly linked to the market's perception of a company's reputation. A company's reputation is therefore captured by the difference between its book value and its market value. Despite their a priori differences, Trotta and Cavallaro (2012) point out that accounting approach and the intellectual capital approach are both based on the idea that there is a gap between the market value of listed companies and their book value. This gap represents the value of intellectual capital in the first approach, and the value of intangible assets in the accounting approach. It is therefore an estimate of reputation. The Latter Approach is Chosen for the Remainder of this Paper.

METHODOLOGY

This research focuses on French companies listed on Compartment A of Euronext Paris. According to Euronext criteria, these are companies with market capitalizations more than €1 billion. Table 1 shows the breakdown of companies listed on Compartment A in Paris in May 2022. Over 84% of companies listed in Compartment A of the Paris stock exchange are of French nationality. The decision to study only French companies in this compartment is linked to the year chosen for the study. Indeed, we focused on the link between reputation and performance in 2020 (annual data were used), which was a particularly turbulent year in economic terms due to the health crisis. We therefore limited our field of study to companies operating in the same crisis economy.

Table 1: Sample Presentation

Filters	Number of Companies
Compartment A – Euronext Paris (situation in mai 2022)	177
Focus on French companies	149

Table 1 presents the sample of this study. It focuses on French companies listed in Euronext Paris.

To understand the reputation of these companies, we chose the second method proposed by Pires and Trez (2018). The latter apprehends reputation by identifying the surplus market value that it can confer on the company in relation to its book value, which is equivalent to calculating the Price to Book ratio. This ratio relates a company's market value to the book value of its assets. A Price to Book ratio greater than 1 can potentially mean two things. Firstly, it may mean the market, i.e., all investors, is valuing the company's assets higher than their book value. However, a large proportion of intangible capital, including reputation, is not recorded in company accounts. Consequently, a Price-to-Book ratio greater than 1 can also mean the company's market value includes the value of its intangible assets, of which reputation is an integral part. However, to use the Price to Book ratio as a proxy for reputation, it is necessary to consider that, from an informational point of view, the market is efficient in the semi-strong form. The postulate adopted in this study is that, if the market is informationally efficient in the semi-strong form, then a company's share price

incorporates all available information. The company's share price, which is originally derived from the equilibrium between supply and demand for the stock, then crystallizes the company's market value in the sense that it represents the discounted sum of all future cash flows linked to the holding of the stock.

The additional market value in relation to the company's book value in the context of a Price to Book ratio greater than 1 therefore approaches the value of the company's intangible assets and serves, in the context of this study, as a measure of the reputation perceived by investors. Like Tomaz (2014), we therefore consider that reputation, a multidimensional concept, constitutes part of the intrinsic value of the company, which is considered in the market value of the share if it cannot be fully valued in the company's financial statements. Indeed, according to Soumia and Amar (2019), reputation is an invisible asset that justifies part of the gap between a company's book value and its market value. Financial performance and economic performance, on the other hand, are approached in a conventional way, using, respectively, return on assets (net income/total assets) and return on equity (net income/equity).

Regression Models

The link between reputation and performance is examined on cross-section data for the year 2020. The ordinary least squares method is used to first identify the impact of reputation on the performance of French companies listed on Compartment A of the Paris stock exchange. We then test the reciprocal by analyzing the impact of performance on reputation. Stata 13.1 software is used to test the following two models:

$$Performance = \alpha + \beta_1 * Reputation + \beta_2 * size + \beta_3 * level\ of\ debt + \beta_4 * sector \quad (1)$$

$$Reputation = \alpha + \beta_1 * Performance + \beta_2 * size + \beta_3 * level\ of\ debt + \beta_4 * sector \quad (2)$$

We have also chosen to include the following control variables: size, sector of activity and degree of debt. These variables are classically used in the literature. All data are extracted from the Factset database. Table 2 presents the definitions and measures of the variables used in the specification of the two models.

Table 2: Variables Definitions and Measures

Definitions	Measures	Code
Financial Performance	Return on Equity = Net Income/ Equity	ROE
Economic Performance	Return on Asset = Net Income/total Assets	ROA
Reputation	Price to Book = market capitalization / book value	PTB
Sector	Dummy variables based on this sector segmentation	SEC
	Finance	SEC Fin
	Consumption	SEC Cons
	IT Communication	SEC IT&C
	Services	SEC Serv
	Industry	SEC Ind
	Health	SEC Health
	Level of Debt	Debt/ total Assets
Size	Ln total assets	SIZE

Table 2 shows the variables used in this study and how they are measured. As reputation proxy we used the price to book ratio. ROE and ROA are used as financial and economic performance measures.

RESULTS AND DISCUSSION

Descriptives Statistics and Correlation

Table 3 presents the descriptive statistics for the variables included in this study. The average economic performance (ROA) of our sample is 2.3%, meaning that €100 of assets generates €2.3 of net income. The average financial performance (ROE) is 3.12%, meaning that €100 contributed by shareholders generates €3 of net income. However, we note the volatility of ROE is higher than that of ROA, underlining the greater dispersion of financial performance data within the database. Reputation, approximated by the Price to Book ratio, averages 2.8, meaning the market value of the shares of the companies in the database represents 2.85 times their market value. The reputation perceived by investors concerning the companies in the database therefore appears to be positive on average on this market, but the volatility of the indicator remains high, implying a high degree of variability in the reputation of companies in Compartment A of the Paris stock exchange.

Table 3: Descriptive Statistics

Variables	Obs	Mean	Std_Dev	Min	Max
ROA	148	2.301	10.77	-23.31	96.51
ROE	146	3.124	33.83	-188.4	264.4
PTB	145	2.851	2.994	0.2151	18.66
SIZE	148	9.053	1.804	4.788	14.73
DEBT	145	161.4	233.1	1.219	2255.3

Table 3 exhibits the descriptive statistics of the variables included in the study.

Table 4 shows the correlations between the variables. As expected, there is a fairly strong correlation (0.8522) between the ROE and ROA performance variables. It is therefore customary to use the performance indicators ROE and ROA in separate models, as they are highly correlated. No other problematic correlations were found.

Table 4: Variables Correlations

	ROA	ROE	PTB	SIZE	DEBT
ROA	1.0000				
ROE	0.8522	1.0000			
PTB	0.4687	0.3703	1.0000		
SIZE	-0.2848	-0.1620	-0.2957	1.0000	
DEBT	-0.2221	-0.3400	-0.0767	0.2506	1.0000

Table 4 shows the correlations between the variables. ROA and ROE are strongly correlated. There will be used in separated models.

REGRESSIONS

Table 5 first presents the results of testing model 1 (impact of reputation on performance). Model 1a regresses economic performance (ROA) on the set of independent variables retained, while model 1b regresses financial performance (ROE) on the same set of independent variables. Models 1a and 1b appear globally significant at a statistical significance level of 1%, suggesting correct model specification. A prior Breusch-Pagan / Cook-Weisberg test revealed the presence of heteroscedasticity in the residuals, necessitating the use of White's correction. The results of the 1a model test show a positive and significant impact (at the 5% threshold) of the Price to Book ratio on ROA, meaning that reputation has a positive effect on performance measured in economic terms. The results are similar when the model is tested on financial performance. The coefficient of the Price to Book ratio is even 2.7 times higher than the coefficient

obtained in the test of model 1.a. This means that financial performance is more sensitive to reputation, as measured by the Price to Book ratio, than economic performance.

Table 5: Reputation Impact on Financial and Economic Performance

Dependent Variable: Performance		
	Model 1a ROA	Model 1b ROE
Independants Variables		
PTB	1.7056* (0.7252)	4.6266* (2.069)
SEC Cons	-6.4507 (4.181)	-20.29 (12.24)
SEC Ind	-6.2219 (4.1228)	-23.519 (12.904)
SEC Health	-8.3999 (6.6978)	-26.645 (18.976)
SEC Serv	-8.3130* (4.1732)	-22.262 (11.961)
SEC T&C	-7.9325 (4.3870)	-7.6312 (11.76)
SIZE	-0.9365 (0.6411)	-0.1846 (1.8563)
DEBTS	-0.0096** (0.0027)	-0.0559** (0.0083)
_Cons	13.319 (7.7130)	17.916 (22.485)
Observations	144	144
R ²	0.3352	0.3021
Adjusted R ²	0.2958	0.2607
F	2.67**	6.41**

Table 5 displays the regression results of the impact of reputation on performance. Model 1a uses ROA as economic performance measure while Model 1b uses ROE as financial performance measure. ***, ** and * indicate the significance at the 1, 5 and 10 percent levels respectively.

Following the example of Tauscher's work (2019), we discover that reputation affects performance. We can assume that this reputation, illustrated in our case by the Price to Book ratio, represents a competitive advantage (Boistel, 2008) that leads to better performance (Bergh et al., 2010; Roberts and Dowling, 2002), both economic and financial. Moreover, if the company enjoys a better reputation, it can count on confidence in its products (Shimp and Bearden, 1982), secure purchase intentions (Yoon, 1993) and thus afford to raise prices when its products are judged to be of high quality (Herbig and Milewicz, 1995), which most likely influences its net income, the key element in financial and economic performance ratios.

In both models 1a and 1b, our results show a statistically significant (at the 1% threshold) and negative impact of the overall degree of debt. Thus, the higher the debt-to-equity ratio, the lower the economic and financial performance. This result is certainly related to the way in which performance ratios are calculated. Indeed, the numerator of ROA and ROE is based on net income, which is a purely accounting concept and comes from the bottom of the income statement. Net income is therefore highly sensitive to negative influences, particularly those linked to interest expenses. Despite this, our results tend to show that performance of the companies in our database is sensitive to their financing structure.

The results also show in the 1a model test that belonging to the service sector rather than the financial sector (corresponding to category 0 of the dummy variable) has a negative impact on economic performance (at the 5% threshold). This result is not at all confirmed by the Model 1b test, as this variable appears to be statistically insignificant at the maximum 5% threshold. This result is undoubtedly linked to the period studied. Indeed, the sectoral impact of the economic crisis linked to the Covid 19 pandemic was very different from one sector to another. The statistical study by Bignon and Garnier (2020) shows that crisis had a far greater impact on the service sector than on the industrial and construction sectors. Table 6 shows the test results for model 2 (impact of performance on reputation). As previously explained, the high correlation between the two performance variables does not allow us to show these two variables in a single model. We therefore regressed reputation first on the set of independent variables including ROA (model 2a) and then on the same set of variables but this time including ROE (model 2b).

Table 6: Impact of Economic and Financial Performance on Reputation

Dependant Variable: Reputation (PTB)		
Independent Variable	Model 2a	Model 2b
ROA	0.1272** (0.0183)	
ROE		0.0359** (0.0086)
SEC Cons	2.0597** (0.6384)	2.0481** (0.6773)
SEC Ind	1.5842** (0.4483)	1.6882** (0.4716)
SEC Health	3.6642* (1.4421)	3.7208* (1.4512)
SEC Serv	1.7830** (0.4848)	1.5719** (0.4807)
SEC T&C	1.4077 (0.7646)	0.6985 (0.6721)
SIZE	-0.2124 (0.1215)	-0.3465** (0.1118)
DEBT	0.0016 (0.0009)	0.0024** (0.0008)
_Cons	2.6872 (1.2486)	4.0229 (1.1712)
Observations	144	144
R ²	0.3442	0.3016
F	14.11	8.23

Table 6 displays the regression results of the impact of performance on reputation. Model 2a uses ROA as economic performance measure while Model 2b uses ROE as financial performance measure. ***, ** and * indicate the significance at the 1, 5 and 10 percent levels respectively.

The specification of models 2a and 2b is satisfactory, given the respective F stat of each model. It should be noted that here too, the Breusch-Pagan / Cook-Weisberg test carried out previously highlighted the presence of heteroscedasticity in the residuals. White's correction was again used to test models 2a and 2b. The results in Table 6 show that inverse relationship between reputation and performance is verified, since our results show that both economic and financial performance positively influence the PTB, which we use here as a proxy for reputation. Companies with better economic and financial performance would have a higher PTB ratio, reflecting a better reputation. These results corroborate the work of Fombrun and Shanley

(1990) and McGuire et al. (1990). Furthermore, the results of model 2b suggest that reputation, as measured by the PTB ratio, is negatively affected by company size. This somewhat surprising result is undoubtedly linked to the variable SIZE itself. The variable is captured by the natural logarithm of total assets. It would therefore seem that the larger a company is in terms of total assets, the lower its PTB ratio will be. As a result, the market value attributed by investors to companies with large amounts of assets is relatively lower than that attributed to companies with lower levels of assets. Reputation is therefore not a question of company size. The results of the Model 2b test also show a positive influence of the overall degree of indebtedness on the level of reputation approached by the PTB ratio, at a statistical significance level of 1%. This means that companies with more debt are also those with a better reputation. This result is related to Ross's (1977) signal theory. According to this theory, a company that takes on debt sends a positive signal to the market in the sense that it signals to all its investors its ability to repay its debt. This conclusion can also be seen from a reputational point of view. As the concept of reputation is protean and multidimensional, it also encompasses the more specific dimensions of the relationship between a company and its creditors. A company listed on the stock exchange is seen by its investors as a company with a reputation for being able to repay its debts.

CONCLUSION

The literature review suggests an ambiguous relationship between reputation and performance. The ambiguity lies in the reversibility of the relationship between reputation and performance. Indeed, several authors have identified a positive relationship between reputation and performance, whether economic or financial, while others advocate the existence of a positive relationship, this time between performance and reputation. The lack of consensus in the literature on this subject can be explained in several ways. Firstly, the difficulty of unanimously defining corporate reputation (Tomak, 2014; Sontaité and Kristensen, 2009; Wartick, 2002) is a major obstacle to the comparability of results from previous studies. Secondly, the fact that reputation is an intangible asset makes it very difficult to measure. Thirdly, existing measures of reputation all have relatively significant weaknesses: even if the majority of authors agree on the recognition of the intangible nature of reputation, it has to be said that qualitative and quantitative measures of reputation fail either to capture all the dimensions covered by reputation, or to capture only the dimensions relating to reputation. In this research, we wanted to analyze the link between reputation and performance in the light of a particular year for French large caps listed on the Paris stock exchange. This particular year is 2020, which was strongly marked by an economic crisis linked to the COVID19 pandemic.

The results of our study, in line with the findings of previous studies, showed the existence of a positive reciprocal relationship between reputation and the economic and financial performance of these companies, even in an economic and financial context that had suffered numerous disruptions. Thus, companies with better reputations have better levels of economic and financial performance, and better-performing companies have better reputations because they have more internal funds to devote to their intangible assets, of which reputation is one. This reciprocal relationship suggests the existence of a virtuous circle between reputation and performance, even when companies are experiencing an economically difficult and financially troubled year. In this sense, our results highlight the existence of a synergistic relationship between reputation and financial performance (Tomak, 2014).

The key role thus played by reputation and the link with performance imply the importance for managers to do what it takes to maintain, or even better, enhance, this reputation. From investor point of view, it's an interesting indicator to keep an eye on, especially if performance is a priority. The originality of our study undoubtedly lies in the use of the Price to Book ratio as a proxy for reputation, and in the analysis of its link with performance in a troubled economic and financial context. Indeed, the Price to Book ratio leaves it up to the market, i.e., all investors, to assess a company's fair value in relation to its book value. This way of measuring reputation is fully in line with the accounting approach to quantitative measures of reputation assumed to be more relevant by Pires and Trez (2018). On the other hand, our research is

perfectible in several respects. First, approaching the reputation of a listed company through the Price to Book ratio requires a relatively strong assumption regarding the level of informational efficiency of the Euronext Paris market. However, in a troubled financial context, the semi-strong informational efficiency assumption may not be met throughout 2020. As a result, the share price may simply be the equilibrium price between supply and demand for these shares, and not an approximation of their true value. In such a scenario, the Price to Book ratio is unable to capture any additional value granted to intangible assets by the market. Furthermore, even if the semi-strong informational efficiency hypothesis were respected, approaching reputation using the Price to Book ratio may lead to another bias in the sense that it can only be a reputation perceived by investors, which is not really the same thing as a proven reputation. Similarly, this market-perceived reputation may also differ from other measures of reputation, which would be based more on a customer approach. It is, in fact, the company's customers who enable it to generate sales. Approaching reputation through a market indicator such as the Price to Book ratio can therefore create a kind of distortion of corporate reality. Indeed, the reputation perceived by investors on the financial market may be totally different from that perceived by the company's other stakeholders.

This study could also be improved by including French companies listed on the other two compartments of the Paris stock exchange. This would provide us with a different spectrum of company sizes and could give us a better idea of the influence of size on reputation. Furthermore, the integration of other types of variables could enable us to better control our results. For example, it would certainly be useful to analyze the impact on reputation of French companies' membership of the CAC40 index, and also to include variables that better capture the tangible nature of the asset. An analysis based on panel data could also be envisaged to verify the temporal consistency of the results. Despite the perfectible nature of this study, the results concerning the positive reciprocal link between reputation and the economic and financial performance of companies undeniably demonstrate the strategic importance of reputation for companies. Thus, even in financially and economically complicated times, reputation is an essential driver of performance. At a time of repeated health scandals, this observation takes on its full meaning.

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