WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

The Effect of Financial Leverage on Earning Per Share: A Case Study on Selected Commercial Bank in Kenya

Dr. M. Sumathy[1] and Kephar Oguta Ombega[2]

[1]Professor And Head of Department, [2]Research Scholar
Department of Commerce, Bharathiar University, Coimbatore – 641046, India.
sumathy@buc.edu.in and oguta2011@gmail.com

ABSTRACT

The management of commercial banks is faced with challenges despite being committed to the growth and prosperity of the institution. To achieve that, they must ensure basic institutional objectives of profit maximization and net worth are achieved in order to meet stakeholders' interests. The current article articulates the leverage problem that is affecting every commercial bank in optimizing the need for the use of internal or borrowed funds with the aim of minimizing financial cost. The study examines the relation and impact of the debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earnings per share of commercial banks in Kenya. The study employs descriptive research design on secondary data collected from commercial banks that are listed on the NSE for the period between the years 2019 and 2024. The study used descriptive statistics, coefficient of correlation and multiple regression for analyzing and testing hypotheses. The study concluded that the debt to equity ratio, debt to EBITDA ratio and interest coverage ratio of KBC bank, Absa bank and Equity bank had a significant impact on DFL despite being conservative on employing debt financing, whereas co-operative banks adopting high debt financing had a significant impact on DFL, but Standard Chartered bank had insignificant impact on DFL despite being highly debt financed. Thus, the variables are related to the degree of financial leverage that causes an effect on earnings per share. The study recommends that commercial banks be prudent enough in administering debt financing in order to leverage the cost and benefits involved.

Keywords: Financial Leverage, Degree of Financial Leverage, Earning Per Share.

1.0. Introduction

The commercial banks deploy debt financing with the aim of amplifying returns on outstanding shares of the company. The institutions are grabbing at how to minimize financial costs and maximize return, which could see them on a growth trajectory. It is believed that with high financial leverage the institution could accrue high profitability, which comes with high financial risks that need to be contained to spare continuity of operation. This needs leveraging between risk and profitability in an institution.

CBK has put in place regulations that could mitigate systematic risks relating to leverage by formulating a monetary policy that could promote financial stability and ensure an effective payment system among the commercial banks in Kenya. Commercial banks must leverage their assets in such a manner that could align with their liabilities, with a focus on avoiding mismatches that might lead to liability problems that could cause a decline in profitability.

The M&M Propositions (I) argue that the firm's worth is independent of its debt-to-equity ratio (Miller, 1995). Nonetheless, the trade-off theory provided a way to determine the amount of debt that could be included in the firm's capital structure to enable a company to weigh out the advantages of debt that includes a tax shield against financial distress (Campbell and Kelly, 1994).

According to the static theory of capital structure, an optimal level of leverage exists when the marginal benefit and marginal cost of debt are equal, which implies that a company could borrow up to a given level where the profit after payment of interest on an additional dollar of debt could exactly offset the cost of the higher risk of bankruptcy (Persimmon et al., 2022). The managers and practitioners lack adequate guidance for the attainment of optimal financing decisions (Kibet, Tenei & Mutwol, 2011). Many of the problems experienced by companies are due to statutory requirements which are associated with financing that have led to loss of investors' wealth and confidence in the stock market (Chebii, Kipchumba & Wasike, 2011).

Financial leverage allows greater potential returns to the investor that otherwise would not have been available, but could have potential loss if the investment becomes insignificant due to unpaid debt (Andy et al., 2002).

1.1. Importance of Financial Leverage, Degree of Financial Leverage and Earning Per Share.

Commercial banks, like any other institution, work towards meeting the basic objectives of maximization of profit and wealth for shareholders. To achieve that, the institution should leverage the internal financing and external financing of its operation to magnify its effects on changes in operating income to withstand financial risks. Financial leverage tends to disclose how commercial banks operate, whether it relies on debt financing or not, in order to magnify returns on the owners of the institution. That relationship between bank debts and its resources or assets is what would tell whether commercial banks have high or low level financial leverage that could determine the quality of their earnings. A high level of financial leverage could indicate low earning quality and vice versa, which is the sensitivity of earnings per share that causes changes in operating income due to changes in an institution's capital structure.

Commercial banks' earning per share could symbolize their profitability, which is the share of profit allocated to each share of stock. The earnings per share are a reflection of the financial standing of a commercial bank that could be used as a tool to induce or attract possible investors; this could only be possible if the company discloses a consistent and growing trend in earnings per share that excites existing or prospective investors to judge whether the investment is reliable (profitable) or not in-order to continue being part of the company or invest for those who are prospects.

1.2. Objectives of study

1. To examine the relation between debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earnings per share of commercial banks in Kenya.
2. To assess the impact of the debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earnings per share on commercial banks in Kenya.

1.3. Hypothesis of study

H_{01}. There is no significant relation in debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earning per share.

H_{02}. There is no significant impact of debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earning per share on earning per share.

1.4. The Study Methodology

The study employs descriptive research design on a sample of five commercial banks that are listed on the Nairobi Stock Exchange for the period between the years 2019 and 2024. The analysis was conducted with the help of descriptive statistics, Pearson coefficient of correlation and multiple regression analysis. The study features debt to equity ratio, debt to earnings before interest, depreciation and amortization and interest cover ratio as independent variables, whereas the study has used a degree of financial leverage to reflect the effect on earnings per share of the commercial banks in Kenya.

2.0. Literature Review

2.1. Theoretical Review

2.1.1. Trading off Theory

The theory indicates that companies decide the optimal mix of debt and equity financing by balancing the benefit of a tax shield against debt financing to avoid potential financial distress and bankruptcy costs. Kraus and Litzenberger (1973) believe that optimal capital structure occurs at the point where a firm's value can be maximized while the weighted average cost of capital is minimized.

According to Myers (1984), an institution could achieve optimal level of debt if only the marginal benefit of an additional dollar of debt equals the marginal cost. This is possible if the benefits accrued on the tax shield on debt financing are minimized to avoid financial distress and bankruptcy costs.

2.1.2. The Pecking Order Theory

The pecking order theory, popularized by Stewart Myers and Nicolas Majluf in 1984, suggests that companies prefer financing investments using internal financing over other funding. The pecking order theory is in favor of retained earnings first, then debt and lastly, equity to avoid cost and other complications associated with external sources.

Stewart Myers and Nicolas Majluf (1984), pecking order theory is based on the capital structure of a company, whereby it considers managers in hierarchical orders since they possess more information on company performance, prospects, risks and future outlook than external users and investors before sourcing funds.

Stewart Myers and Nicolas Majluf (1984) believe that a company finances an investment opportunity emanates from external financing to raise higher returns to meet the desires of the creditors and investors; thus, greater preference is given to external financing rather than internal financing.

2.2. Empirical Review

Angina C. M. et al. (2022), the study sought to establish theoretical framework encompassed a review of the shift ability theory and risk management theory with the help of longitudinal research design. Secondary data was collected from eleven Kenyan commercial banks listed at NSE for a period between 2016 and 2020 that were analyzed using descriptive statistics, multiple regression analysis, correlation analysis and t-test analysis. The outcome of the study indicated that both financial leverage and risk management had positive implication on profitability. Thus, it could be appropriate for the regulators to introduce capital buffers that could be above the minimum statutory requirement to shield the institutions from any unforeseen economic shocks and as well the management should maintain proper proportions of leverage in their capital structure.

Arhinful R. & Radmehr M. (2023), was aimed at establishing the effect of financial leverage on financial performance, with the help of random effect and the GMM to estimate the effect of the firms' leverage on non-financial companies listed in the Tokyo stock market. Secondary data was collected from 257 automotive, construction, electronic, metal, and telecommunications companies for a period between 2000 and 2021. The interest and cash coverage ratio had a positive and statistically significant effect on ROA, ROE, and Tobin's Q, whereas debt service obligations had negative effect on financial performance.

Fred O. Sporta et al (2017), attempted to determine the effect of financial leverage as a financial distress factor on financial performance of commercial banks in Kenya with the help of secondary data obtained from 38 commercial banks from for the period between 2005 and 2015. The study concluded that there was a perfect positive correlation between debt equity ratio with return on equity and return on assets as well return on equity.

Julius Oketch et al. (2018), examined effect of financial leverage on Commercial bank Performance in Kenya that are listed at Nairobi Securities exchange between the periods of 2010 and 2016. The study featured on the effect of debt ratio, debt equity ratio, interest cover ratio and Tobin's Q on return on assets and return on equity. It was realized that while size and liquidity are systematic in nature, market risk premium is emphasized by credit risk analysis which is a relevant factor in financial performance, which confirms the impact on financial of commercial banks in Kenya.

Nafia Laila & Tania Akhter (2021), it's a case study aimed at measuring the effect of financial leverage on financial performance with the aid of secondary data drawn from the financial statements of the concern for period of five years that was analyzed on its impact on return on asset, return to equity and earning per share. It was established that financial leverage does not influence the profitability though there exists sign of financial leverage that positively leveraged firms had more profits on average despite the fact it wasn't statistically significant.

Ebiringa Oforegbunam Thaddeus and E. Chigbu (2012), analyzed corporate performance with the help of debt-equity, coverage ratios on earnings per share in order to disclose the effect of financial leverage. There was need to assess the extent on optimizing financing risk while maximizing returns on shareholders due to effect of leverage on the Nigerian banking industry. With the help of F-test, Durbin-Watson, Akaikeand Schwarz Information Criteria as well as log likelihood were used as parameters of the study. The study disclosed mixed outcome, leverage financing was seen to be a critical strategy for maximizing shareholders returns. Thus it's up to the institutions to ensure that leverage financing leads to desire outcome in business.

3.0. Analysis and Results

3.1. Descriptive statistics

Table 3.1.1. KCB Bank of Kenya

Years	DFL	TD. Eq	TD. EBITDA	ICR
2019	1.58	6.45	11.31	3.46
2020	1.54	6.33	15.04	2.79
2021	1.58	6.53	11.49	3.63
2022	1.85	9.86	11.37	3.40
2023	-3.06	11.25	15.63	1.83
2024	1.60	7.56	9.19	2.10
Mean	**0.85**	**8.00**	**12.34**	**2.87**
SD	**1.92**	**2.08**	**2.48**	**0.76**
CV	**2.26**	**0.26**	**0.20**	**0.27**

Source: Secondary data

Note: DFL = Degree of Financial Leverage; TD.Eq = Total Deposit to Equity; TD.EBITDA = Total Deposit to Earnings before Interest, Tax, Depreciation & Amortization; ICR = Interest Cover Ratio.

Inference

KCB bank experience high level of degree of financial leverage (DFL) throughout the period of study except year 2023 that had DFL less than one. The year 2023 had a negative DFL that indicates the conservatory stand use of debt in financing company's operation. With the high level of DFL on the other years which is above one indicates that the company is subject of highly proportionate changes in earning per share that is triggered by small percentage change in operating income that could lead to high financial risks in the company due to high dependence on debt financing. Thus during the study period at average level the company adopted a conservative way in debt financing.

Table 3.1.2. Absa Bank Kenya

Years	DFL	TD. Eq	TD. EBITDA	ICR
2019	1.15	8.53	15.58	2.70
2020	-2.56	7.62	18.80	2.18
2021	2.45	7.82	16.65	3.27
2022	1.09	7.49	7.88	1.64
2023	0.43	7.56	12.06	2.61
2024	0.92	5.89	8.84	2.53
Mean	**0.58**	**7.49**	**13.30**	**2.49**
SD	**1.68**	**0.87**	**4.42**	**0.55**
CV	**2.90**	**0.12**	**0.33**	**0.22**

Source: Secondary data

Inference

Absa bank experience high level of DFL in 2019, 2021 and 2022 that could indicate that the company is subject of highly proportionate changes in earning per share that is triggered by small percentage change in operating income that could lead to high financial risks due to high dependence on debt financing. In the years 2020, 2023 and 2024 DFL less than one that suggests a highly conservative level with the debt financing in the company. Thus during the period of study, averagely the company adopted a conservative way on debt financing.

Table 3.1.3. Co-operative Bank of Kenya

Years	DFL	TD. Eq	TD. EBITDA	ICR
2019	1.64	5.94	10.44	2.90
2020	1.57	5.83	12.69	2.65
2021	1.19	6.65	11.55	2.13
2022	1.32	5.17	10.15	2.91
2023	0.44	5.11	9.25	2.45
2024	0.26	4.82	8.22	2.07
Mean	**1.07**	**5.59**	**10.38**	**2.52**
SD	**0.58**	**0.68**	**1.59**	**0.37**
CV	**0.54**	**0.12**	**0.15**	**0.15**

Source: Secondary data

Inference

Co-operative bank experience high level of DFL in 2019, 2020, 2021 and 2022 that could indicate that the company is subject of highly proportionate changes in earning per share that is triggered by small percentage change in operating income that could lead to high financial risks due to high dependence on debt financing. In the years 2023 and 2024 DFL less than one that suggests a highly conservative level with the debt financing in the company. Thus during the period of study, the company adopted high level of debt financing.

Table 3.1.4. Equity Bank of Kenya

Years	DFL	TD. Eq	TD. EBITDA	ICR
2019	0.58	7.00	10.65	3.71
2020	1.82	8.27	18.30	2.33
2021	1.09	8.22	12.45	3.59
2022	0.18	6.57	11.48	2.91
2023	0.69	7.12	13.06	1.72
2024	0.32	6.84	11.06	1.60
Mean	0.78	7.34	12.83	2.64
SD	0.60	0.73	2.82	0.91
CV	0.77	0.10	0.22	0.35

Source: Secondary data

Inference

Equity bank experience high level of DFL in years 2020 and 2021 that could indicate that the company is subject of highly proportionate changes in earning per share that is triggered by small percentage change in operating income that could lead to high financial risks due to high dependence on debt financing. In the years 2019, 2022, 2023 and 2024 DFL less than one that suggests a highly conservative level with the debt financing in the company. Thus during the period of study, averagely the company adopted a conservative way on debt financing.

Table 3.1.5. Standard Chartered Bank of Kenya

Years	DFL	TD. Eq	TD. EBITDA	ICR
2019	-4.95	7.15	12.88	3.40
2020	1.21	7.03	20.94	2.84
2021	2.13	6.92	16.50	4.89
2022	1.35	7.73	15.04	6.63
2023	1.33	7.19	15.49	7.84
2024	0.89	5.80	9.00	6.25
Mean	0.33	6.97	14.98	5.31
SD	2.62	0.64	3.96	1.95
CV	7.94	0.09	0.26	0.37

Source: Secondary data

Inference

Standard Chartered bank experience high level of DFL in 2020, 2021, 2022 and 2023 that could indicate that the company is subject of highly proportionate changes in earning per share that is triggered by small percentage change in operating income that could lead to high financial risks due to high dependence on debt financing. In the years 2019, and 2024 DFL less than one that suggests a highly conservative level with the debt financing in the company. Thus during the period of study, averagely the company adopted a conservative way in debt financing.

3.2. Testing H_{01}: There is no significant relation in debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earning per share.

Table 3.2.1. Correlations matrix - KCB Bank of Kenya

		DFL	DT.E	DT.EBITDA	ICR
DFL	Pearson Correlation	1	-0.730	-0.660	0.679
DT.E	Pearson Correlation		1	0.334	-0.501
DT.EBITDA	Pearson Correlation			1	-0.316
ICR	Pearson Correlation				1

Correlation is significant at the 0.05 level (2-tailed).

Inference

There was a strong positive correlation between interest cover ratio and degree of financial leverage whereas debt to equity ratio and debt to earnings before interest, tax, depreciation and amortization had moderate negative correlation respectively on degree of financial leverage.

Table 3.2.2. Correlations matrix - Absa Bank of Kenya

		DFL	DT.E	DT.EBITDA	ICR
DFL	Pearson Correlation	1	0.034	-0.373	0.462
DT.E	Pearson Correlation		1	0.586	0.160
DT.EBITDA	Pearson Correlation			1	0.471
ICR	Pearson Correlation				1

Correlation is significant at the 0.05 level (2-tailed).

Inference

Both debt to equity ratio and interest cover ratio had a positive correlation though moderate and that of debt to equity ratio was weak. Debt to earnings before interest, tax, depreciation and amortization had a weak relation with the degree of financial leverage.

Table 3.2.3. Correlations matrix - Co-operative Bank of Kenya

		DFL	DT.E	DT.EBITDA	ICR
DFL	Pearson Correlation	1	0.640	0.802	0.692
DT.E	Pearson Correlation		1	0.761	-0.026
DT.EBITDA	Pearson Correlation			1	0.283
ICR	Pearson Correlation				1

Correlation is significant at the 0.05 level (2-tailed).

Inference

All the variables showed a positive correlation with degree of financial leverage, whereby both debt to equity and interest cover ration had a moderate relation while debt to earnings before interest, tax, depreciation and amortization had a strong relation.

Table 3.2.4. Correlations matrix - Equity Bank of Kenya

		DFL	DT.E	DT.EBITDA	ICR
DFL	Pearson Correlation	1	0.926	0.900	0.058
DT.E	Pearson Correlation		1	0.718	0.211
DT.EBITDA	Pearson Correlation			1	-0.243
ICR	Pearson Correlation				1

Correlation is significant at the 0.05 level (2-tailed).

Inference

Debt to equity ratio and debt to earnings before interest, tax, depreciation and amortization had a strong positive correlation, while interest cover ratio had a weak relation.

Table 3.2.5. Correlations matrix - Standard Chartered Bank of Kenya

		DFL	DT.E	DT.EBITDA	ICR
DFL	Pearson Correlation	1	-0.078	0.315	0.454
DT.E	Pearson Correlation		1	0.559	-0.002
DT.EBITDA	Pearson Correlation			1	-0.405
ICR	Pearson Correlation				1

Correlation is significant at the 0.05 level (2-tailed).

Inference

Debt to equity ratio had a weak negative correlation on degree of financial leverage whereas both debt to earnings before interest, tax, depreciation and amortization ratio and interest cover ratio had moderate positive relation on degree of financial leverage.

3.3. Testing H_{02}: There is no significant impact of debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earning per share.

Table 3.3.1. Regression Analysis Model Summary

	R	R^2	Adjusted R^2	Std. Error	F
KCB Bank	0.90	0.81	0.52	1.32	2.84
Absa Bank	0.92	0.85	0.62	1.03	3.74
Co-operative Bank	0.97	0.94	0.86	0.22	10.91
Equity Bank	0.99	0.98	0.94	0.15	27.04
Standard Chartered Bank	0.88	0.77	0.43	1.98	2.25

Inference

KCB bank, R^2 value is 0.81 which indicates that 81% of the variability on degree of financial leverage that could be due to variability of debt to equity ratio, debt to earnings before interest, tax, depreciation and amortization and interest cover ratio. The F-value being 2.84 which appears to be greater than the critical values of 2.71, therefore null hypothesis rejected since there is significant impact of debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earning per share.

Absa bank, R^2 value is 0.85 which discloses 85% of the variability on degree of financial leverage that could be due to variability of debt to equity ratio, debt to earnings before interest, tax, depreciation and amortization and interest cover ratio. The F-value being 3.74 which appears to be greater than the critical values of 2.18, therefore null hypothesis rejected since there is significant impact of debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earning per share.

Co-operative bank, R^2 value is 0.94 which shows 94% of the variability on degree of financial leverage that could be due to variability of debt to equity ratio, debt to earnings before interest, tax, depreciation and amortization and interest cover ratio. The F-value being 10.91 which appears to be greater than the critical values of 0.085, therefore null hypothesis rejected since there is significant impact of debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earning per share.

Equity bank, R^2 value is 0.98 which discloses 98% of the variability on degree of financial leverage that could be due to variability of debt to equity ratio, debt to earnings before interest, tax, depreciation and amortization and interest cover ratio. The F-value being 27.04 which appears to be greater than the critical values of 0.036, therefore null hypothesis rejected since there is significant impact of debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on earning per share.

Standard chartered bank, R^2 value is 0.77 which implies that 77% of the variability on degree of financial leverage that could be due to variability of debt to equity ratio, debt to earnings before interest, tax, depreciation and amortization and interest cover ratio. The F-value being 2.25 which appears to be

less than the critical values of 3.23, therefore null hypothesis accepted since there no is significant impact of debt to equity ratio, debt to EBITDA ratio and interest coverage ratio on rate of changes on earning per share.

4.0. Conclusion and Recommendations

The study concluded that the debt to equity ratio, debt to EBITDA ratio and interest coverage ratio of KBC bank, Absa bank and Equity bank had a significant impact on DFL despite being conservative on employing debt financing, whereas Co-operative banks adopting high debt financing that had a significant impact on DFL, but Standard Chartered bank had insignificant impact on DFL despite being highly debt financed. Thus, the variables are related to the degree of financial leverage that causes an effect on earnings per share. The study recommends that commercial banks be prudent enough in administering debt financing in their capital structure in order to leverage the costs and benefits involved.

REFERENCES

Andy, C. W. C, Chuck, C. Y. K. and Alison, E. L. (2002) "The Determination of Capital structure: Is national Culture a Missing Piece of the Puzzle?" Journal of International Business Studies.

Angima, C. M., Miroga, J., & Otinga, H. N. (2022). Effect of financial leverage and risk management on profitability of commercial banks listed at the Nairobi Securities Exchange (NSE) Kenya. The Strategic Journal of Business & Change Management, 9 (1), 585 – 599.

Arhinful, R., & Radmehr, M. (2023). The Impact of Financial Leverage on the Financial Performance of the Firms Listed on the Tokyo Stock Exchange. *SAGE Open*, *13*(4).

Campbell, D.E. and Kelly, J.S. (1994), "Trade-off theory", The American Economic Review, Vol. 84 No. 2, pp. 422-426.

CBK, Guidelines on the Liquidity Coverage Ratio, Net Stable Funding Ratio and Leverage Ratio

Chebii, Kipchumba & Wasike, A. (2011). The emerging patterns of power in Corporate Governance. Back to the future in improving Corporate decision making. Journal of managerial psychology, 15(5), 477- 507.

Ebiringa Oforegbunam Thaddeus and E. Chigbu (2012), Analysis of Effect of Financing Leverage on Bank Performance: Evidence from Nigeria.

Fred O. Sporta, Patrick K. Ngugi, Patrick Ngumi, Christine S. Nanjala (2017). The Effect of Financial Leverageas a Financial Distress Factor on Financial Performance on Commercial Banks in

Julius Oketch et al. (2018) Effect of financial leverage on performance of listed commercial banks in Kenya. International Journal of Social Sciences and Information Technology, Vol IV Issue II.

Kenya. IOSR Journal of Business and Management (IOSR-JBM), Volume 19, Issue 7.

Kibet, B., Kibet, L., Tenai, J. & Mutwol, M. (2011). The Determinants of Leverage at the Nairobi Stock Exchange, Kenya. The Second Asian Business and Management Conference 2011 Osaka, JP: Sage Global Publishers.

Kraus and Litzenberger (1973), trade off theory of capital structure.

Miller, M.H. (1995), "Do the M & M propositions apply to banks?", Journal of Banking and Finance, Vol. 19 Nos 3-4, pp. 483-489.

Myers (1984) trade off theory on leverage

Nafia Laila & Tania Akhter (2021), Financial Leverage and its Impact on Earning Per Share. IOSR Journal of Economics and Finance (IOSR-JEF), Volume 12, Issue 1.

Stewart Myers and Nicolas Majluf (1984), pecking order theory.

Vernimmen, P., Quiry, P. and Le Fur, Y. (2022), Corporate Finance: Theory and Practice, John Wiley & Sons.