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CAPITAL STRUCTURE AND INTEREST RATE AS DETERMINANTS OF PROFITABILITY AND EFFICIENCY OF THE PHILIPPINE BANKING SECTOR: THE CASE OF UNIVERSAL AND COMMERCIAL BANKS

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ABSTRACT

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This study examined the influence of capital structure and interest rate as determinants of profitability and efficiency of universal and commercial banks in the Philippines. The researcher uses equity capital and debt capital to measure capital structure, and return on asset, and return on equity as a measure of efficiency and profitability respectively. The method used to summarize the relationship of these banks was Multivariate Regression Analysis. The results shows that capital and interest rate have significant effect to return on asset and return on equity by showing a p-value of less than five percent in the regression analysis. Capital structure in terms of debt capital has negative effect while equity capital shows positive impact to ROA and ROE. Moreover, interest rate also shows a negative effect to the performance of banks. Thus, the paper recommends universal and commercial banks should strengthen their efforts to depend on internally generated funds as their source of finance.

KEYWORDS: *Universal banks, Commercial banks, Return on asset, Return on equity, Interest rate*

1. INTRODUCTION

Optimal capital structure is what every firm are geared into; it is having the right mix of debt and equity to fund the company's operation and to finance its assets, but having the right mix of capital structure can vary significantly on what type of industry. Speculative companies are not applicable for debt, because their cash flows are unpredictable therefore having a greater chance of being unable to repay its obligation. In this case, banking industry can use a lot of debt in their capital to use as leverage because their business model requires a large amount of debt.

The Philippine banking industry played a significant role in helping to sustain the pace of growth of the economy. Yet, it is one of the most sensitive businesses because of their low level of equity to total assets and because banks are highly leveraged company, it will be very sensitive to economic declines. For example, when an economy is facing a high-inflation situation, central bank may impose a counter-inflationary measure, which is to increase the rate of interest. In this case, banks will be primarily affected because their primary source of income came from loans.

Therefore, banks must find better ways to use their capital structure to further expand their business operations and boost their performance. In this context, this study is analyzed to find out the relationship between capital structure and interest rate to the performance of universal and commercial banks in terms of profitability and efficiency.

2. THEORETICAL FRAMEWORK

Capital structure is the way a corporation finance its assets through some combination of debt, and equity capital. There are different theories and concepts in capital structure, and its origins are traced back to work of Modigliani and

Miller that is called the "Irrelevance Proposition Theory" (Nkansah, 2018). This theory implies that the value of the firm is always the same under different capital structure. The amount of debt and equity capital employed is irrelevant to the value of the firm, assuming that the markets are perfect, there are taxes, and have no bankruptcy cost.

2.1Trade-off Theory

However, there is no such thing as perfect market so Modigliani and Miller develop their 19own theory that involves the real world assumptions. Trade-off theory allows bankruptcy cost and tax to exist, which indicates that there are benefits and costs with financing using debt. Trade-off theory could be used to explain how firms manipulate profitability by using taxation and choose an optimal debt level. The focus of the theory is to balance the costs and benefits of debt to obtain an optimal leverage level (Myers, 2001). The theory also emphasized that any firm should borrow more funds to finance its operations and increase their value as well to decrease their cost of capital (Ronoh and Ntoiti, 2015)

2.2 Pecking-order Theory

Unlike the trade-off theory, the pecking order has no concept of optimal or target capital structure. It suggests that businesses should have a specific preference order for capital used to finance their firms (Myers &Majluf, 1984). The theory proposes that all internal sources should be exhausted first before resorting to debt issuance. In the event that the firm requires more sources then comes the issuance of debt, and when the debts is not rational for the firm to take, then it can fall on equity capital to supply the needed funds (Nkansah, 2018).

2.3 Financial Leverage

Financial leverage refers how much debt a company has used to finance their assets. It benefits common shareholders as long as the borrowed funds generate an income that is greater than the cost of borrowing. It can also be used to increase the expected return, which is supported by the trade-off theory that claims that there is an optimal level of financial leverage where the company maximizes their performance (Sturesson and Källum, 2017).

2.4 Loanable Funds Theory

Another factor affecting the performance of banks is the interest rate. It's the price that a borrower pays for the use of money they borrow from a lender (Ngure, 2014). According to loanable funds theory, it argues that equilibrium interest rate in the market results from the interaction of demand and supply of loanable funds. Demand for loanable funds increases as interest rate falls, however the demand decreases as interest rate rises (Mishkin, 2004).

3. METHODOLOGY

The research design used in the study is quantitative analysis through multivariate analysis based on the selected dependent and independent variables. The study used this regression to identify the relationship of capital structure and interest rate to the performance of universal and commercial banks in the Philippines. The study employed the data of universal and commercial banks in the Philippines for eleven years, spanning from 2008 to 2018. A period good enough to establish the relationship of the variables. The data were collected in Bangko Sentral ng Pilipinas including the financial statements and selected performance indicators of universal and commercial banks.

3.1 Econometric Model

Multivariate analysis type of regression was used because there are two explained variables in the study which are the return on asset (ROA), and return on equity (ROE) and the determinants used in the study to determine the relationship are debt capital, equity capital, and interest rate.

Suppose the following notations hold:

$$ROA = \beta_0 + \beta_1 \mathrm{DC} + \beta_2 EC + \beta_3 \mathrm{Int} + \varepsilon_+$$

$$ROE = \beta_0 + \beta_1 \mathrm{DC} + \beta_2 EC + \beta_3 \mathrm{Int} + \varepsilon_+$$

Where,**ROA** is Return on Asset, **ROE** is Return on Equity, **DC** is Debt Capital, **EC** is Equity Capital, and **Int** is Interest Rate.

It is expected that debt capital, and equity capital to have a positive impact to the performance of banks in terms of efficiency (ROA), and profitability (ROE) because having leverage in capital structure can lead to higher growth rate. However, debt capital could also pose a negative effect in ROA, and ROE because there is also a chance of losing if the managers may not be able manage the funds properly, hence just increasing the cost by paying interest expense to the creditors. Also, interest rate has negative effect to the performance of banks because higher interest rate brings lower demand for loans which is the primary source of income for banks.

3.1.1Results of the Study

The results shows that an increase in debt capital has inverse effect on return on asset such that an increase in debt capital will result to decrease in return on asset by 0.3849. The study also shows that debt capital is statistically significant at five percent level of significance giving a p-value of 0.000. Meanwhile, the coefficient of equity capital is 2.2471, which means that an increase in equity capital will result to an increase by 2.2471 in return on asset. The p-value also shows a 0.000, which explains that equity capital, is statistically significant at five percent level of significance. Lastly, the coefficient rate is negative at 0.1749, which represents a negative impact on return on asset such that an increase in interest rate will result to a decrease in return on asset by 0.1749. It also shows a p-value of 0.001 that denotes a statistically significant variable at five percent level of significance.

Table 1: Test of Parameter Estimates

Dependent Variable	Parameter	Coefficient	T-statistics	P-value
ROA	Intercept	2.740565	7.80	0.000
	Debt Capital	-0.384894	6.57	0.000
	Equity Capital	2.247078	4.80	0.000
	Interest Rate	-0.1748678	3.66	0.001
ROE	Intercept	21.25009	4.97	0.000
	Debt Capital	-2.288726	4.97	0.000
	Equity Capital	12.39219	3.37	0.002
	Interest Rate	-1.190451	3.17	0.003

In terms of return on equity, the coefficient -2.2887 suggest a negative impact on ROE which implies that an increase in debt capital will result to a decrease in return on equity by 2.2887, the p-value of 0.000 states that debt capital is statistically significant at five percent level of significance. Moreover, unlike debt capital the coefficient of equity capital shows a 12.3922 that indicates a positive impact on return on equity that an increase in equity capital will increase in ROE by 12.3922, it is also statistically significant at five percent level of significance given the p-value of 0.002. Meanwhile, interest rate shows a coefficient of -0.1905, which shows a negative impact on ROE that an increase in interest rate will result to a decrease in ROE by 0.1905. The computed p-value of 0.003 shows that interest rate is also statistically significant at five percent level of significance.

Moreover, all the explanatory variables have individually and collectively exert a significant effect on return on asset, and return on equity since the calculated F-ratio and T-statistics is greater than its critical values.Also, there are 66.67 and 57.35 percent in the variation of ROA and ROE respectively. Hence we can conclude that the explanatory variables can be used to explain the performance of banks in terms of profitability and efficiency.

4. CONCLUSION AND RECOMMENDATION

The study shows that only equity capital has positive impact with respect to return on asset and return on equity while, debt capital and interest rate shows a negative effect. This means that financial leverage is not effective on universal and commercial banks in the Philippines. The negative effect of debt capital is due to a cost that is more expensive that the profit received which results in low financial performance (Sivalingam and Kengatharan, 2018). However, the positive effect of equity capital on ROE and ROA is theoretically the outcome of a deeper monitoring from the bank, which increase the value of its asset. Lastly, interest rates directly impacts the performance of banks as higher interest rates results in reduced loan granting. Therefore, increasing interest rates would make loan portfolios contract, negatively affecting the future bank performance (Pavek, 2011).

Based on the conclusions drawn in the study, the paper recommends that universal and commercial banks should intensify their efforts to rely on internally generated funds as their source of finance. They should try to finance from retained earnings rather than depending heavily on debt capital in order to obtain sufficient capital in financing their core business operations and to expand their network that in turn creates profitability. This is because an underdeveloped financial market like the Philippines, there exist a high cost of debt. However, they can employ debt capital as the last resort but it is advised to reduce non-deposit funds as source of debt financing

With a goal of maximizing the performance of banks (ROA, ROE), the managers should exert an effort to attain the optimal level of capital structure and uphold it as much as possible. Also, these banks must not be only interested in acquiring these deposits but they must also able to use these deposits effectively and efficiently. Banks must set competitive lending rates that would not deter clients from accessing loans.

Moreover, bank management should give due consideration to manage their debts in a way to reduce its negative impact on the core business operations, and increase loans to keep the profitability of their loan portfolio to generate more interest income from these advances.

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