The Impact of Corporate Social Responsibility on Financial Performance: The Case of United Kingdom's Companies

Necib Adel[1], Jarboui Anis[2]

Abstract:

Purpose: The purpose of this article is to look at how Corporate Social Responsibility affects financial performance.

Design/methodology/approach: The information used comes from a database of 97 companies that spans the years 2012 through 2020 (873 observations). Multiple regressions is the statistical instrument, and management quality is employed as a control variable. A principal component analysis revealed that EFP is one-dimensional, whereas CSR has three dimensions: ERL (Economic-Legal Responsibility), ERR (Environmental Responsibility), and EPR (Environmental Policy Responsibility) (Ethical-Philanthropic Responsibility). The study demonstrates and evaluates CSR's favorable impact on EFP.

Findings: According to the research results, the established evaluation model is used to comprehensively explore the effects of CSR on company performance. The experimental results show that in the 4 models selected, the CSR variable has a positive impact (0.084; 0.076; 0.055 and 0.29 respectively). However, it is statistically significant at the $\alpha < 0.01$ level in the first two models only. In contrast, in models 5 and 6, the effect of CSR is not significant. In models 1 and 5 the capital structure variable has a negative effect (0.035 and 0.15) and is statistically significant at an $\alpha < 0.01$ level. In models 2 and 6, the variables operationalizing the capital structure, namely DLT/TP and FP/TP, are both insignificant. The first variable has a negative effect in both models 2 and 6. And it is significant at the $\alpha < 0.01$ level.

Practical implications: The paper has guiding significance for the overall development of benefits, and also provides the scientific method for evaluating the effect of corporate social responsibility on financial performance.

Originality/value: This study contributes modestly to the field of empirical research dealing with the CSR in Unied Kingdom firms. Indeed, the results of econometric tests confirm the theories theories reinforcing the impact of CSR on the financial performance of the company.

Keywords: CSR, Social Responsibility, financial performance, United Kingdom.

Paper type: Research paper.

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[1]Ph.D., Universite de Sfax, Tunis, adelnecib314@gmail.com;
[2]Prof., the same as in 1, anisjarboui@yahoo.fr;

1. Introduction

Many researchers in the fields of management, finance, strategy, and firm organization are interested in the relationship between Corporate Social Responsibility and Corporate Performance. Numerous research studies have tried to establish this link, but the results have been very mixed and diverse or divergent. The link has never been fully established. Proponents of the stakeholder theory of the firm argue that good Corporate Social Responsibility is a prerequisite for the legitimacy of the firm in its environment; thus Corporate Social Responsibility and Corporate Performance can only be positively correlated in the long run (Freeman, 1984).

Opponents of this theory argue that concern for anything other than shareholder interests leads to a breach of trust, which will inevitably have an adverse impact on the wealth created on behalf of shareholders (Friedman, 1970). In general, there are three categories of theoretical explanations for the evaluation of the relationship between corporate responsibility and corporate performance.

The first postulates the existence of linear relationships between the two constructs. This category poses two problems; one is related to the direction of the relationship: are Social Responsibility and Financial Performance positively or negatively correlated or not at all. The other is related to the causal link between these two concepts: does Social Responsibility influence Corporate Performance, or is it the other way around? The second category of explanations suggests the absence of links between the two constructs, and finally the last category suggests the existence of non-linear, more complex relationships between the two variables.

Based on this observation, the purpose of this research is to investigate the impact of corporate social responsibility (CSR) on the financial performance of firms listed on the London FTSE100 stock exchange, taking into account the Vigeo agency's score. To accomplish so, the first part of this paper will be devoted to a review of the literature on the idea of CSR, and the second part will be devoted to experimentally testing the impact of CSR on the company's financial performance.

2. Literature Review

CSR stems from three primary schools of thought: corporate ethics, business and society, and social issue management (Gendron, 2004), as well as the separation of shareholding and management in corporations, which has made executives more attentive to societal issues (Gond and Igalens, 2008).

The discipline of the relationship between business and society (Business and society field) has been at the origin of the emergence of the concept of CSR and its development. Several authors have analysed this relationship. Indeed, Preston (1975) distinguishes three approaches to understanding this relationship. The

institutional approach, which is a macro-economic analysis that states that the company has a responsibility towards society. The second method is an organizational approach, which includes a microeconomic examination of the company. It states that an organization's actions have an impact on the environment and vice versa.

These two techniques are concerned with describing social phenomena, whereas the third, the so-called philosophical or normative approach (Swanson, 1999), is concerned with analyzing the dos and don'ts. In the same vein, Pasquero (2005) presented three categories of reasons that led to the emergence of CSR: philosophical, ethical and pragmatic reasons that are the result of company-society interactions. Table 1 summarises the main theoretical assumptions that researchers are trying to validate empirically.

However, it is worth noting that the many studies that have been conducted in this direction do not allow for a clear-cut debate on the interactions between social and financial performance, given the different econometric methods and data used. Some studies show positive correlations, others show negative correlations or even no correlation in some cases (Donaldson, 1999; Johnson; 2003).

Table 1. Structure chart of effectiveness evaluation model for enterprise financial management

Causality	Positive	Negative
Social Performance ➡ Financial Performance	(1) Social impact or good management hypothesis	(3) Arbitrati onhypothesis
Financial Performance ➡ Social Performance	(2) Assumption of availablefunds or "organisational slack	(4) Opportuni smhypothesis
Social Performance ⬌ Financial Performance	(5) positive Synergy	(6) Negative Synergy

Source: Preston and O'Bannon (1997).

In practice, even if the implementation of socially responsible strategies generates additional costs that can sometimes penalise the competitiveness of the company (Laroche; 2005), the latter can still benefit from several positive aspects linked to CSR. These range from the improvement of its image/reputation (Abbott and Morsen, 1979) to the improvement of managerial skills and knowledge of the company's environment and its stakeholders (Barney, 1991; Russo, 1997), which will undoubtedly improve its organisational efficiency.

Similarly, with regard to the operational aspect, thanks to the substitution of certain processes or materials for example, the company will be able to reduce costs and/or generate savings (Peignier and Desgagné, 2002).

For example, by understanding the environmental risk management aspect, it is possible to set up eco-design processes aimed at efficient management of raw material and energy consumption. Similarly, a company can set up processes to make optimal use of existing equipment and plan to invest in the future in "green" equipment, which is less polluting and above all less energy-consuming. Similarly, to elaborate on the question of the impact of CSR on company performance, we can distinguish three methodologies: the study of events, the comparison of the performance of the most advanced and least advanced companies and finally econometric studies.

For the study of events linking stock prices to the occurrence of a major event. In this context, we quote the study carried out by Hamilton (1995) where the effect of pollution on the stock market performance of British companies was demonstrated. The conclusion was that it had a negative impact on the stock market price. Similarly, in 1997, Frooman showed that irresponsible practices are systematically penalised on the financial markets.

In addition to the negative effects, the economic benefits of CSR were also discussed so that CSR could be considered an effective source of competitiveness. However, the studies carried out in this respect do not lead to a clear consensus. According to Derwall (2005), the better performance of portfolios invested in securities with a high corporate environmental score could reflect an undervaluation of the information. This means that the announcement of good news related to CSR, even if it is relevant for financial markets, is still insufficiently quantified and therefore not effectively reflected in stock prices (Manescu, 2011).

Renneboog (2008) summarizes the key findings of the research on the impact of each CSR component on stock market value, focusing on the following effects: the first effect is good governance, compliance with environmental standards and moderate consideration of stakeholder relations would be associated with higher shareholder values; the second effect is that environmental performance is not automatically associated with a higher share price.

The second methodology, which compares the performance of the most and least advanced corporations on specific social and environmental factors, also fails to provide a clear consensus (Bird, 2007).

The third methodology, which is based on econometric studies, also fails to produce consistent results. Companies that are proactive in CSR, according to Waddock (2000), perform better. Other investigations, such as Barnett and Salomon's, come to the opposite conclusion (2006).

Hypothesis 1: There is a relationship (positive or negative) between CSR and EFP.

Corporate CSR   H (+/-)   Financial Performance

The model to be estimated to analyse the impact of CSR on EFP is as follows

Performance = β + α1.CSR + α2.X + ε.

Where:
Performance is the performance indicator chosen each time
β: constant
CSR: an indicator variable indicating whether or not the company complieswith CSR principles
X: A matrix of control variables that can explain the company's financial performance

3.   Empirical Analysis

3.1 Specificities of ListedCcompanies with a CSR Label

In the sample studied, only 30 companies out of the 97 listed stocks hold the title of "top performers in social responsibility" awarded by Vigeo. These companies are those that have obtained the highest scores on 22 criteria of the Vigeo reference framework, consolidated into 6 areas: business ethics, efficiency and independence of governance, social commitment, protection of human capital, respect for human rights, and protection of the environment and development of human capital.

Table 2. *Summary of CSR experiences of Vigeo Eiris Top Performers*

Top Performers London 2017	CSR Objectives is rated as a leader on the FTSE100
Royal Dutch shell	Royal Dutch Shell PLC, simply known as Shell, is an Anglo-Dutch oil and gas company. Founded in 1907, based in the Netherlands and incorporated in the UK, Shell now has operations in over 70 countries. It operates in oil and gas exploration and production, refining, transportation, distribution and marketing, petrochemicals, power generation and trading..
Unilever	Unilever is an Anglo-Dutch multinational consumer goods company listed in the UK and the Netherlands. Formed from companies founded in the 1870s, Unilever now has over 400 brands, including Ax/Lynx, Dove, Omo, Heartbrand ice cream, Hellmann's, Knorr, Lipton, Lux, Magnum, Rexona/Degree, Sunsilk and Surf.
HSBC	HSBC Holdings PLC is a multinational banking and financial services company, listed in both London and Hong Kong. Founded in Hong Kong and Shanghai in 1865, HSBC has grown to operate in over 60 countries, with operations in commercial banking, investment banking, retail banking and wealth management, and global private banking.

AstraZeneca	AstraZeneca PLC is a British-Swedish multinational pharmaceutical and biopharmaceutical company. AstraZeneca develops, manufactures and sells pharmaceutical and biotechnology products to treat major disease areas including cancer, cardiovascular, gastrointestinal, infection, neuroscience, respiratory and inflammation.
BP	BP PLC, formerly The British Petroleum Company and BP Amoco, is a multinational oil and gas company. Founded in 1909, BP operates in oil and gas through exploration and production, refining, distribution and marketing, petrochemicals, power generation and trading, and also has interests in renewable energy with biofuels and wind power.
Glaxo Smi thKline	GlaxoSmithKline PLC, better known as GSK, is a pharmaceutical company. GSK manufactures products for major disease areas such as asthma, cancer, infections, diabetes and mental health, and also has a portfolio of vaccines.
BHP	BHP Group PLC is the UK arm of the Anglo-Australian multinational mining, metals and petroleum company, which is also listed on the Australian Securities Exchange and a major constituent of the ASX index.
Britsh Americ anTobacco	British American Tobacco PLC, also known as BAT, is a multinational cigarette and tobacco company. Established in 1902, BAT is now the world's second largest tobacco company with several international brands including Lucky Strike, Dunhill, Pall Mall, Rothmans International, Winfield and a wide range of local brands.
Diageo	Diageo PLC is a multinational alcoholic drinks company. Notably the world's largest producer of whisky, Diageo is involved in the production and distribution of a number of spirits and beers, with some of the world's most famous brands, including Guinness, Johnnie Walker, Smirnoff and Gordon's.
Rio Tinto	Rio Tinto PLC is the UK part of the Anglo-Australian multinational metals and mining company, also listed on the Australian Securities Exchange and a major constituent of the ASX index. Founded in 1873, Rio Tinto has evolved into a leader in the extraction of minerals..

Source: *Preston and O'Bannon (1997).*

The other 20 best performing companies in the field of CSR are:

«Reckitt Benckiser», «Vodafone, Relx Group», «Lloyds Banking Group», «Prudential», «National Grid», «Compass Group», «Glencore», «Barclays», «London Stock Exhange Group», «Anglo American», «Royal Bank of Scotland», «Tesco», «Experian», «CRH», «Carnival», «Associated Britsh Foods», «BAE Systems», «Standard Chartered», «Legal & General».

3.2 Research Methodolog

In order to verify the impact of CSR on the financial performance of British companies, the study was based on a sample of 97 companies listed on the

FTSE100 London Stock Exchange. The data is collected from the financial statements of thesecompanies available on the FTSE100 website.

The empirical methodology used is panel data econometrics over a time horizon of 9 years (2012-2020), in order to obtain a cylindrical panel of a maximum number of listed companies. In other words, multiple linear regressions will be performed using OLS in the first instance if no heteroscedasticity or autocorrelation problems arise, otherwise the regressions will be performed using GCMs to remedy these problems.

The dependent variable of this research, EFP, is operationalised by three performance measures: stock market performance, economic profitability and return on equity. The choice of the main explanatory variable is based on the research hypothesis developed. Indeed, as the aim here is to verify whether CSR has a direct impact on PFE, this notion has been operationalised by an indicator variable indicating whether the company in question follows a CSR policy or not:

CSR = 1, if the company follows a CSR policy; 0 otherwise

Control variables in the statistical sense were added to the model in order to take into account all the components that could play a role in explaining the company's performance. Indeed, the variables "labour structure", "firm size" and "business cycle" was all introduced.

- The capital structure variable was operationalised by the debt/equity ratio. In a more extended version of the model, it was translated into the two ratios: Long TermDebt/Total Liabilities and Equity/Total Liabilities.
- The variable "Size of the company" was materialized by the logarithm of the turnover of each company.
- The "Business cycle" variable was operationalised by the annual growth of GDP

However, it is worth noting that the business cycle variable is not only insignificant but does not improve the quality of the model.

In the interest of parsimony and in order to ensure that our model has explanatory power, the explanatory variables are gradually eliminated in a top-down fashion. The mechanism starts with the p-regressor regression, and at each step the least significant variable is eliminated, i.e., the variable with the smallest Student's t. In thefinal model, the variables business cycle and extension of the capital structure willbe eliminated.

Table 3. Summary of model variables

Variable to be explained	Financial Performance	Stock market performance	
		Economic profitability	
		ROE	
Variable explicative	CSR	I CSR = 1, if the company follows a CSR policy: 0,otherwise	
Control variable	Capital Structure	1. Debt/Equity	2. Liabilities LT/Total Liabilities
			2. Equity/Total Liabilities
	Size	Log(Turnover)	
	conjuncture	Annual GDP growth rate	

Source: *Own study.*

3.3 Descriptive Statistics of the Variables Studied

The descriptive statistics for the variables studied show fairly significant differences between the companies in the entire sample and the small sample of companies that apply a CSR strategy.

Table 4. Descriptive statistics for all companies surveyed

Indicator	stock market performance	Economic profitability	ROE	Capital Structure	Long-term debt/total liabilities	equity/total liabilities
Means	-0.68	14.2%	11.7%	42.7%	9.3%	40.1%
Median	-2.1%	13.2%	12.6%	9.8%	4.2%	39.7%
standard deviation	36.8%	13.5%	21.5%	76.3%	13.6%	22.3%
Min	-90.6%	-46.2%	189.1%	0.0%	-0.3%	7.6%
Max	192.6%	64.9%	46.5%	702.4%	55.3%	94.4%

Source: *SPSS Outputs.*

On average, the stock market performance of the companies studied over the period 2012-2020 is (-0.68%), the average economic profitability is around 14.2% and the average ROE is 11.7%, with respective maximums of around 192.6%, 64.9% and 46.5%. In terms of capital structure, equity financing is preferred (40.1% on average with a maximum of 94.4%) compared to 9.3% on average for long-term debt financing (with a maximum of 55.3%).

On average, the stock market performance of CSR-labelled companies over the 2012-2020 period is 11.6%, the average economic profitability is around 24.7% and the average ROE is 24.7%, with respective maximums of around 192.2%, 50.3% and 55.1%. In terms of capital structure, equity financing is preferred (37% on average) compared to 7% for long-term debt financing, with a maximum of 93.4% and 64.7% respectively.

Table 5. Descriptive statistics of CSR-Vigeo Top Performers

Indicator	stock market performance	Economic profitability	ROE	Capital Structure	Long-term debt/total liabilities	equity/totalliabilities
Means	11.6%	24.7%	22.9%	23.4%	4.0%	39.4%
Median	-1.1%	16.5%	45.3%	10.3%	1.9%	33.3%
standard deviation	40.4%	11.6%	13.6%	40.2%	7.8%	25.7%
Min	-92.3%	4.1%	2.6%	0.0%	0.0%	7.0%
Max	192.4%	50.3%	55.1%	146.7%	64.7%	93.4%

Source: SPSS Outputs.

The following findings emerge from these two Tables:

> ➢ The average stock market performance of CSR-labelled companies is far superior to that of the overall sample (11.6% Vs. -0.68%).
> ➢ Similarly, whether it is economic profitability or return on equity, CSR- labelled companies perform better on average.
> ➢ In terms of capital structure, CSR-labelled companies have less recourse to debt than the sample as a whole. Indeed, the equity ratio is 23.4% for CSR- certified companies compared to 42.7% for the entire sample.

4.   Empirical Results

In this section, we present the results of our empirical study. Models 1 to 6 present the results of the multiple regressions conducted to test the hypothesis developed according to the performance indicator used in each case.

Table 6. *Results of regressions testing the impact of CSR on the financial performance of the company given the different performance measures*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Dependent variables	Economic profitability	Economic profitability	Stock market performance	Stock market performance	ROE	ROE
Independentvariables						
Constant	0.079** (0.042)	0.095* (0.05)	-0.096 (0.065)	-0.2 (0.08)	-0.02 (0.78)	-0.374** (0.171)
CSR	0.084** (0.025)	0.076*** (0.04)	0.058 (0.04)	0.055 (0.04)	0.033 (0.04)	0.29 (0.07)
Debt/Equity	-0.035*** (0.12)		0.031 (0.03)		0.15*** (0.016)	
Long Term Debt/Total		-0.29*** (0.079)		0.08 (0.17)		-0.17 (0.13)

Liabilities						
Equity/Total Liabilities		-0.0.27 (0.05)		0.02 (0.17)		-0.21 (0.14)
Size	0.08 (0.006)	0.007 (0.005)	0.003 (0.02)	0.004 (0.02)	0.03** (0.02)	0.05** (0.03)
R^2	0.28	0.26	0.03	0.03	0.61	0.49
Adjusted R^2	0.261	0.269	0.01	0.01	0.576	0.487

Test F	24.43***	18.79***	1.3	0.677	85.2***	44.46***
Prob(F-statistic)	0.0000	0.0000	0.3200	0.6700	0.0000	0.0000
Durbin Walson	1.96	2.04	1.97	1.95	1.98	2.07
N	873	873	873	873	873	873

Note: This table shows the non-standardised β coefficients and the standard errors inbrackets; Significance level : ***p<0.01; **p<0.05; *p<0.10
Source: *SPSS Outputs.*

Models 1 to 6 test the research hypothesis of the existence of a direct impact of CSR on the financial performance of the firm by changing either the dependent variable in the odd-numbered models or the financial structure variables in the even-numbered models.

Only 4 out of 6 models, those with economic profitability and ROE as dependent variable, were found to be affected by CSR. Models 1, 2, 4 and 6 have explanatory power as their R2 are 28%, 26%, 61% and 49% respectively. The two remaining models do not explain any stock market performance for the company.

In the 4 models selected, the CSR variable has a positive impact (0.084; 0.076; 0.055 and 0.29 respectively). However, it is statistically significant at the α < 0.01 level in the first two models only. In contrast, in models 5 and 6, the effect of CSR is not significant.

In models 1 and 5 the capital structure variable has a negative effect (0.035 and 0.15) and is statistically significant at an α < 0.01 level. In models 2 and 6, the variables operationalising the capital structure, namely DLT/TP and FP/TP, are both insignificant. The first variable has a negative effect in both models 2 and 6. And it is significant at the α < 0.01 level.

The size variable has a positive impact on the financial performance of the firm in models 1, 2, 4 and 6 (0.08; 0.007; 0.04 and 0.005 respectively).

4.1 Validity of Statistical Tests

It is reported that heteroscedasticity anomalies were detected in 2 models through the graphical analysis of the residuals and the Durbin Watson statistic. In order to

remedy this problem, the regression was done according to the GLS model, which made the results of the models more meaningful and unbiased with corrected heteroskedasticity and autocorrelation.

The overall assessment of the adequacy of the prediction model is based on the Fisher test. Given the p-value of around 0.0000 for the four selected models, we can conclude that models 1, 2, 5 and 6 are all significant.

Individually, apart from the Size and Equity/Total Liabilities variable in models 1 and 2, and the CSR variable in models 5 and 6 for which the coefficients are insignificant, all other coefficients are significantly different from 0 given the p-value of the Student's test.

4.2 Homogeneity Test

The homogeneity test is theoretically carried out as follows:

$Y_{it} = a_i + x_{iy} B + e_{it}$

$H_0 : a_1 = a_2 = \ldots = a_{n-1} = 0$

$H_1 : a_i \neq 0$

with : $i = 1, \ldots, N$; $t = 1, \ldots, T$ with : $i = 1, 2\ldots, N-1$

The Fisher statistic is given by :

$$F \frac{(TN - N - K)\left(\hat{\varepsilon}'_{MCO} \hat{\varepsilon}_{MCO} - \hat{\varepsilon}'_W \hat{\varepsilon}_W\right)}{(N-1)\left(\hat{\varepsilon}' \hat{\varepsilon}\right)} \quad F(N-1, TN - N - Z)$$

With:
K: represents the number of explanatory variables,
T: is the number of years,
N: is the number of observations,
At the threshold of 5%; If F-tabulated < F-calculated then we reject H_0 which assumes the non-existence of specific effects.

Applying this test on the sample of FTSE 100 companies we obtain a Fisher value of F (96, 767) = 6.02. The value confirms the existence of specific effects. The specification test applied to the model suggests the existence of specific effects. For

this reason, we use the Hausman test to specify the types of effects (fixed or random) retained and subsequently the estimation method that will be used in the analysis and interpretation of the data.

The following Table 7 summarises the result of the homogeneity test:

Table 7. *Homogeneity test for the model*

	DL	F-calculated	P-value	Specific effects
Model	*(96 , 767)*	*6.02*	*0.000*	*Existence of effects*

Source: *Own study.*

4.3 Test of Hausman

This test assumes that two types of estimators are available. An unbiased estimator under the null hypothesis (H_0) and a biased estimator (Alternative hypothesis: H_1) (Hurlin, 1997).

Taking the following model:

$$y_{it} = a_i + x_{it}\beta + \varepsilon_{it}$$

with: i = 1…, N ; t =1…, T

The hypothesis tested concerns the correlation of individual effects and explanatory variables.

H_0: E $(a_i / x_{it}) = 0$
H_1: E $(a_i / x_{it}) \neq 0$ with: i = 1,…,N; t = 1,…T

The statistic of χ^2 is given by:

H = $J'[V(J)]^{-1} J$ follows $\chi^2 (K-1)$ where $J = b_{MCG} - b_W$

With:
K represents the number of explanatory variables.

The Hausman test that we carried out with the STATA 11 data analysis software on the parameters of the model gave a chi-square value equal to 91.74 and a probability equal to 0.000. This result suggests the presence of a fixed effect for the model. The same test applied to the parameters of the model, gave a chi-square value equal to 11.58 and a probability equal to 0000. This result confirms that the nature of the effect is random for the model. The results of this

test are presented in the following Table 8.

Table 8. *Hausman test for the model*

	DL : K*	χ2(k) à 5%	χ2calculated	p-value	EF/EA**
Model	*9*	*11.08*	*91.74*	*0.000*	*EA*

Note: **K : Number of explanatory variables ; ** EF/EA : Fixed or random effects.*
Source: *Own study.*

If χ2(k) >χ2(Hausman) ⟹ EA
If χ2(k) <χ2(Hausman) ⟹   EF
Source: *Own study.*

5.   Conclusion

The objective of this research is to examine the relationship between corporate social responsability and the performance of listed companies in UK. More specifically, we examined the effect of board composition, shareholding and composition, shareholder rights and disclosure of ownership structure information on economic and financial performance, as measured by return on assets (ROA) and return on equity (ROE) on 100 banks listed in UK during the period 2008-2018.

After presenting the conceptual framework related to corporate governance, firm performance and the theoretical effect corporate social responsibility on performance, this study has set out the general research hypothesis that CSR influences the financial performance of firms.

This study contributes modestly to the field of empirical research dealing with the CSR in Unied Kingdom firms. Indeed, the results of econometric tests confirm the theories theories reinforcing the impact of CSR on the financial performance of the company

Our study suffers from some limitations. The size of our sample is relatively reliable. Other characteristics related to the board of directors such as the independence of board members, the remuneration systems of its members and the composition of committees will have to be integrated in a future research. In addition, it would be desirable for future studies to examine the relationship between the governance system and the performance of MENA banks.

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