THE CHARACTERISTICS OF MERGERS AND ACQUISITIONS AND THEIR IMPACT ON PERFORMANCE IN EMERGING COUNTRIES: A SAUDI ARABIAN STUDY

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Abstract - Mergers and acquisitions are attracting interest from financial researchers who are trying to determine the performance of these high-risk operations. It is not easy to identify variables that precisely map into the various factors that affect value creation through cross border mergers and acquisitions nor to pick an appropriate performance indicator because the definitions of performance vary in terms of accounting, financial and operational views. In this paper, we focused on the impact of the characteristics of the transaction on the corporate financial performance of mergers and acquisitions, which are return on investment, return on equity and Marris ratio, using data on the deals that occurred during the period 2010-2015 in Saudi Arabia. Panel data and precisely random effect method are applied to carry out empirical analysis. In this paper, we examine whether specific merger characteristics impact the M&A's performance. The results show that the performance is negatively influenced by the level of indebtedness for the 3 performance indicators and by the sectorial proximity for the return on equity. The cash level has a very slight positive impact on the 3 indicators. Concerning the other explanatory factors, they do not have a significant effect on performance for the acquiring firms.

Keywords - Emerging economies, mergers and acquisitions, operation characteristics, performance measures.

I. INTRODUCTION

In the era of globalization of industry and markets, which is characterized by increasingly greater competition, businesses now operate in an increasingly competitive environment with market shares tending to narrow and unpredictable and frequent changes, seek to protect themselves against the main risk, that of their disappearance. To do so, companies are forced to circumvent this phenomenon through a regrouping movement. The use of strategic alliances, mergers or the purchase of local companies now enables them to solve problems more easily, such as the acquisition of new markets, the establishment of a distribution network, the training of the employees, improving their profit margins or intangible objectives such as improving their technological or organizational knowledge. The main objective of these operations is to increase the results through the implementation of synergies (Ansoff, 1965) which are supposed to guarantee their success. Numerous studies have shown that the success of these operations was far from what was expected, and that not all of them allowed to increase performance and the latter remained uncertain. The risk of failure of such operations is high: the rate of failure announced varies between 45 and 70% (Cartwright & Cooper, 1993a, Ravenscraft& Scherer, 1987, Schoenberg, 2006). For our research, we focused on the impact of the characteristics of the transaction on the performance of mergers acquisitions. Our study focuses on the analysis of a sample of 83 Mergers and Acquisitions carried out in Saudi Arabia during the period from 2010 to 2015. To our knowledge, it is the first to examine specifically the relationship between transaction characteristics and the performance of the acquirers of Saudi Arabian firms. We adopt a multivariate analysis framework to examine the relationship between the characteristics of takeovers, the acquiring firm and operational performance during the post-acquisition period. We study successively: the impact of cash level, debt level, cross-border character and sectorial proximity on the post-acquisition performance of acquiring companies.
Although numerous studies analyze mergers and acquisition in developed economies, a much smaller number of studies focus on M&As in of emerging economies.
Our research question can now be clearly formulated: Do the characteristics of the M&A operation impact positively its performance?

II. LITTERATURE REVIEW

1)The determinants of performance related to the characteristics of the operation:

In this subsection, we discuss the factors most studied in the literature, related to the characteristics of the operations, which contributed to explain the performance. The main determinants of performance are the means of payment, the relative size of the target, the sectorial proximity, the cross-border character, the cash level and the debt level.

a) The cash level

The impact of payment method choice on performance is certainly one of the issues that has most interested researchers working on mergers and acquisitions.
Schlingemann, 2004). Carline et al. (2009) find a negative but not significant effect on the long-term performance of purchasers.However, the majority of

empirical studies do not confirm this association between the cash level and the post-acquisition operational performance of the merged firms (Healy et al., 1992, Sharma and Ho, 2002, Powell and Stark, 2005, Martynova et al., 2007).

b) Sectorialproximity

Healy et al(1992, 1997) and Maquieraet al.(1998) find that productivity gains are stronger when the firms involved in the groupings have similar activities (managerial expertise, economies of scale, Market, etc. On the other hand,Ghosh (2001) and Kruse et al. (2002) are opposed to what has been cited previously and find that the operational performance of conglomerate acquisitions outperforms the performance of horizontal acquisitions. However, most empirical studies do not find a significant link between sectorial proximity and post-acquisition operational performance (Linn and Switzer, 2001, Sharma and Ho, 2002, Powell and Stark, 2005, Martynova et al. Carline et al., 2009).

C. Cross-border character

Gugler et al. (2003) find that cross-border acquisitions have a significant impact on post-acquisition operational performance.

Cultural differences can increase the integration problems of the target company and could lead to difficulties in managing the post-acquisition process (Schoenberg, 1999). Moeller and Schlingemann (2004), and Martynova et al. (2007) show that cross-border acquisitions have a lower post-acquisition operational performance than domestic acquisitions.

d. Debtlevel

Jensen (1986, 1987), Harris and Raviv (1990) and Stulz (1990) find that debt has a positive impact since it reduces agency phenomenas and increases supervisory power. According to agency theory, debt plays a disciplinary role in aligning the deviant behavior of leaders. However, results on the relationship between debt level and operating performance are mixed. Harford (1999), Ghosh and Jain (2000), Kang et al. (2000) confirm the positive relationship between high indebtedness and post-acquisition performance, while Clark and Ofek (1994), Switzer (1996), Linn and Switzer (2001) find no significant relationship between high indebtedness and Post-acquisition operational performance.

2)The measures of performance :

Managing, administering, organizing, piloting, managing an organization are all terms given to a single mission: to carry out the objectives and strategies of a company. However, all these terms have been pooled with one concern: to improve the Performance of the firm. ROI (Return on Investment) is a financial indicator that allows you to measure and compare the return on an investment.The return on investment is an essential indicator for choosing between several projects and determining which will yield the most money compared to the initial sums invested.

$$ROI = \frac{\text{Gain from investment} - \text{cost of investment}}{\text{cost of investment}}$$

For the Return on equity (ROE), it measures the return on equity in the balance sheet. This "accounting" ratio therefore measures the return on capital raised by shareholders.

It is obtained by reporting the shareholders' net income, after deduction of tax, to the funds that the shareholders have invested.

Return on Equity = Net Income/Shareholder's Equity

The last indicator we are presenting is the Marris ratio, referred to as the Market to Book Ratio, is the inverse of the Book to Equity ratio, which measures the expected return on the equity market (calculated at book value).

Marris ratio = Market capitalization / Equity

III. HYPOTHESIS

Previous studies stated that the cash level, the indebtedness level, the crossbordercharacter and the sectorial proximity affect positively the Performace while others suggesteda negative relationship between them.

The hypothesis is developed as follows:

H1: The cash level impacts positively the ROI of the acquiring firms.

H2: The level of indebtedness impacts positively the ROI of the acquiring firms

H3: The crossborder character impacts positively the ROI of the acquiring firms.

H4: The sectorial proximity impacts positively the ROI of the acquiring firms.

H5: The cash level impacts positively the ROE of the acquiring firms.

H6: The level of indebtedness impacts positively the ROE of the acquiring firms

H7: The crossborder character impacts positively the ROE of the acquiring firms

H8: The sectorial proximity impacts positively the ROE of the acquiring firms.

H9: The cash level impacts positively the Marris Ratio of the acquiring firms.

H10: The level of indebtedness impacts positively the Marris Ratio of the acquiring firms.

H11: The crossbordercharacter impacts positively the Marris Ratio of the acquiring firms

H12: The sectorial proximity impacts positively the Marris Ratio of the acquiring firm

IV. METHODOLOGY

This chapter presents the methodology used to collect the data that have enabled us to shed light on our research problem. The first section describes the research methodology used. The second section

describes our dependent and independent variables and their measurements.

1) Data Selection

Data collection is a necessary and fundamental step in the success of any empirical study. Our source of data is the Global Mergers and Acquisitions database of Thompson Reuters-Eikon. Data is collected with regard to deals carried out by International companies with Saudi Arabian companies based in Saudi Arabia from 2010 to 2015. These data include the date of the announcement, the effective date, the name of the acquirer, the name of the target, the country of the acquirer, the country of the target, the RIC codes of the acquirers, the transaction value , the acquirer's attitude (friendly or hostile), the acquirer's sector of activity, the sector of activity of the target, the type of transaction (acquisition, merger or exchange offer) and percentage acquired. We obtain at the end a total sample of 83 companies.

2) Dependantvriables :

Performance Measurement :

ROI (Return on Investment)

Return on equity (ROE) which measures the return on equity in the balance sheet.

Marris ratio : referred to as the Market to Book Ratio.

3)Independent variables

The sectorial proximity between the acquiring company and the target company (SAMEINDUSTRY). In this study, we created a dummy variable that takes the value 1 when acquiring firms and acquired firms operate in the same industry and 0 otherwise. The cross-border character (CROSSBORDER). In this study we have created a dummy variable that takes the value 1 when the acquiring firms and the acquired firms are in different countries which means the acquiring firm is not located in Saudi Arabia and 0 if The acquiring company is located in Saudi Arabia. The level of liquidity (CASH). This variable is retrieved directly from the Thomson Eikon database and allows to have the level of liquidity that each company has at the end of each year during the 8 years of study. The level of indebtedness (DEBTRATIO). This variable is measured by the ratio of medium and long-term debt to the total assets of the acquiring firm at the end of the fiscal year.

4) Model structure

For this study we estimated 3 models using OXMETRICS 7. OxMetrics is a family of software packages providing an integrated solution for the econometric analysis of time series, forecasting, financial econometric modelling and statistical analysis of cross-section and panel data. A panel data (also known as longitudinal data or cross-sectional time series data) regression analysis is applied to show the relationship between dependent andindependent variables.

The general Panel regression models can be written as follows:

$ROI = \beta_0 + \beta_1$ DEBT RATIO $+ \beta_2$ CASH $+ \beta_3$SAMEINDUSTRY$+ \beta_4$ CROSSBORDER$+ \varepsilon$

$ROE = \beta_5 + \beta_6$DEBT RATIO $+ \beta_7$CASH $+ \beta_8$ SAMEINDUSTRY $+ \beta_9$ CROSSBORDER$+ \varepsilon$

MARRIS RATIO $= \beta_{10} + \beta_{11}$DEBT RATIO $+ \beta_{12}$ CASH $+ \beta_{13}$ SAMEINDUSTRY $+ \beta_{14}$ CROSSBORDER$+ \varepsilon$

V. EMPIRICAL RESULTS

1) Descriptive analysis

Table 1 presents the descriptive statistics for each explanatory variable. For each variable, we calculated the mean, standard deviation, maximum and minimum. These descriptive statistics indicate that these takeover transactions are, on average,

Table 1 : Descriptive Statistics

	ROI	ROE	MARRIS RATIO	CASH	DEBT RATIO	SAMEINDUSTRY	CROSSBORDER
Min	-120,1	-156,6	-126,82	0,027	0	0	0
Max	65,31	72,08	16,5	19167,8	0,7099	1	1
Mean	4.8646	6.3120	1.5134	631.19	0.30453	0.77612	0.5422
S.d	16.386	22.041	6.8658	1916.4	0.27462	0.41736	0.4988

The average value of ROI is 4,86 varying between -120,1 and 65,31, which shows that the return on investment is very low in the acquiring firms. Same remark for the Return on equity which average is 6,31 for values varying between -156,63 and 72,08 revealing a very low level of return on equity. Furthermore the statistics show that the number of acquiring firms from foreign countries are dominant in ours ample (more than 50%). Concerning the sectorial proximity, we can see that more than 70% of the companies acquire firms which operate in the same field.

Then, as part of the descriptive analysis of the data, we performed a dynamic cross-matrix on excel to identify the ROI, ROE and Marris RATIO means for the mergers taking place in the same year, and then compare each mean with the corresponding reference years (2 years before and 2 up to 5 years after the Merger). We can clearly see that, for all the years of the study (2010,2011, 2012, 2013, 2014 and 2015) and for our 3 performance indicators (ROI, ROE and MARRIS RATIO) the perfomance falls heavily starting from the date of the M&A's transaction and continues to fall for up to 3 years after and then begin to improve slightlyafterwards.We can say that generally, and by relying on the 3 performance indicators we choosed for our research, that the mergers and acquisitions in Saudi Arabia aren't value creators .

2) Correlation

In order to realize the regressions, it is essential to study the correlations between the different variables of the model and to test the problem of multicollinearity. In fact, a major problem that could bias the results of our model lies in the multicollinearity between variables. Thus, it seems essential to ensure their independence.

Table 3: CORRELATION MATRIX

Correlation matrix:

	CROSSBORDER	SAMEINDUSTRY	Cash	Debt Ratio
CROSSBORDER	1.0000	0.093501	0.26399	-0.069697
SAMEINDUSTRY	0.093501	1.0000	0.056396	-0.031428
Cash	0.26399	0.056396	1.0000	-0.074181
Debt Ratio	-0.069697	-0.031428	-0.074181	1.0000

According to the correlation matrix there is low correlation between the independent variables of our model. In so far as all the correlation coefficients are less than 0.26 , way far from the limit drawn by Kervin (1992). Due to the complexity of the panel data regressions, we normally estimate two regressions, one with fixed effects method and the other with random effects method then we compare the two methods using Hausman test. But in our case, we introduced 2 dummy variables in our regression. In this case the fixed effect method will not be appropriate and we will use from the start the random effect method named GLS (using within/ between) in the model PCGIVE of OxMETRICS software.

Table 4 : Results of the regression with ROI as a dependant variable.

ROI	Coefficient	Std.error	t-value	t-prob
SAMEINDUSTRY	-3,524	2,588	-1,36	0,174
CROSSBORDER	-2,81	2,193	-1,28	0,201
Cash	0,0012	0,0004	2,83	0,005
Debt Ratio	-19,85	3,95	-5,02	0,000
Constant	15,04	2,72	5,52	0,000
R2	9,31			

Table 4 shows the results of the regression analysis for the hypothesized relationship between the operation's characteristics and the Return on investment. The p value is significant at the 10, 5 and 1 per cent level respectively for the Cash and Debt ratio. We can say that Debt ratio impacts strongly the return on investment (-19,85), the more the firm is endebted the less it is its ROI. This result is not consistent with the assumption that debt has a positive impact on performance since it reduces agency costs and increases management control.The cash level, which coefficient is near to zero, even with a significant p-value, doesn't impact much the ROI. The Sameindustry and crossbordercharacteristics have a negative impact on ROI but with non-significant p-value. To sum up, for the hypothesis relative to ROI performance, we can say that only Cash level impacts positively the ROI and the debt ratio impacts negatively the ROI.

Table 5 : Results of the regression with ROE as a dependant variable.

ROE	Coefficient	Std.error	t-value	t-prob
SAMEINDUSTRY	-4,97	3,86	-1,29	0,09
CROSSBORDER	-2,77	3,28	-0,846	0,398
Cash	0,0017	0,0006	2,59	0,010
Debt Ratio	-35,28	6,086	-5,80	0,000
Constant	21,65	4,089	5,30	0,000
R2	10,86			

Table 5 shows the results of the regression analysis for the hypothesized relationship between the operation's characteristics and the Return on equity. The p-value is significant at the 5and 10 per cent level for the Cash and at the 1,5 and 10 per cent debt ratio. We can say that Debt ratio impacts strongly the return on investment by -35,28. Increased debt increases the leverage factor in a company. During normal or boom times, leverage results in exponential profit returns. During recessions, leverage can result in exponential losses, as well which is the case in our study. The cash level, which coefficient is near to zero, even with a significant p-value, doesn't affect much the ROE. The same industry characteristic affects negatively the return on enquity by -4,97 at a level of 10 per cent. To sum up, for the hypothesis relative to ROE performance , we can say that only Cash level impacts positively the ROE and the debt ratio impacts negatively the ROI as well as the sectorial proximity.

Table6 : Results of the regression with Marris Ratio as a dependant variable.

Marris Ratio	Coefficient	Std.error	t-value	t-prob
SAMEINDUSTRY	-0,19	0,7231	-0,264	0,792
CROSSBORDER	-0,82	0,625	-1,32	0,187
Cash	0,00037	0,00016	2,30	0,022
Debt Ratio	-1,506	1,305	-1,15	0,249
Constant	2,416	0,784	3,08	0,002
R2	2,63			

Table 6 shows the results of the regression analysis for the hypothesized relationship between the operation's characteristics and the Marris Ratio.

The p-value is significant only for the cash at a level of 5 per cent, but with a very negligible coefficient (0,00004).

All the other independant variables (SAMEINDUSTRY, CROSSBORDER, and Debt Ratio) have a negative coefficient respectively (-0,19 ; -0,82 ; -1,506) but with p-value > 0,10 . Which means they don't have significant impact on performance.

To sum up, for the hypothesis relative to Marris Ratio performance, we can say that only Cash level impacts positively the Marris Ratio. For the other variables, they don't have significant impact on Marris ratio.

CONCLUSION

Mergers and acquisitions are an important area of research in finance. The actual performance of these operations always raises so many questions. Currently, with the renewed growth of these operations, the evaluation of their impacts remains all the more essential. Much research has been done to determine whether M & As are profitable. In the short term, a consensus tends to recognize their positive effect for the shareholders of the target, while they are not significant for the shareholders of the acquirer. In the long term, the different methodologies used do not allow us to decide on the performance of mergers and acquisitions. In our paper, we focused on the impact of the characteristics of the transaction on the corporate financiel performance of mergers and acquisitions, that is Return on investment, return on enquity and Marris Ratio, using data on the deals occurred during the period 2010-2015 in Saudi Arabia. Panel data and exactly random effect method are applied to carry out empirical analysis. In this paper, we examine whether specific merger characteristics impact the M&A's performance. The results show that the performance is negatively influenced mainelyby the level of debt and slightly by the sectorial proximity concerning the return on equity. The cash level has a very slight positive impact tending to zero. On the other hand, other explanatory factors do not have a significant effect on performance for the acquiring firm. Beyond the measurement of performance and its determinants, the motivations behind the development of mergers and acquisitions are also essential; They can effectively influence their long-term success. One of the main motivations noted in the literature is the personal interest of managers. Thus, the study of these engines is also likely to bring some clarification on the paradox of the blossoming of mergers and acquisitions despite their mixed results. In future research, it would be interesting to take into account some reflections. First, it will be of interest to extend this analysis to other emerging countries in order to have a benchmark. Secondly, new business and sector specific variables should be added, including the ownership structure of firm's capital and the environment in which firms operate, and other characteristics of the operation such as the friendly or hostile nature of the operation and the geographic proximity.

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