



# Journal of Business, Economics and Finance

Year: 2018 Volume: 7 Issue: 1



## DETERMINANTS OF M&A PREMIUMS: EMPIRICAL EVIDENCE FROM KUWAITI FIRMS

DOI: [10.17261/Pressacademia.2018.802](https://doi.org/10.17261/Pressacademia.2018.802)

JBEF- V.7-ISS.1-2018(13)-p.130-138

Mohamed Nazir Tarabay<sup>1</sup>, Jamil Hammoud<sup>2</sup>

<sup>1</sup> Rafik Hariri University, Mechref, Lebanon.

[tarabaymn@rhu.edu.lb](mailto:tarabaymn@rhu.edu.lb), ORCID: 0000-0003-2796-0127

<sup>2</sup> Rafik Hariri University, Mechref, Lebanon.

[hammoudja@rhu.edu.lb](mailto:hammoudja@rhu.edu.lb), ORCID: 0000-0003-2796-0127

### To cite this document

Tarabay, M.N., Hammoud, J. (2018). Determinants of M&A premiums: empirical evidence from Kuwaiti firms. *Journal of Business, Economics and Finance (JBEF)*, V.7(1), p.130-138.

Permanent link to this document: <http://doi.org/10.17261/Pressacademia.2018.802>

Copyright: Published by PressAcademia and limited licenced re-use rights only.

### ABSTRACT

**Purpose-** This is an empirical study examining the premium paid over book value to target firms, and attempts to discover whether there are patterns in the firms that are involved in the acquisitions. We explore target financial characteristics that were considered attractive by the acquirer and thus motivated the acquiring firm to pay a premium to acquire these characteristics. This analysis will highlight some motivating reasons behind the decision to integrate.

**Methodology-** The empirical study analyzes a sample of 68 M&A deals that took place between 2010 and 2017. The cross-sectional data gathered aimed at examining possible relationships between various financial variables and merger premiums. The objective was to determine the variables that were statistically significant in explaining variations in merger premiums. In this research, the price offered to acquire the stock is compared to the prevailing book price of equity.

**Findings-** Takeover premium paid to target firm shareholders was found to be statistically negatively related to net income, and significantly positively related to percentage of ownership, debt-to-equity, sustainable growth rate, market value of the merger transaction, and gross cash flow to current liabilities.

**Conclusion-** This study found that acquirers are seeking firms that are highly leveraged, with the ability to grow in the future, and a good liquidity position.

**Keywords:** Mergers and acquisitions, merger premiums, finance, Kuwait, M&A motives

**JEL Codes:** G10, G20, G30

### 1. INTRODUCTION

The issues relating to mergers and acquisitions have attracted the attention of scholars, bankers and regulators. Although the topic is one of the most extensively researched topics in the field of finance, some basic issues continue to be controversial and unresolved. Most previous studies concluded that shareholders of target firms earn significantly positive abnormal return, while acquiring firms' shareholders earning negative or not significant returns. Some studies found that M&A deals impact positively institutional efficiency (Akhavain, Berger and Humphrey, 1997) and market-book value (Cyree, Wansley and Black, 2000), while other studies found no significant positive gain in efficiency (Berger and Humphrey, 1992; DeYoung, 1993 and Peristiani, 1997) or profitability (Srinivasan and Wall, 1992; Linder and Crane, 1992 and Pilloff, 1996).

The lack of profits in M&A transactions could be attributed to the high premium paid by the acquiring firm and thus threaten the solvency, stability and efficiency of the transaction (Cuervo, 1999). In this study, we aim at analyzing the determinants of the premium paid by the acquiring firm using financial variables of targets. A careful analysis of the premium could provide a better understanding the target characteristics that were deemed attractive by the acquirer to justify the premium, help us better understand the reasons behind the merger wave that took place recently (Rhoades, 1987), and how the continuation of these transactions would affect participating firms.

Most studies were focused on companies listed on developed countries stock exchanges. Focusing on this data has the disadvantage of holding many institutional factors relatively fixed. As Cheng, Gup, and Wall (1989) remarked that premium determinants can be influenced by where and when the M&A transaction took place and consequently, the results found cannot be applied to any country or institution. Acquisition activities listed on the stock exchanges of MENA countries remain unexplored. This study then, becomes essential because it expands the insight available on merger and acquisitions which have not been tackled before.

This paper focuses on acquisitions within the Kuwaiti financial system, and thus is better able to explain the importance of a wider range of institutional behavior, corporate governance rules, corporate laws and regulations, and market conditions which is not possible under developed markets structures, and therefore will provide insights to academics, and policy implications to investors, businesses and regulators.

Recent developments in the regulatory and economic policies have deeply impacted the financial sector in Kuwait. With more deregulation, globalization, and developments in technology, firms are resorting to M&As to face increasing competition. As mergers and acquisitions continue in the future, businesses actively seeking mergers and acquisitions may find the expansion provided by this research significant. While mergers and acquisitions are considered the biggest investment decision of the company, this research would highlight the different variables that could drive value from such an investment. Understanding the interaction of various financial factors in determining acquisition premiums offers insight into management's pursuit of mergers and acquisitions. This insight is important to business managers and their financial advisors who are seeking improved returns through better understanding of the factors that are important in valuation.

This study investigates five main research questions centering around target firm characteristics to better understand the motive behind the takeover and consequently the determinants of the takeover premium. Variables that are addressed in the study are size of target firm, growth, liquidity, leverage, and performance. For each of these variables certain financial variables have been used as surrogates.

#### **Target and Deal Size**

The size of the control premium is often attributed to the estimation of the bidder's gains from the acquisition, and the strength of the target bargaining power. Acquisition gains may in return be derived from synergetic gains expected from combining the participating firms, or the target being underpriced or poorly managed.

Eckert (1997) found that the size of the firm consistently impacted acquisition premiums over the entire study period that ranged from 1988 to 1995. This study suggests that smaller firms are more attractive targets than large firms. Acquirers are willing to pay higher premiums for smaller firms because they could more rapidly and effectively assimilate their operations and gain synergies from the merger. Also, smaller targets require fewer share dilution of the current shareholder ownership of the bidder, and since this is a very important feature in Kuwait since most firms are closely held, therefore, we expect to find a negative relationship between target asset and equity size and the merger premium.

#### **Target Firm Growth**

This study also postulates that acquiring firms are willing to pay higher premium for targets with high growth history. Target firm total growth rate may indicate either a growth rate in the region or the market in which the firm operates, and thus offer bidders an opportunity to gain access to these growing markets, or may surrogate the management's ability to achieve growth and offer acquirers ability to utilize this management expertise. This study utilized three growth measures: Sustainable growth rate, assets growth rate, and equity growth rate. A recent rising historical trend in these values may indicate higher levels in the future. Consequently, this hypothesis suggests a positive linear relationship between merger premiums and target growth rates.

#### **Target Liquidity**

High liquidity measures are also attractive target attributes that help explain higher merger premiums. From the perspective of the acquirer, target liquidity can be used to finance its own acquisition. The additional liquidity is even more applicable to leveraged targets for it may be an important factor in the target's ability to pay for its financing after the merger. Thus, a positive relation is expected between target firm liquidity, and the merger premium paid to those liquid targets.

#### **Target Leverage**

Previous literature review has also concluded that target firms with low leverage are also desirable. Low leverage indicates a lower level of risk as well as added debt capacity that can be used to finance the takeover. Lewellen (1971) agreed with Modigliani and Miller positions that low leverage firms are more likely to be subject to takeovers than high leveraged firms. We argue that the special features and characteristics of our study provide an exceptional case. A long-standing convention

in Kuwait holds that the government of Kuwait will always act to protect shareholders from debt and credit crisis. This convention allows firms to be more aggressive in their merger and acquisition strategies by undertaking high risk investments and projects whether by acquiring highly leveraged firms or financing the acquisition premium by additional debt, expecting the government to intervene and protect shareholders if investments turned out bad.

### **Target Performance**

The elimination of inefficient management hypothesis postulates that acquiring firms will be able to squeeze more profit from inefficient firms after replacing it with the superior management skills of bidders. If the hypothesis stands correct, we should expect that the market will perceive such a decision positively. However, if the market perceives that targets are already efficient, then the decision to integrate will not be rewarded by shareholders. If return on assets, return on equity, return on invested capital, net income and earnings per share are surrogates of managerial efficiency, then we should expect that acquirers are not willing to pay high premiums for efficient firms because of their hindered ability to exploit abnormal returns from the efficient firm. On the other hand, we should expect markets to reward the elimination of inefficient management, and acquirers willing to pay higher premiums for inefficient firms that represent higher opportunities for abnormal returns.

## **2. LITERATURE REVIEW**

This study selected the variables included in the model according to a number of hypothesis based on existing literature and previous empirical evidence. This section of the paper introduces these studies and identify variables used.

Walkling and Edmister (1985) attempted at analyzing the motivating factors behind bid premiums. They utilized a model that uses debt, working capital, type of combination, valuation related variables, and bargaining strength variables. They applied the model to a sample of tender offers filed with the securities and exchange committee between 1972 and 1977. Complete data on 158 cash tender offers were obtained of which 65 were conglomerates and the remainder was either vertical or horizontal. The results indicate that debt to assets, market to book-value, and the number of bidders was significant in explaining the premium paid over book value.

Rhoades (1987) researched bank mergers between 1973 and 1983. Using cross sectional regressions of financial ratios to determine the premium paid to book value for 1835 bank mergers, he found growth, capital to assets ratio, and market growth were significant.

Beatty, Santomero, and Smirlock (1987) researched 265 bidding and target banks between 1984 and 1985. The research aimed at regressing 14 financial ratios against price to book value (the dependent variable). They found that higher premiums were paid for well managed banks represented by the target return on equity (ROE), and for banks in noncompetitive environment.

In his unpublished doctoral dissertation at the University of Texas at Arlington, Nagassam (1989) researched 52 target bank acquisitions spanning 1980 through 1987. The researcher regressed premiums to book value against 46 independent variables. Significant variables were target profitability, capital adequacy, management efficiency, size, diversification and leverage; collectively, they produced an R-square of 77 percent.

Cheng, Gup, and Wall (1989) attempted to investigate financial determinants of banks takeovers. The research was based on a sample of 136 takeovers in the southeast during the period 1981-1986. The authors analyzed common financial variables of both the target and acquirer (i.e., return on assets, return on equity, net income growth, total assets growth, earning asset growth, core deposit growth, equity growth, retail loans/ total loans, and charge off/ total loans) and found results supporting the hypothesis, that better managers pay more for acquisitions. They also found that some banks attempt to takeover banks with higher profitability ratios and faster earnings growth. The relative asset size (target/acquirer) suggested that bidders' ability to enhance target service is inversely related to their relative size.

Rose (1991) researched 496 acquiring banks and 503 acquired banks. He regressed the number of bidders, relative risk-return, efficiency ratios, growth rates, and other financial measures. He found that the number of target banks in the target operating area, size of the target, and the targets return on average equity were significant. On the other hand, insignificant parameters were market concentration, number of bidders and efficiency ratios of the target.

Henry Servaes (1991) researched 704 mergers and takeovers. Using Tobin's Q ratios and considering takeover gains, he found target returns to be positive and significant, while on the other hand, bidder returns were negative with a mean of -1.07 percent and total returns are positive with a mean of 3.66 percent. Losses to bidding firms were on average 4 percent larger in hostile takeovers than in friendly takeovers, while target firms earn 10% more in hostile takeovers. Consistent with previous research, he also reports that both targets and bidders earn higher abnormal returns in all-cash takeovers. Total returns are 10 percent higher in cash takeovers than in pure securities takeovers, total returns are negative in an exchange

of securities. If Q is interpreted as a measure of managerial performance, the results indicate that takeover gains were larger if the target company is performing poorly and bidding company is performing well.

Palia (1993) researched 137 bank mergers occurring between 1984 and 1987. Palia reports that in the 137 mergers, the price-to-book value premium varies from minimum value of 0.7 to a maximum value of 4.9 with a mean of 1.89 and a standard deviation of 0.64. The difference in merger premiums was related to the characteristics and regulatory environment of both acquirer and target banks. Using takeover premium-to book values as a dependent variable and regressing against various independent variables, Palia results were consistent with that of Cheng, Gup, and Wall (1989) and Beatty, Santomero and Smirlock (1987); Target return on assets was significant and had a positive sign, suggesting that premiums to be positively related to targets profitability. Relative size of acquirer to target was statistically significant and negative. On examining the quality of loan variables, the variable for non-performing loans was negative and very significant indicating that targets with large amounts of nonperforming loans are unattractive to potential bidders. TCNOC a factor to represent four-bank-concentration in the targets state was positive and significant suggesting that acquirers are attracted to concentrated markets.

Bugeja and Walter (1995) used a sample of 78 Australian takeovers occurring between 1981 and 1989 to test for determinants of target shareholder premium. The results indicated that higher premiums were associated with provision of financial slack to the target firm by the bidder, and the performance of the bidder in the period prior to the bid. High bidder ownership resulted in lower premiums.

Crawford and Lechner (1996) researched 305 corporations acquired between 1971 and 1981 and tested the direct and anticipated effects of target attributes on merger premiums. The research used takeover premium as the dependent variable with independent variables divided into two categories, tax related and financial ratios. The premium calculated over an event window that approximately began 50 trading days before the announcement date, and ends when the target shares are delisted. Based on the regression results and the information from the model they found significance in liquidity, leverage and return on equity. High liquidity increased the probability of a firm to be taken over, while leverage decreased the probability of acquisition.

Shawky, Kilb, and Staas (1996) Examined 320 bank mergers occurring between 1982 and 1990. The dependent variable explained in this analysis is the merger premium defined as the purchase price paid over book value of the target firm. They found that the target bank returns on common equity appeared to be the most important determinant of bank merger premiums. In the absence of return on equity, return on assets was a strong substitute, while return on assets was a very close substitute. Consistent with Palia (1993), they find a significant negative relationship between the merger premium and the asset size of the target bank.

Jackson and Gart (1999) researched 200 completed large bank mergers occurring between 1990 and 1996. Using price to book value as the dependent variable they found the following significant at the 0.01 level: target core deposits, target leverage, target's return on assets, a factor representing pooling transaction, and a factor representing the target's state deposit cap restrictions.

Scarborough (1999) focused on bank acquisitions over \$100 million accomplished between 1989 and 1998 by purchasing or pooling transactions. The research attempted to identify financial and accounting variables that help explain the price paid to book value. Variables selected for the study were target percentage of non-performing assets, target return on average assets, bidder size measured by total assets, target size measured by total assets, relative size of the bidder relative to target, and deal size. Significant variables were bank profitability, asset utilization, size of the deal, and the accounting method.

Shawver (2002) attempted to analyze variables significant in explaining merger premium paid to target firm shareholders using 178 transactions all in the United States. The stepwise regression results reported significant values for target bank profitability measured by return on equity and the ability to account for the transaction using the pooling method. The adjusted R-square accounted for 42.7 percent indicating that the two significant variables accounted for 42.7 percent in the variation of the premium paid to the targets book value.

Glenn (2006) attempted to use macroeconomic variables to explain the size of the merger's premium paid by bidders to target firm shareholders. The researcher utilized 430 takeovers spanning 11 years from January 1993 to December 2003. The dependent variables were selected from three categories: financial/operating variables, market variables, and macroeconomic variables. Significant variables proved to be from the three categories. The researcher concluded that market and macroeconomic variables are as important in explaining the premium paid to target shareholders as financial and operating variables.

### 3. DATA AND METHODOLOGY

The final sample of the study consisted of 68 target firms that took place between 2010 and 2017. A firm or a merger case was excluded from the research if the available data was insufficient or not reliable. The initial sample collected consisted of 75 targets but 7 cases were eliminated due to the absence of the data on the price offered or the existence of unreliable data since not all companies provide their financial statements. Merger cases were extracted from Zawya M&A monitor, Noor financial fund data base, public newspapers, and annual reports. To meet the criteria of firms to be included in this study, the business firms would have had to possess the following set of characteristics:

1. Be headquartered in Kuwait, or belonging to a Kuwaiti holding company.
2. All the information necessary for calculating the price offered to book value and various financial characteristics were available and appear reliable.
3. The merger or the acquisition must have been officially announced in the newspaper or some other official publication.
4. Only mergers and acquisitions that took place between 2010 and 2017 were included in the sampling frame.

#### Pearson Correlation Test

The Pearson correlation test is a statistical method used to measure the strength of a linear relationship between two variables. Values for the Pearson correlation coefficient ( $r$ ) range from (-1) indicating a perfect negative linear association between the variables to (+1) indicating a perfect positive linear relationship. A zero value, on the other hand refers to a lack of the linear relation between the variables. The formula for the Pearson correlation coefficient,  $r$ , is

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n(\sum x^2) - (\sum x)^2][n(\sum y^2) - (\sum y)^2]}}$$

For price paid-to-book value, the first processing steps were to run paired correlations tests of each of the identified independent variables against the dependent variable (targets price-to-book). A preliminary evaluation of each independent variable was studied for significance, and potential multicollinearity. The independent variables included in this methodology were assets, equity, net income, debt-to-equity ratio, return on assets, return on equity, market value of the merger transaction, and percentage of acquisition, gross cash flows to current liability, sustainable growth rate, asset growth rate, and equity growth rate.

#### Multiple Regression Analysis

Multiple regression analysis is a widely utilized statistical technique utilized to examine the relation between a single dependent variable, and several independent variables. The basic form of the multiple regression equation is

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_n X_n$$

Where  $\alpha$  is the intercept of the equation, and  $\beta_1$  to  $\beta_n$  are regression coefficients.  $Y$  is the dependent variable and  $X_1$  to  $X_n$  are the independent variables.

Regressions were run with the independent variables against the price-paid to book value. A preliminary evaluation was studied for significance in explaining the variation in the dependent variable.

Also, progressive (step-wise) regressions of potentially significant variables were run against the dependent variable seeking to find the highest R-squared factor offering explanation in the premium-to-book value. Stepwise regression is a technique that adds and deletes one independent variable based on whether the variable improves the model.

### 4. FINDINGS AND DISCUSSIONS

This section will provide some at first some descriptive statistics of the sample and then proceeds to analyze the results for the Pearson correlation at first and then for the regression analysis before drawing the conclusion

#### Price-to-Book Value and Pearson Correlation Analysis

Table 1 provides descriptive statistics for the cases included in this study and includes range, minimum, maximum, mean, standard deviation, skewness, and kurtosis. The average value was 19.024 percent. Average ROA was 8.073 percent, and average ROE was 13.71 percent. Total assets ranged from 5,465 thousand Kuwaiti dinars minimum to 1,457,144 thousand Kuwaiti dinars maximum, while equities ranged from minimum 4,611 thousand Kuwaiti dinars to a maximum of 832,840 thousand Kuwaiti dinars.

**Table 1: Descriptive Statistics Descriptive Statistics of Target Firm Financial Characteristics**

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Std. Error
TOSHIP	68	97.00	3.00	100.00	19.0243	24.49725	2.128	.393	3.887	.768
TASST	68	1451679.00	5465.00	1457144.00	147836.4257	2.46039E5	4.483	.388	23.247	.759
TEQTY	68	828229.00	4611.00	832840.00	86197.1572	1.37447E5	4.710	.388	25.417	.759
TNI	68	281799.11	-331.11	281468.00	19232.8761	50086.25665	4.624	.388	22.588	.759
TROA	68	26.39	-.78	25.61	8.0731	5.80698	1.122	.388	1.654	.759
TROE	68	33.21	-.90	32.32	13.7105	8.40690	.344	.388	-.311	.759
TDE	68	3.18	.01	3.19	.8436	.79445	1.343	.388	1.481	.759
MVMT	68	105750.00	850.00	106600.00	21492.9730	30334.15758	2.029	.388	2.751	.759
TGCCCL	62	13.07	-2.28	10.79	1.1928	2.52494	2.778	.414	8.381	.809
TSSG	62	127.30	-89.75	37.55	6.2744	20.34462	-3.307	.414	16.645	.809
TASSTG	54	246.70	-21.48	225.22	43.5243	66.05901	1.986	.427	3.092	.833
TEQTYG	54	207.84	-28.29	179.55	29.0890	49.23478	2.291	.427	4.833	.833

Table 2 reports the Pearson correlations for the relationship between the dependent variable (price-to-book value) and various financial characteristics of these target firms. The results reported that 6 out of the 12 tested relationships were statistically significant. Variables significant at the 10% level were percentage of acquisition (0.286), sustainable growth rate (0.312), and target firm net income (-0.055), with the corresponding correlation coefficients provided in brackets. The positive association between the takeover premiums and percentage of ownership and sustainable growth rates clearly indicates that acquirers are willing to pay higher premiums to gain higher control of the firms, with higher ability to grow in the future. The negative significant relation with net income, indicates that acquirers pay less for firms with higher profits. One explanation could indicate that acquirers perceive targets with high profits are efficiently managed, and consequently less ability to exploit it as an inefficient target.

The variable market value of the merger transaction (MVMT) was positive and significant at the 5% level with a correlation coefficient of 0.374 indicating that the bidding bank is willing to pay more when the size of the deal is larger. Another variable that was positive and significant at 5% level was the target debt-to-equity (TDE). With a correlation coefficient of 0.335, the results indicated that bidders paid higher premium to acquire more leveraged firm.

Gross cash flow- to -current liabilities (TGCCCL), a liquidity measure, was also positive and statistically significant at the 1% level. This indicates that higher premiums were paid to more liquid targets that confirmed higher abilities to pay their debt obligations. Read in the context of the positive associations between premium paid and target sustainable growth, as well as target debt/equity ratios, it could be understood that acquirers were willing to pay higher premiums for firms that follow aggressive growth policy financed with debt, but still can meet these obligations.

**Table 2: Correlations between Takeover Premiums and Selected Financial Variables**

Financial Characteristics	N	r	p-value
Percentage of Acquisition(TOSHIP)	68	0.286	0.09*
Assets (TASST)	68	0.018	0.914
Equity(TEQTY)	68	-0.104	0.539
Target Asset Growth Rate (TASSTG)	54	-0.054	0.776
Target Equity Growth Rate (TEQTYG)	54	-0.002	0.991
Debt/ Equity ratio(TDE)	68	0.335	0.043**
Target Sustainable Growth Rate (TSSG)	62	0.312	0.082*
Market Value of Merger (MVMT)	68	0.374	0.023**
Return on assets (TROA)	68	-0.022	0.897
Return on equity(TROE)	68	0.026	0.877
Net Income(TNI)	68	-0.055	0.074*

Gross CF to CL(TGCCL)	62	0.487	0.005***
-----------------------	----	-------	----------

\*, \*\*, \*\*\* . Indicates 10, 5, and 1 %, levels of significance, respectively.

### Price-to-Book Value and Multiple Regression Analysis

The primary processing steps to test for this hypothesis is to run a stepwise regression with all the variables included seeking to find the highest R-squared factor offering explanation in the premium-to-book value. The results reported in table 3 indicate that the highest R-square of 55% was explained by three variables: Target gross cash flow to current liabilities, market value of the merger transaction, and target equity. While target gross cash flow to current liabilities and market value of the merger transaction are consistent with the correlation results in being significant and positive, target equity reported significant results in the step wise regression and statistically insignificant results in the correlation test. Noticeable however, is the negative coefficient of the equity variable which supports the previous findings from the correlation test of debt/equity ratio. These consistent results again, support the results that acquirers paid higher premium to leveraged firms. One potential problem rises from this model is the multicollinearity problem noted in the correlation matrix between market value of the merger transaction, and gross cash flow to current liabilities. To better understand the existing situation, a multivariate linear regression analysis, after accounting for multi-collinearity is conducted.

**Table 3: Step Wise Regression Analysis of Takeover Premiums Paid to Target Firm Shareholders and Various Financial Characteristics**

Dependent Variable: Price Paid - to-Book Value				
Method: Step Wise				
Sample: 68				
Variable	Coefficient	Std. Error	t- Statistic	p-value
Constant (C)	1.774	0.222	7.987	0.000***
Target GCF to CL (TGCCL)	0.268	0.066	4.087	0.000***
Market Value Merger Transc. (MVMT)	2.887E-5	0.000	3.673	0.001***
Target Equity (TEQTY)	-3.384E-6	0.000	-2.322	0.028**
R Squared	0.550	F- Statistic		10.607
Adjusted R squared	0.498	P-Value (F-Statistic)		0.000***

\*, \*\*, \*\*\* . Indicates 10, 5, and 1 %, levels of significance, respectively.

Table 4 presents the results for the ordinary least square regression analysis of premium paid to target firm shareholders and various financial variables. After accounting for the multicollinearity problem, by eliminating variables that correlated highly at the 10% level of significance, the estimated regression equation included five independent financial variables: target equity, gross cash flow to current liabilities, and debt to equity, sustainable growth rate, and equity growth rate. The sample consisted of 68 merger cases that were involved in mergers, or acquired by another firm between 2010 through 2017. The result of the R-square ( $R^2$ ) suggested that 47% of the variation in the premium paid to target firms could be explained by these five attributes. The findings also revealed that out of the six used the only statistically significant variable was gross cash flows to current liabilities with a coefficient of 0.287 and 3.968 t statistic, indicating the importance of liquidity as a desirable feature in targets.

**Table 4: Multiple Regression Takeover Premium Paid to Target Firm Shareholders and Financial Characteristics**

Dependent Variable: Price Paid - to-Book Value				
Method: Least Squares				
Sample: 68				
Variable	Coefficient	Std. Error	t- Statistic	p-value
Constant (C)	1.531	0.367	4.169	0.000***
Target Equity (TEQTY)	9.547E-8	0.000	0.073	0.942
Gross Cash flows to Cur. Liab. (TGCCL)	0.287	0.078	3.698	0.001***
Debt-to-Equity (TDE)	0.469	0.278	1.687	0.105
Sustainable Growth Rate (TSSG)	0.015	0.010	1.565	0.131
Equity Growth rate (TEQTYG)	-0.002	0.004	-0.384	0.705
R Squared	0.470	F- Statistic		4.255
Adjusted R squared	0.359	P-Value (F-Statistic)		0.007***

\*, \*\*, \*\*\* . Indicates 10, 5, and 1 %, levels of significance, respectively.

## 5. CONCLUSION

The study investigated the premium paid to target shareholders, and financial characteristics that contributed to creating the value of the premiums. This study test was particularly important because it helps explain the driving force behind the acquisition decision, i.e. the motive behind the acquirer's decision to target the firms with values that they believe are important and value creating.

Takeover premium paid to target firm shareholders was found to be statistically negatively related to net income, and significantly positively related to percentage of ownership, debt-to-equity, sustainable growth rate, market value of the merger transaction, and gross cash flow to current liabilities. Insignificant variables included assets, equity, assets growth rate, equity growth rate, return on assets, and return on equity.

The cross-sectional regression results of the relationship between price-to-book value premium and various financial target firm characteristics was as follows:

$$\text{Price-to-book value premium} = 1.531 + 9.547E-8(\text{TEQTY}) + 0.287(\text{TGCCL}) + 0.469(\text{TDE}) + 0.015(\text{TSSG}) - 0.002(\text{TEQTYG})$$

The Pearson correlation results of price paid –to- book value reported significant positive correlation with percentage of acquisition and market value of the merger transaction. This indicates that bidder banks paid higher premium if the deal size was bigger and the higher the percentage they wanted to control of the target firm. The significant negative correlation of the merger premium with net income confirms that acquirers were willing to pay higher premium for targets with lower net income levels perceived to be inefficient, aiming to drive value from replacing inefficient target management with the better and superior acquirer target management. The negative correlative nature of net income taken as a surrogate of managerial efficiency, along with the significant and positive correlative nature of the merger premiums with sustainable growth rate, lends support to Gaughan (2007) "improved management" hypothesis that acquirers should seek small, poorly managed firms, with considerable opportunity for growth.

In contradiction to the Modigliani and Miller propositions of leverage irrelevance, the debt –to- equity variable was found to be statistically significant and positive, indicating that highly leveraged firms are attractive targets and received higher premiums. Lewellen (1971) asserted that firms with less leverage enhance the ability of acquirers to borrow additional funds. In contrast, this study found that acquirers are seeking firms that are highly leveraged, with the ability to grow in the future, and a good liquidity position.

The positive significant association of the merger premium and the variable measuring sustainable growth rate of the firm supports the above hypothesis. While leveraged targets were considered attractive, also acquirers made sure that those targets possessed the ability to grow without having to borrow additional funds, or increase their leverage.

The gross cash flow to current liabilities was found to be statistically significant and positive in correlation tests, and was the only significant variable in the cross-sectional regression analysis. This suggests that acquirers were seeking targets with high leverage but still possessed enough cash liquidity to meet the debt obligations. Worth noting that from the correlation matrix, in addition gross cash flows to current liabilities also highly correlated with the percentage of acquisition indicating that not only acquirers paid higher premiums for liquid companies, but also attempted to gain higher control of these firms.

## REFERENCES

- Akhavein, J. D.; Berger, A. N.; Humphrey, D. B. (1997). The effects of bank megamergers on efficiency and prices: Evidence from the profit function. *Review of Industrial Organization*, Vol. 12, pp. 95-139.
- Beatty, R.P., Santomero, A.M., and Smirlock, M.L. (1987). Bank merger premiums: Analysis and evidence. (Monograph Series in Finance and Economics, 198 – 3). New York University, Solomon Brothers Center.
- Berger, A. N.; Humphrey, D. B (1992). Megamergers in banking and the use of cost efficiency as an antitrust defence. *Antitrust Bulletin*, Vol. 37 (Autumn), pp. 541-600.
- Bugeja, M. and Walter, T. (1995). An empirical analysis of some determinants of the target shareholder premium in takeovers. *Accounting and Finance*, 35 (2), 33 – 60.
- Cheng, S., Gup, L. and Wall, R. (1989). Financial determinants of bank takeovers. *Journal of Money, Credit, and Banking*, 21 (4), 524 – 536.
- Crawford, D. and Lechner, T.A. (1996). Takeover premiums and the anticipated merger gains in the US market for corporate control. *Journal of Business Finance and Accounting*, 23 (5), 807 – 829.
- Cuervo, A. (1999). Razones para las fusiones y adquisiciones: factores organizativos no explícitos como determinantes del éxito. *Economistas*, Vol. 82, pp. 20-31.



Cyree, K. B.; Wansley, J. W.; Black, H. A. (2000). Bank growth choices and changes in market performance. *The Financial Review*, vol. 41, pp. 49-66.

DeYoung, R. (1993). Determinants of Cost Efficiencies in bank mergers. *Economic and Policy Analysis Working Paper*, 93-1. Washington Office of the Comptroller of the Currency.

Eckert, G.M. (1997). Factors affecting the probability of bank mergers and acquisitions: An empirical analysis. Unpublished Dissertation. Ann Arbor, MI: UMI Company Microfilm No. 9806932.

Frieder, L.A.; Petty, P.N. (1991). Determinants of Bank Acquisition Premiums: Issues and Evidence. *Contemporary Policy Issues*, Vol. 9, N. 2, pp. 13-24.

Gaughan, P.A. (2007). *Mergers, acquisitions, and corporate restructuring* (4<sup>th</sup> ed.). New York: John Wiley and Sons, Inc.

Jackson, R.; Gart, A. (1999). Determinants and Non-Determinants of Bank Merger Premiums. *The Mid- Atlantic journal of Business*, Vol. 35, N. 4, pp. 149-157.

Lewellen, W. (1971). A pure financial rationale for conglomerate mergers. *Journal of Finance*, 26 (5), 552 – 537.

Linder, J. C.; Crane, D. B. (1993). Bank Mergers: Integration and profitability. *Journal of Financial Services Research*, Vol. 7, pp. 274-282.

Nagassam, C. (1989). Factors affecting the probability of acquisitions and the magnitude of premiums paid to target shareholders: Evidence from the banking industry. (Unpublished Doctoral Dissertation, University of Texas at Arlington).

Palia, D. (1993). The managerial, regulatory, and financial determinants of bank merger premiums. *Journal of Industrial Economics*, 41 (1), 91 – 102.

Peristiani, S. (1997): "Do mergers improve the x-efficiency and scale efficiency of U.S. Banks? Evidence from the 1980s", *Journal of Money, Credit, and Banking*, Vol. 29, N. 3.

Pilloff, S. J. (1996). Performance changes and shareholder wealth creation associated with mergers of publicly traded banking institution. *Journal of Money, Credit, and Banking*, Vol. 28, No. 3.

Walking, R. and Edmister, R. (1985). Determinants of tender offer premiums. *Financial Analysts Journal*, 41, 54 – 68.

Rhoades, S. A. (1987). Determinants of Premiums Paid in Bank Acquisitions", *Atlantic Economic Journal*, March, pp. 20-30.

Rose, P.S. (1991). Bidding theory and bank merger premiums: The impact of structural and regulatory factors. *Review of Business and Economic Research*, 26, 22 – 40.

Scarborough, E., (1999). Valuation determinants used in bank take-overs and mergers", *Doctoral Dissertation*, Nova Southeastern University.

Shawky, H., Kilb, T., and Staas, C. (1996). Determinants of bank merger premiums. *Journal of Economics and Finance*, 20 (1), 117-131.

Shawver, Tara J., (2002). Determinants of Bank Merger Premiums, *Bank Accounting and Finance*, 15 (6), 26-29.

Servaes, H. (1991). Tobin's Q and the gains from takeovers. *Journal of Finance*, 27, 495 – 502.

Srinivasan, A.; Wall, L. D. (1992). Cost savings associated with bank mergers", *Federal Reserve Bank of Atlanta*, W.P. No. 92-2.