Journal of Accounting, Business and Finance Research
ISSN: 2521-3830
Vol. 17, No. 2, pp. 55-63, 2023
DOI: 10.55217/102.v17i2.709

Implications of financial leverage for bank profitability in Ghana

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Abstract

The complexity of the relationship between debt and equity financing models and their impacts on bank profitability in the Ghanaian banking sector cannot be overemphasized. This study examines the impacts of the two financing models on bank profitability. Emphasis is placed on the importance of credit risk, liquidity risk, and capital adequacy when making financing decisions. To measure bank profitability, the research employs two key metrics: Risk-adjusted return on assets (RAROA) and risk-adjusted return on equity (RAROE). These metrics indicate how well banks are performing financially. An inverse relationship between bank profitability (measured by RAROA) and credit risk was among the research findings. This implies that higher credit risk negatively affects profitability. There is a direct link between capital adequacy and RAROE, inferring that as banks increase their lending activities, they need to maintain adequate capital to safeguard their profitability. We recommend a balanced financing approach, which mitigates risks associated with excessive debt while still benefiting from the advantages of asset diversification and strategic growth.

Keywords:
Capital adequacy
Credit risk
Financial leverage
Liquidity risk
Profitability.

JEL Classification:
G11; G12; G32; L10.

Publisher:
Scientific Publishing Institute

Received: *24 August 2023*
Revised: *19 October 2023*
Accepted: *2 November 2023*
Published: *17 November 2023*

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Funding: This study received no specific financial support.
Institutional Review Board Statement: Not applicable.
Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.
Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.

1. Introduction

The reasons for the global financial crisis of 2007 are continuously studied, and the literature highlights the uncertainty surrounding the best financing mix for companies (Llorens, 2019). These arguments have led some scholars (e.g., Altunbas, Manganelli, & Marques-Ibanez, 2011; Bernanke, 2018) to conclude that the global financial crisis resulted from excessive credit growth and the loose application of credit standards by banks. Acharya, Engle, and Richardson (2012) alluded to the deteriorating nature of bank capital, which is regarded as one of many culprits of risky decisions. Financial leverage is not beneficial because it mainly lends itself to excessive debt rather than equity. Nevertheless, it is argued that debt has an advantage over equity in terms of

investment diversification and strategic growth (Tuncay, 2019). Equity is favorable because it provides security for firms and the owners of equity capital. According to Acharya et al. (2012), the inadequacy of the common equity capital of most banks and the absence of an operational guide explain why some banks struggle to raise new equity capital. Creditors will lend funds only if common shareholders bear a significant portion of the associated risk.

Banks are financial institutions charged with the responsibility of intermediation based on wholesale markets and depositors to finance loans and related investments (Llorens, 2019). Until the introduction of the Basel III accord, banks fulfilled their capital requirements through common equity and a hybrid instrument with fewer risky attributes. These include preferred and absolute subordinated debts (Llorens, 2019). The choice of regulatory capital composition of a financial institution is mostly grounded in corporate finance theories. One of these capital structure theories is the trade-off theory (TOT). Contrary to the trade-off capital structure theory, the pecking order theory (POT), made popular by Myers and Majluf (1984), holds that it is economical to issue debt-like instruments before deciding on equity capital because the TOT option has a lower informational cost (Almazan, Martín-Oliver, & Saurina, 2015). None of these alternative financial leverage mixes predicts a non-zero or total absence of debt-like capital combined with regulatory capital (Loutskina, 2011).

In this study, we test whether the predictions based on the corporate finance theories of financial leverage perfectly fit in the bank sector using risk-adjusted return on assets (RAROA) and risk-adjusted return on equity (RAROE). In testing this, it is prudent to reflect on risk management practices, even after one has had a perfect combination of regulatory capital and debt instruments with lower loss attributes. According to Conway (2010), the International Monetary Fund highlighted that the 2007–2009 global financial crisis was a result of poor credit management practices and how returns are computed without adjusting for possible associated risk elements. Added to this allusion is the over-reliance of banks on wholesale funding, which facilitates bank failure. In addition, the issue of liquid assets or the debt-to-equity ratio that a bank should have at a given time is still contested. Pasaribu and Sari (2011) asserted that a high debt-to-equity ratio boosts the public's confidence in how stable a bank is. The contention of this study is based on the reality that if the Basel III capital regulatory threshold and level of liquidity are out of play, we should expect crisis tendencies, mostly due to the unregulated lending behaviors of banks. Therefore, it is essential to consider how much equity capital should be maintained, the level of liquid assets to hold for precautionary reasons, and the lending threshold of banks.

2. Literature

2.1. The Trade-Off Theory (TOT)

The composition of a financial institution's operational capital is mostly grounded in corporate finance theories. One of these capital structure theories is the Modigliani and Miller (1958) trade-off theory (TOT), which suggests that it is not optimal to hold 100% equity capital, but rather a combination of equity capital and investment instruments (debt). The other theory linked to financial leverage is the pecking order theory (POT) by Myers and Majluf (1984), which looks at the TOT vis à vis. Keynes (1937) explains that banking institutions need liquid assets to cover daily expenses. Firms must raise adequate funds in one of two ways—through capital markets or by liquidating their existing assets (Bafana, 2016). In the case of capital markets, it is argued that there are many imperfections in markets with high transaction costs, which could be avoided if firms hold sufficient cash (Keynes, 1937). Similar to the comparison between debt and holding cash in the vault are the cost and benefit theories that come into play. However, although holding cash is unwise, it offers a safety net for the firm, making it easy to avoid the cost of sourcing funding externally or liquidating existing assets (Bafana, 2016).

Also known as the tax bankruptcy trade-off theory, the TOT posits that in deciding on the best capital mix and how it is used, firms consider the absolute cost of bankruptcy and the tax benefits that it may bring (Czerwonka & Jaworski, 2021). Voutsinas and Werner (2011) argued that most firms regard debt-to-equity as a trade-off between the tax shield of debt and the cost of leverage, as in the case of agency costs. The TOT further states that debt financing is usually adopted when a firm's tangible assets are at a high level, as opposed to equity, which is used when the level of intangible assets is high. By extension, a firm should maintain an optimal debt–equity mix (Al-Tally, 2014). Firms resort to the use of TOT when the cost involved in debt financing is comparatively lower than the benefits of debt financing. As a result, a profitable firm should use leverage to finance its operations and investments. Again, TOT holds that firms borrow to the extent that the tax shield on debt financing immediately offsets the associated cost of undertaking such a debt finance option (Agyei, Sun, & Abrokwah, 2020). Golinelli and Bontempi (2001) emphasized that most companies borrow but at a gradual pace so that they optimize the debt-to-equity ratio. At this level, firms' market value is maximized when juxtaposing the current anticipated gains against losses in debt capital financing.

2.2. Empirical Review from the Global Bank Sector

There is adequate evidence, including an earlier study by Bourke (1989), on the liquidity–firm performance relationship, which shows that due to the ability of certain firms to strategically diversify their asset portfolio, they tend to have higher liquidity and higher profits. Conversely, Tran, Lin, and Nguyen (2016) believe that holding too much liquidity leads to lower profit. Credit risk has been at the center of controversy regarding its role in the global financial crisis. Tarus, Chekol, and Mutwol (2012) investigated the relationship between credit

risk and firm performance and resolved that credit risk positively impacts bank profitability. Other studies have also found a positive relationship between credit risk and bank performance, including Angbazo (1997), Demirgüç-Kunt and Huizinga (1999), and Carbó-Valverde, Del Paso, and Fernández (2007). Other studies have found a negative link between credit risk and firm performance (Dietrich & Wanzenried, 2011; Miller & Noulas, 1997; Ongore & Kusa, 2013; Vong & Chan, 2009). In their study of South African enterprises, Islam and Nishiyama (2016) reported that credit risk, as a measure of non-performing loans, had a negative but significant influence on profitability.

Bafana (2016) investigated the effect of financial leverage and liquidity on firm performance in Nairobi and found that liquidity has a positive relationship with firm performance. An analysis by Fosu (2013) of 257 firms in South Africa using a data-set spanning from 1998–2009 established a positive leverage effect on firm performance. Enekwe, Agu, and Eziedo (2014) undertook a study on the impact of leverage on firm performance using ROA as a profitability measure and found that both the debt ratio and the debt-to-equity ratio were negatively correlated with bank profitability. Akinlo and Asaolu (2012) used a regression analysis model to investigate the relationship between leverage and firm profitability and discovered that profitability is inversely related to leverage. Regarding capital size and profitability, Ozili (2017) concluded that regulatory capital has a positive relationship with bank profitability. Abbas, Iqbal, and Aziz (2019) established a negative effect of capital adequacy on bank profitability in the US and Asia. Ibhagui and Olokoyo (2018) reported a negative and significant relationship between leverage and the performance of small firms in Nigeria. This negative effect is emphasized as the firms grow and eventually vanishes when the firms reach their growth potential. Therefore, the study concluded that much of the negative effect of leverage on firm performance rests on small-sized firms and not on larger firms.

2.3. Empirical Review from Ghana

Focusing on the Ghanaian banking sector, Gatsi and Akoto (2010) found that debt has a large negative impact on profitability. According to Hongli, Ajousu, and Bakpa (2019), despite attempts by researchers to explain the influence of financial leverage on firm performance, the conclusions are extremely disparate, necessitating further research. The research on the impact of liquidity and financial leverage on business performance revealed that liquidity has a substantial positive effect on return on equity (ROE), which is regarded as a proxy for performance. This study confirms that financial leverage has a significantly favorable impact on firm performance. The study concluded that finance managers meet their short-term commitments to improve their firm's performance. Gadzo and Asiamah (2018) outlined a number of performance drivers in Ghana's banking industry and posited that there may be other propellers of bank performance in the near future aside from what other studies have identified in the past. The study established that there is high leverage among unlisted banks in Ghana with a high debt-to-equity ratio. It was also found that the gearing level of unlisted banks in Ghana was positively related to bank performance drivers (ROA and ROE), and firm size was found to be significantly positively related to bank performance. The authors concluded that the cost of debt financing and the type of debt contracted by banks are key in determining bank performance. They recommended that stakeholders be more concerned about the optimal level of leverage and efficient use of this debt.

3. Data and Methods

This study used a panel data analysis model to assess the impact of financial leverage on bank performance. The panel data model refers to longitudinal or cross-sectional time series data, where the behavior of entities in the sample is observed across time (Torres-Reyna, 2007). Using this model allows researchers to control for variables that cannot be easily measured, such as age and culture, across the chosen entities. It also controls for differences in bank practices across the selected banks. It allows for the determination of heterogeneity and addresses collinearity issues among the regressor variables (Gujarati & Sangeetha, 2007).

3.1. Panel Data Estimation Approach

Two techniques are used to analyze the panel data—fixed effects (FE) and random effects (RE) models. The FE model is used to explore the relationship between a response variable and focus regressors, usually within a company or country. It is assumed that every entity has a unique feature that may or may not influence the regressor variables (Torres-Reyna, 2007). Therefore, the FE model assumes that a unique element of an individual firm can bias the response or regressor variables and must be controlled for. This is where the issues of the error term and the regressor variables are discussed. In this way, the time-variant characteristics are removed so that the net result of the regressor variables on the response variables is ascertained without bias. Thus, the FE model omits all time-invariant differences between individual entities, such that the coefficients obtained are without bias. In this case, the error terms and the constant are deemed uncorrelated; otherwise, the FE model will fail to hold.

The RE model is a form of the FE model in which variations across entities are deemed to occur by chance, and the error term is not correlated with the regressor variables in the model. Therefore, if there are differences across entities that can influence the outcome of the response variable to bias results, then the RE model is appropriate. Under the RE model, the time-invariant variables tend to explain the results only if the error terms

are not correlated. The appropriateness of the model was determined using the Hausman test. This tests whether there are correlations between unique errors and the regressor variables. After running the Hausman test, the alpha value (0.05) was compared to the p-value of the test. If the p-value of the Hausman test is less than the alpha value of 0.0, the null hypothesis is rejected in favor of the alternative hypothesis, which states that the FE model is appropriate. On the other hand, if the Hausman test gives a p-value greater than the alpha value of 0.05, the null hypothesis is not rejected, and therefore, the RE model is applied for the analysis.

After running the Hausman test for the first model, risk-adjusted return on assets (RAROA), the Prob > (Chi^2) was 0.9655, implying that the null hypothesis is not rejected and the RE model is suitable for the analysis. The regression equation used for RAROA is as follows:

$$Y_{it} = B_0 + B_1 (CAP_{it}) + B_2 (LRISK_{it}) + B_3 (CRISK_{it}) + B_4 (SIZE_{it}) + B_5 (FUNDRISK_{it}) + \varepsilon_{it}$$

Where:

Y_{it} = RAROA or RAROE for bank i at time t
CAP = Capital adequacy requirement
LRISK = Liquidity risk (optimum liquid assets proxied by cash to total assets)
SIZE = Bank size (proxied by the log of total assets)
CRISK = Bank risk-taking ability (proxied by total loans to total assets)
FUNDRISK = Funding risk (proxied by customer deposits)
B_0 = Constant
ε_{it} = Error term
B_1 to B^6 = Coefficients of the respective independent variables in the study
This study used RAROA and RAROE as proxies for bank profitability.

$$RAROA_{it} = \frac{ROA_{it}}{\sigma(\mathrm{ROA_{ip}})}$$

$$RAROE_{it} = \frac{\frac{E}{A_{it}}}{\sigma(ROA_{ip})}$$

3.2. Identification and Definitions of Variables

RAROA = risk-adjusted return on assets; RAROE = risk-adjusted return on equity (RAROE); $\frac{E}{A_{it}}$ = the equity to asset ratio of bank i at time t; and $\sigma(\mathrm{ROA_{ip}})$ is the standard deviation of the ROA of bank i at time t over the sample period p (Adusei, 2015; Köhler, 2015).

3.3. Explanatory Variables

Capital adequacy is one of the three focus regressors used in this study. It is measured by dividing the total equity by the total assets of the bank. A financial institution's capital adequacy determines its soundness and safety. Capital ratios also protect shareholders from bankruptcy by absorbing losses. In accordance with the Basel II agreement, banks are required to maintain a capital adequacy ratio of 8.5%, while the Bank of Ghana recommends a 10.5% adequacy ratio (Ghana Banking Survey, 2018).

Table 1 details the variables that are used in the study and their definitions.

Table 1. Variables and definitions.

Variable	Definition	Acronym
Dependent variables		
Risk-adjusted return on assets	Computation of returns on investment after accounting for possible uncertainties in business operations	RAROA
Risk-adjusted return on equity	Computation of returns on owners' capital after accounting for possible uncertainties in business operations	RAROE
Exposure variables		
Capital adequacy	Total equity divided by total assets of the bank	CAP
Liquidity risk	Cash and maturing income from balances held at other depository institutions divided by total assets	LRISK
Credit risk	Sum of loans over total bank assets	CRISK
Control variables		
Funding risk	Deposits to assets ratio plus equity to assets ratio divided by the standard deviation of deposits to assets ratio	FRISK
Bank size	Natural logarithm of total assets	BSIZE

Source: Adusei (2015).

3.4. Testing for Normality

The regression model that affects the validity of all tests assumes that all residuals behave normally. The Shapiro Wilk non-graphical test was used for normality in determining whether there was normal behavior among the data collected. The test identified that the data was normally distributed across the sample. This was ascertained through the p-value, which was less than the alpha value of 0.05. Therefore, the hypothesis that the data was not normally distributed was rejected.

4. Results and Discussion

In establishing the effect of each proxy variable for bank performance, a number of tests were conducted to identify the most suitable model to analyze debt capita and risks and their implications for the performance of Ghanaian banks.

Table 2. Panel regression results: RAROE.

	Fixed effects (FE)				Random effects (RE)			
VAR	**Coeff.**	**Std. error**	**t-stats.**	**P >|t|**	**Coeff.**	**Std. error**	**z-stats.**	**P >|z|**
CAP	0.641	3.205	0.20	0.020**	-1.412	3.209	-0.44	0.656
LRISK	-0.294	1.049	-0.28	0.078*	-1.624	1.054	-1.54	0.122
CRISK	0.223	0.063	3.52	0.001***	2.499	0.922	2.71	0.007**
BSIZE	0.199	0.131	1.51	0.038**	0.011	0.122	0.09	0.925
FRISK	0.189	0.132	1.43	0.061*	0.284	0.130	2.18	0.029**
CONT	3.356	1.498	2.24	0.153	4.946	1.355	3.65	0.000***
R-sq:					R-sq:			
Within	0.342				Within	0.283		
Between	0.013				Between	0.644		
Overall	0.224				Overall	0.298		
F (6 48)	4.26				Wald chi-sq	23.74		
Prob > F	0.001***				Prob > chi-sq	0.004***		
N	209				N	209		

Note: RAROA = Risk-adjusted return on assets, RAROE = Risk-adjusted return on equity, BSIZE = Bank size, FRISK = Funding risk, LRISK = Liquidity risk, CRISK = Credit risk.
* 10% significance.
** 5% significance.
*** 1% significance.

A panel regression analysis was estimated using the fixed effects model (see Table 2). The Hausman test was then run (see Table 3), in which the null hypothesis (which prefers the random effects model) was rejected. The result showed a p-value of 0.024, which is less than the alpha value of 0.05. This led to the rejection of the null hypothesis and therefore the fixed effects model was chosen for the analysis with RAROE as the dependent variable (see Table 2). The R^2 for bank performance measurement in the fixed effects model is about 22%, signifying a weak fit, i.e., the regressor variables combined in this model explain about 22% of the variance in bank profitability determinants. The study's F-statistic stands at 4.26 at the 1% significance level.

Table 3. Hausman test: Model 1 - Risk-adjusted return on equity.

	Coefficients			
	(b)	**(B)**	**(b-B)**	**sqrt (Diag (V_b-V_B))**
VAR	**Fixed**	**Random**	**Difference**	**S. E.**
CAP	0.641	-1.412	2.053	0.471
LRISK	-0.294	-1.624	1.330	0.134
CRISK	0.228	2.499	-2.271	-
BSIZE	0.199	0.011	0.189	0.085
FRISK	0.189	0.284	-0.095	0.025

Note: b = Consistent under H_0 and H_a (Obtained from xtreg).
B = Inconsistent under H_a, efficient under H_0 (Obtained from xtreg).
Test: H_0: Difference in coefficient is not systematic.

chi^2 (5) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B)

= 14.58

Prob > chi^2 = 0.0248

(V_b-V_B is not a positive definite)

4.1. Bank Capital Adequacy and Risk-Adjusted Return on Equity

Bank capital adequacy showed a statistically significant positive link with bank profitability, as measured by RAROE using the fixed effects model (see Table 2). This result is directly supported by Ozili (2017), who found that adequate bank capital correlates favorably with bank profitability. This stems from the fact that buffer capital saves the firm from unexpected external shocks and also from bad trading periods that incur losses. Abbas et al. (2019) examined the effects of bank capital, among others, on the profitability of US and Asian banks and showed that capital has a significant positive impact on profitability.

4.2. Bank Liquidity and Risk-Adjusted Return on Equity

Liquidity risk was found to have a negative connection with an average bank performance (see Table 2), where RAROE acts as a proxy for bank profitability. In most cases, banks strive to reduce the occurrence of insolvency by maintaining a minimum required level of liquid assets to fulfill creditors' maturing leverage. Under this variable, the study sought to determine the optimum amount of liquidity that an average bank in Ghana should maintain in order to meet the payback obligations of borrowed funds, and whether is would be better to invest these borrowed funds in interest-bearing securities or keep them in the company's accounts to meet maturing debts to creditors. Fortunately, the findings of Abbas et al. (2019) corroborate this negative liquidity risk-bank profitability relationship. By implication, borrowed funds should be invested into interest-earning assets to make returns, thus, leverage is negatively related to bank profitability.

In contrast, Hongli et al. (2019) found that liquidity has a significant positive impact on ROE, a performance proxy, in their study on the impact of liquidity and financial leverage on company performance in Ghana. In order to prevent insolvency, they advised management to reduce the use of debt financing and instead use more of their retained earnings for their operations. In contrast to the findings in Table 2, their analysis showed a positive correlation between financial leverage and bank performance.

4.3. Credit Risk and RAROE

The focus here is on credit risk as proxy for leverage and as an accounting-based measure. There is a statistically positive relationship between bank credit risk and bank profitability (see Table 2). Financial leverage positively affects bank performance in the form of bank profitability, gauged by RAROE. If a bank has a leverage ratio of 3% and credit rises by one percentage point, the value of equity will rise by about three percentage points. Confirming the results of this study, Tarus et al. (2012), Demirgüç-Kunt and Huizinga (1999) and Carbó-Valverde et al. (2007) also established a positive relationship between credit risk and profitability.

Table 4. Panel regression analysis: RAROA.

	Fixed effects				Random effects			
VAR	**Coeff.**	**Std. error**	**T-stats.**	**P >|T|**	**Coeff.**	**Std. error**	**Z-stat.**	**P >|Z|**
CAP	3.890	3.635	1.070	0.290	2.088	4.015	0.52	0.065*
LRISK	0.419	1.232	0.340	0.734	-0.381	1.121	-0.34	0.067*
CRISK	-0.655	1.039	-0.630	0.531	-1.027	1.194	-0.86	0.003***
BSIZE	-0.113	0.149	0.760	0.452	0.245	0.179	1.37	0.140
FRISK	0.002	2.000	0.001	0.999	0.023	0.164	0.14	0.000***
CONT	4.688	1.689	2.770	0.008***	6.088	1.663	3.66	0.000***
R-sq:					R-sq:			
Within		0.162			Within	0.149		
Between		0.464			Between	0.639		
Overall		0.217			Overall	0.212		
F (6 48)		1.54			Wald chi-sq	15.930		
Prob > F		0.175			Prob > chi-sq	0.024**		
N		209			N	209		

Note: RAROA = Risk-adjusted return on assets, RAROE = Risk-adjusted return on equity, BSIZE = Bank size, FRISK = Funding risk, LRISK = Liquidity risk, CRISK = Credit risk.
* 10% significance.
** 5% significance.
*** 1% significance.

Table 5. Hausman test: Model 2 - Risk-adjusted return on assets.

	Coefficients			
	(b)	**(B)**	**(b-B)**	**sqrt (diag (V_b-V_B))**
VAR	**Fixed**	**Random**	**Difference**	**S. E**
CAP	3.890	2.088	1.802	1.912
LRISK	0.419	-0.381	0.795	0.662
CRISK	-0.655	-1.027	0.372	0.536
BSIZE	-0.113	-0.245	-0.132	0.128
FRISK	0.002	0.023	-0.021	0.087

Note: b = Consistent under H_0 and H_a; obtained from xtreg.
B = Inconsistent under H_a, efficient under H_0; obtained from xtreg.
Test: H_0: difference in coefficient is not systematic.

chi^2 (5) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B)

= 1.406

Prob > chi^2 = 0.9566

(V_b-V_B is not positive definite).

The null hypothesis, which favors the use of a random effects model, was not rejected because the Hausman test demonstrated that the alpha value (0.05) is far less than that established by the test (see Table 5: Prob > chi^2 = 0.9566). As a result, the random effects model was chosen for the RAROA analysis.

RAROA was one of the proxies used to gauge bank profitability. R-squared is around 21%, indicating that just 21% of the variables explain bank performance. This suggests that a 21% change in RAROA will result from a unit change in all explanatory variables put together. The information provided by the explanatory factors is statistically significant and superior to what the basic mean would provide given the p-value of 0.05.

4.4. Capital Adequacy and Profitability.

The estimates show that, except capital adequacy, which has a positive relationship with profitability, the other two core independent variables (CRISK and LRISK) have a negative significant impact on profitability. The CAP–profitability relationship has one economic implication—the usage of more leverage for a bank's commercial activities pays better than solely relying on owner equity. So, with a cautioned increase in leverage, there is an improvement in bank profitability. Ozili (2017) stated that regulatory bank capital cushioned by leverage positively relates to commercial bank profitability. This is directly in tandem with the findings in Table 4. However, a study in Ghana by Gatsi and Akoto (2010) observed that debt had a significant negative effect on profitability.

4.5. Liquidity and Profitability

With an emphasis on liquidity risk, the significance of reducing the incidence of bank insolvency is paramount, and banks should hold optimum liquid assets that can be easily converted into cash (Adusei, 2015). As observed in Table 4, the relationship between liquidity risk and bank profitability is negative. The study results of Abbas et al. (2019) justify the results of this study. This presents an argument that idle liquid assets are synonymous with savings, which yield almost no return or very marginal returns instead of investing in interesting-earning securities and stocks to accrue income.

4.6. Credit Risk and Profitability

Table 4 contains the results of the random effects analysis of the effect of financial leverage on bank profitability through RAROA and shows that CRISK has a statistically significant negative relationship with bank profitability. By implication, a lower debt-to-capital ratio is preferable. By extension, it pays off for firms to use less debt capital relative to equity capital financing.

5. Conclusion

The study examined the implications of financial leverage for bank profitability in Ghana using credit risk, liquidity risk, and capital adequacy as exposure variables. A balance between debt and equity is crucial for maintaining financial stability and managing risk within banking institutions. The research further highlights the deteriorating nature of bank capital as a contributory factor to bank crises. Although financial leverage utilizes debt to fund operations, it is often regarded as a practice that comes with drawbacks, such as higher levels of debt. However, debt can also have advantages in terms of portfolio diversification and strategic growth. Equity financing is known to provide security for both the firm and shareholders. The study established that equity investors have a vested interest in the company's success and are less likely to engage in risky behavior when making decisions. Many banks struggle to raise new capital, which may be due to the inadequacy of their common equity capital. However, creditors are more willing to lend funds if shareholders bear a significant portion of the risk associated with borrowing.

6. Recommendations

Based on the conclusion, we outline the following recommendations for policy and the banking industry:

Compliance with the Basel III accord: Banks are advised to strictly adhere to the Basel III accord, which sets the minimum requirement for capital adequacy at 8%. Compliance with international regulatory standards such as Basel III is essential for maintaining financial stability and resilience in the face of economic shocks.

Adherence to the Bank of Ghana's directive: The directive from the Bank of Ghana (Ghana Banking Survey, 2017) mandates banks to maintain a minimum capital level of GHC400 million to withstand external shocks. This requirement is crucial for safeguarding the financial system against unexpected events and ensuring that banks have a sufficient capital buffer.

Retaining earnings: It is recommended that banks retain a portion of their earnings after distributing dividends to shareholders. This practice helps boost the bank's capital reserves, reinforcing its financial strength. Instead of disbursing excessive bonuses to shareholders, banks can reinvest earnings for long-term sustainability.

Asset volume and transaction costs: Increasing the volume of assets can lead to lower transaction costs, ultimately improving a bank's overall performance and profitability. Effective asset management and a diversified portfolio can contribute to reducing operational costs.

Liquidity management: While holding sufficient liquidity to meet maturing debts and protect against insolvency is important, it is suggested that banks consider investing idle funds in interest-earning securities. This approach allows banks to optimize the use of their resources and generate additional income from their liquidity holdings.

In a condensed form, these recommendations emphasize the importance of capital adequacy, prudent financial management, and strategic decisions in the banking sector. By complying with regulatory standards, retaining earnings, optimizing asset management, and judiciously managing liquidity, banks can enhance their stability, profitability, and overall resilience in the face of economic challenges.

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