

# **EFFECT OF CAPITAL ADEQUACY ON THE FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN KENYA**

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## **ABSTRACT**

The purpose of this study was to examine the effect of capital adequacy on the financial performance of insurance companies in Kenya. A survey research design was adopted in this study. The target population of the study constituted 54 insurance companies that were licensed to carry out business in Kenya between the periods 2014 to 2018. Secondary data was used from the annual audited financial statements of the insurance companies. Purposeful sampling technique was adopted in selecting a sample of 46 insurance companies. Only those insurance companies with complete financial statements for the 5 years, were selected to participate in the study. Panel data was used in analyzing the data collected. The research findings were presented in tables and figures. The study established that insurance companies in Kenya have positive ROA an indication that they are able to generate at least 20 percent

profit from the assets they have. The insurance companies also maintained good quality assets between the periods 2014 to 2018 thus enabling them to generate significant income. A significant variation in the total assets possessed by insurance firms was evident with some firms accumulating huge volume of assets and others having small volumes of assets. A statistically significant positive correlation exists between cash flow and asset quality of the insurance companies in Kenya. The results provided evidence that among the three determinants of capital adequacy only cash flow had a statistically significant relationship with the financial performance of the insurance firms. Capital adequacy has a statistically significant effect on the financial performance of insurance companies in Kenya.

**Key Words:** *capital adequacy, financial performance*

## **INTRODUCTION**

The modern global business environment is highly competitive and dynamic in nature. Organizations are operating in more turbulent conditions than ever before and this calls for a strong financial system that is capable of lubricating the business activities of organizations. The gains that a firm can make therefore largely rely on the degree at which a firm performs its financial intermediation functions. Companies ought to be able to appropriately address risks that are related to capital inadequacy in order for them to gain integrity from the various stakeholders (Udom & Eze, 2018).

Running a profitable entity is the single most important factor that attracts investment from potential and interested persons. Sound financial performance therefore becomes a very essential element that will lure investors into a firm. Firms require capital from investors in order for them to accomplish their investment objectives over a period of time. Babakova (2013) argues that the main objective of any business enterprise is to earn profits out of its business operations. However, it is necessary to note that profitability of any firm is normally determined by a

number of factors key among them being the capital structure. Capital also is an important ingredient in maintaining the financial safety and soundness of an organization (Saona, 2011).

A perusal through the available research knowledge reveals that a firm's financial performance is significantly influenced or affected by capital adequacy. This implies that capital adequacy is a key element of an organization's performance more specifically financially. This position has been supported by several researchers such as Almazari and Alamri (2017) who carried out an investigation on this subject in Saudi Arabia. The results from their research work indicated the presence of a direct correlation relating to the performance of a firm and its capital adequacy. This denotes that a growth in capital adequacy results to enhanced firm's financial performance. A study was done by Udom and Eze (2018) to examine the correlation of capital adequacy and firms' financial performance. The conclusion made based on the study results, indicates that capital adequacy was very central in ensuring enhanced financial performance.

According to Archer et al., (2010) capital adequacy refers to availability of reasonable capital that will safeguard the sanctity of any customer deposits held by an organization. Another definition by Olalekan & Adeyinka, (2013) suggests that capital adequacy refers to money required by an institution to hold or have in order to facilitate sound and smooth business operations over a period of time. He further asserts that availability of adequate capital is necessary to prevent a firm from failure by absorbing any possible losses. According to Almazari and Alamri (2017) the term capital adequacy denotes the ability and competence of a firm to determine how well it addresses the risks it is faced with. It also relates to what way the firm is capable to make decisions founded on the corporate strategy. They also assert that capital adequacy is a very significant factor especially ascertaining the prices of various products and optimization of returns from a firm's activities.

An argument by Almazari and Alamri (2017) states that the Capital Adequacy Ratio (CAR) of an organization is the most suitable metric of measuring capital adequacy. They also indicate that CAR is an important ration of firm liquidity. This is a percentage of an organization's overall capital to the aggregate weighted risk assets. This ratio may differ from one industry to another depending on the regulations that have been put in place by the regulatory authorities. The significant pointers of capital adequacy in a firm may include asset quality, capital structure, the liquidity of a firm and the asset base (Olalekan & Adeyinka, 2013). CAR further serves as an important pointer towards a firm's management competence especially in deploying financial assets with the aim of optimizing shareholder returns. Information from studies indicates that a negative relationship is evident between huge levels of capital adequacy and profitability (Almazari & Alamri, 2017).

Financial performance may be stated as the process of creating revenue through employment of the assets that belong to the firm. Financial performance as a gauge of organizational performance can only be important if the results are compared and contrasted with those of related firms. Brealey et al., (2009) stated that there are a number of measures that may be

relevant in gauging the performance of an organization and they mention items such as potential to make profit; the ability of a firm to meet its current cash requirements; the ability to service debts and optimization of costs. Profitability of an organization focuses on how much income a firm is able to make using available assets; liquidity on the other hand measures how effectively a firm can be able to meet its long-term and current credit obligations; solvency focuses on dissolution and whether a firm's assets are able to cover existing liabilities in case winding up occurs.

It is therefore crucial to argue that part of the most important functions of the top management of an organization is to ensure sound financial performance. This aspect should not be underestimated since the continuity of the business into the foreseeable future depends heavily on it. In the absence of sound good financial performance, a business organization may easily close down its operations. The level of success a firm achieves in its financial performance may be affected by some factors such as; ability to have better financial management, proper planning, proper financial record keeping, ability to access funding from external sources, as well as possibility of accessing expert financial advice (Ismaila, 2011).

The insurance industry in Kenya is perceived to be more established compared to other countries in the region. The reason for this perception is drawn from the understanding that the highest rate of penetration of insurance in the region, which happens to be three percent, is in Kenya. This therefore places Kenya in a position where it is considered as the pace setter in insurance within the region. For instance, in the financial year 2015/16 the country's insurance sector realized total premiums amounting to more than 1.7 billion. Most of these premiums originated from General Insurance business conducted by the firms. It is also evident the regulatory framework for insurance activities is far much more developed in Kenya when compared to other countries around the same region. [Klynveld Peat Marwick Goerdeler (KPMG), 2016].

Some of the very recent developments observed in the insurance industry in Kenya was the approval of the Financial Services Authority Bill. The aim of the bill is to reduce or eliminate financial exclusion. The bill is also meant to drive the country towards attaining the position of the leading financial center in Sub-Saharan Africa. The major objective of the bill is to dismantle the three regulatory agencies related to insurance industry, which are: the Insurance Regulatory Authority, Retirement Benefit Authority and Capital Markets Authority, in order to come up with a single regulator that will assist in transforming the sector for its betterment. In addition to the above development, the industry has also witnessed the reduction of the claim settlement duration from the previous ninety days to thirty. This change comes in handy to save the clients from a long period of waiting for claims settlement. Many more changes are taking place including the introduction of Islamic insurer in East Africa, to cater for the insurance needs of an exact niche or section of the market that was previously neglected (KPMG Budget Brief, 2016).

Another notable development includes the advancement of the industry where the stakeholder funds have considerably improved over the years. The year 2017 experienced an increase of

approximately 5.5 percent. It was evident that the primary element of the shareholder equity, was the retained earnings that constituted close to 40 percent. The other elements of shareholder equity that were found to have significant percentages, were, paid up capital and reserves held due to statutory requirements. It was also confirmed that the assets of the industry further increased and bypassed the half a trillion mark by Ksh.84.84 billion. The investments of insurers and reinsurers were also estimated to be more than 13.0%. The most prominent investments were: government securities, real estate, shares and term deposits (IRA, 2017).

Perusing through research related to this topic reveals that there are some individuals who have made a significant attempt to investigate whether there is any connection between capital adequacy and firms' financial performance. In Saudi Arabia for example, Almazari and Alamri (2017) piloted a study to find out how capital adequacy impacts the profitability of a firm. The study compared results from two banks in the country. The findings originating from the study confirmed the presence of a direct or positive relationship ROA and DER. Another research done by Udom and Eze (2018) regarding the same topic revealed that specific aspects of capital adequacy including Total Quality Control (TQC), Available Stable Funding (ASF) and Capital to Risk Weighted Assets Ratio (CRWA) cumulatively have notable effect on ROA. In Kenya, Musyoka (2017) undertook a research to assess the effect of capital adequacy on the profitability of commercial banks in Kenya. The outcome depicted the presence a significant negative correlation between bank profitability and capital adequacy.

It is evident that the research findings reveal mixed results where some researchers indicate positive relationship while some depict negative relationships between the variables. Based on the available research it may be prudent to mention that the focus of most researchers has been tilted towards influence of capital adequacy on profitability. Profitability is not the only measure of firm performance. There are many more measures of this performance that require to be explored. There are few studies that have investigated these other measures. Therefore, this study sought to investigate the effect capital adequacy on the financial performance of insurance companies in Kenya.

## **LITERATURE REVIEW**

### **Asset Quality**

The Federal Deposit Insurance Corporation (2018) defines asset quality as the description of the level of financial power as well as risk that can be associated with a firm's assets such as the loans, investments and other items that appear on the balance sheet. Firms or organizations that have better credit management practices and have management to ensure that their investments are well managed and that risk mitigation is a priority are considered to have better asset quality whereas firms that have deficiency in credit management practices and have poor risk management are considered to have poor asset quality. Therefore, the quality of assets a firm maintains relies entirely on the ability of the firm to manage credit risk (Khalid, 2012).

According to Abata (2014) the contemporary business environment is largely dynamic and turbulent in nature. This turbulence occurs as a result of the frequent changes of diverse nature that characterize the modern business environment within which firms operate. They further argue that for firms to survive in such an unstable business environment, they must ensure that they have in place good quality assets that are capable of supporting the operations of a business. The asset quality maintained by a firm also depends on the commitment of the firm towards various activities that have a direct impact on asset quality (Khalid, 2012).

### **Cash Flows**

According to Roos (2018) a statement of cash flows is never about the earnings of an enterprise as they are presented on paper but rather on the actual revenues and expenses that are incurred by a firm when there is physical exchange of cash. It is therefore a form of accounting that can be termed as cash accounting since it relies entirely on the time a firm receives or spends what has already been received in cash. Roos (2018) further asserts that the basic aim of cash flow is to provide an overview or rather a clear picture of the actual amount of cash on hand a firm can use in its operations or to cover its operations as well as to expand its business activities and functions including investments.

Meritt (2019) asserts that there are six ways businesses can be able to measure their cash flows. However, none of this methods is superior than the other, only that firms have to select one method that is suitable for the firm. The most common method that is popular with firms is the use of Free Cash Flow (FCF) method. This method takes into consideration the amount of cash that remains once the firm has made capital expenditures. FCF which is also known as net income from operations is normally obtained by subtracting the capital expenditure from operating cash flow. This provides an actual amount of cash that a firm may use to enhance or improve its long-term value. The second method involves determining the cash flow from operations which includes cash flow before any investments or financing activities are made. Thin cash flows may imply necessity for external financing.

### **Asset Base**

The term assets may be defined as worth of a business establishment based on the market value of what the firm has in possession or can be able to control. The basic reason as to why profit-oriented business establishments acquire assets is to enable them generate enough revenue to earn profits. This implies that the only justification of holding assets is through adequate revenue generation that can be exhibited in the balance sheet. The asset base of the firm may also be referred to as the asset structure since it also reveals how a firm utilizes the capital from shareholders of the business to invest in assets that can enhance revenue generation (Marty, 2018).

In a case where a firm attains a weak ROA this implies that the entity's performance is wanting. In some cases, firms may opt to adjust downwards the structure of their assets for some reasons. However, the basic reason or purpose for such reduction is to enable the firm to have a substantial escalation in the ROA. Though, in doing this reduction the biggest problem the firms must address is reducing the base of their assets without reducing the revenue earned by the firm. The challenge, in other words, is to reduce the asset base without lowering earnings. In order to overcome these challenges, some firms may prefer to operate on leased assets or even outsourcing of capacity (Marty, 2018).

### **Financial Performance**

There are two different categories of measures that firms use to measure their performance. The primary classes of measures are financial measures and the succeeding category is the non-financial measures. Firms use these two categories to judge the capability of the organization to achieve their performance objectives. None of these two categories of measures can be discredited since both have been found to important in ascertaining the financial health of an organization. However, the extent to which a company is financially successful often determines the tangible benefits of management. Performance based benefits may also depend on how well the firm is performing and this may include bonus payment and promotions. This fact further accentuates the emphasis which is given to making sure that companies' operations are profitable (Carton and Hofer, 2010).

According to Lee (2008) the performance of a firm may be attained at the area of convergence between two key factors namely the ownership structure and its level of performance and accumulation of the firm. The other key finding from the study of Lee (2008) concluded that a positive correlation was evident between ownership structure and performance. Liargovas & Skandalis (2008) also carried out a related of similar research in Greece that was inclined towards factors affecting an entity's performance. From their findings, it was concluded that leverage has a key impact on financial performance. Findings from other researches relating to the firm's size indicate that it has statistically significant positive association with the financial performance of business enterprises. This has been supported by scholars such as Prasetyantoko and Parmono (2008) who during their research on determinants of financial performance at the corporate level of Indonesian companies established that there was positive association between company profitability and size. Another study that supports the size of a firm was carried out by Antoniou *et al.*, (2007) in the UK and it was revealed firm size has positive correlation with firm performance.

### **RESEARCH METHODOLOGY**

This study employed a longitudinal survey research design. The study population involved all the registered insurance companies operating in Kenya at year end of 2018. According to the Insurance Regulatory Authority (2017), there were 54 registered insurance companies that were

operating in Kenya at year-end of 2018. The study's target population was therefore be the 54 insurance companies. For this study, the sampling frame constituted the complete list of the Insurance companies that were licensed and fully operating in Kenya by the year 2018. This was the list from which the sample was selected. Secondary data was sourced from the companies' audited annual financials. The data was collected by use of a specially designed data collection schedule that enabled the researcher to pick the relevant data only from the financial statements. The data collected included: current assets, fixed assets, total assets, net income, total liabilities, shareholder equity, current liabilities, cash and cash equivalents and investments. These items were selected since they were relevant in calculating the ratios required for both the explanatory and response variables. The effect of each of the explanatory variable on the financial performance of insurance companies in Kenya was measured using panel data analysis. The interrelationship between the variables was assessed using correlation analysis using Pearson's correlation coefficient. The coefficient of determination ( $R^2$ ) was used in testing the relationship between the variables.

## **RESEARCH FINDINGS**

### **Cash Flows**

The cash flows of the insurance companies in Kenya were measured using the levered cash flow. This was the net income contained by the insurance companies after settling their entire financial obligation including payment of debt. The mean for the cash flow was 11.030491 and the standard deviation was 4.3695083. This was an indication that the net income that remained after making all the necessary payments varied widely among the insurance companies. Some insurance companies managed to retain a huge amount of income even after repaying debts whereas others remained with a small amount of income after meeting their financial obligations. However, it is important to note that the results reveal positive figures for the three independent variables and indication of an industry that is thriving well.

### **Asset Base**

The asset base of the insurance companies in Kenya was measured using the total assets of the insurance companies. The mean and standard deviation of the total assets of the companies was obtained. It was evident that the mean was 15.182858 and the standard deviation was 1.1280548. This implies that there was greater deviation of the observed asset figures. Some insurance companies had a huge portfolio of assets whereas others had a small portfolio of assets.

### **Financial Performance**

The financial performance of the insurance companies in Kenya was measured using Return on Investment (ROI) of all the insurance companies. The average ROI for each of the firms for the five years was obtained. The results revealed that the mean for financial performance was 0.304156 and the SD was 0.14758230. This implies that majority of the insurance companies had

a positive financial performance between the duration of the study and that there was no significant deviation of the observed values from the mean.

### **Correlation Analysis**

The study sought to establish the nature of relationship that existed among the independent variables of the study which included asset quality that was measured using (ROA), cash flows that were measured using levered cash flow, and asset base which was measured using the total company assets. The findings from the study revealed that there was an inverse correlation of -0.447 between asset quality and asset base. However, this was not considered a significant relationship since significance for the 2-tailed test was considered significance at 0.01. It was also evident from the study results that there was a statistically significant positive correlation of 0.467 between asset quality and cash flow. This implies that the higher the asset quality an insurance company had, the higher the amount of income it retained after meeting its financial obligations including payments to creditors. The correlation between asset quality and cash flow was found to be statistically significant at 0.01 as illustrated in Table 4.3 above. Concerning the correlation between asset base and cash flow, it was established from the study, that there was a very weak inverse correlation. This correlation was found to be statistically insignificant since it had a significance value of 0.654. This implies that an increase in asset base is likely to lead to an increase in cash flow of the insurance companies in Kenya.

### **Effect of Capital Adequacy on Financial Performance**

The main purpose of this study was to determine the effect of capital adequacy on the financial performance of the insurance firms in Kenya. The independent variables of the study were asset quality, asset base and cash flow. Owing to the huge figures of total assets and net income after meeting financial obligations of the companies, the natural logarithms of total assets and levered cash flow were used. The dependent variable of the study was the financial performance of the insurance companies that was measured using ROI. Since the data collected was longitudinal in nature cutting across 5 years and for different insurance companies, panel data regression was used to determine the effect of capital adequacy on the financial performance of the insurance firms in Kenya. The results obtained from the panel data regression are presented in table 1.

The study findings as illustrated in table 1 reveals that asset quality had a coefficient of -0.001, standard error of 0.077, and  $p$ -value of 0.987. This implies that there was no statistically significant relationship between asset quality and the financial performance of insurance firms in Kenya. On the other hand, asset base had a coefficient of 0.005 and a  $p$ -value of 0.785. This was further a confirmation that the relationship between asset base and financial performance of the insurance company was not statistically significant. Cash flow had a coefficient of 0.024 and  $p$ -value of 0.000. This confirmed that there was a statistically significant relationship between cash flow and the financial performance of the insurance firms in Kenya.

**Table 1: Panel Data Regression Results**

	<b>Coefficient</b>	<b>Std. error</b>	<b>t-ratio</b>	<b>p-value</b>	<b>VIF</b>
Constant	-.136	.277	-.491	.626	
Asset Quality	-.001	.077	-.017	.987	1.99
Asset Base	.005	.018	.274	.785	3.32
Levered cash flow	.024	.005	4.991	.000	4.75
Mean dependent var	.204565		S.D dependent variable		.1566980
Sum Squared resid	.325692		S.E of regression		.1207091
R-squared	.446		Adjusted R-squared		.407
F(3, 42)	11.278		P-value (F)		.000

Further results from the panel data regression revealed that the coefficient of determination (R-squared) had a value of 0.446 and the adjusted R-squared value was 0.407. This was therefore translated to mean that the three independent variables asset quality, asset base and cash flow explain 40.7 percent of the financial performance of insurance companies in Kenya. In other words, 40.7 percent of the variance in the financial performance of insurance companies in Kenya can be attributed to asset quality, asset base and cash flow of the companies. The *p*-value (F) had a value of 0.000 implying that the regression model constituted a statistically significant relationship between the independent and dependent variables. The following regression model was therefore developed to explain the effect of capital adequacy on the financial performance of insurance companies in Kenya:  $Y_{it} = -0.136 - 0.001X_{it} + 0.005 z_i + 0.024 u_i + 0.277$ . This implies that the financial performance of the insurance companies in Kenya will be equivalent to -0.136 in the absence of asset quality, cash flow and asset base. The weights -0.001 over a period of time determines the effect of asset quality on financial performance, the weight 0.005 will determine the level of cash flow, 0.024 is the weight of the asset base and 0.277 is the error term representing the variables not captured in this study.

On whether there is existence of multicollinearity among the predictor variables of this study, the VIF values in in Table 4.5 reveal that asset quality has a value of 1.99, asset base 3.32 and levered cash flow 4.75. These values are well below 5 which is the acceptable range. This implies that the predictor variables are not linearly correlated. Although asset base and cash flow had a very strong correlation, this did not affect the effect of the predictor variables on the dependent variable and thus was ignored.

## **DISCUSSION**

The findings from this study do not exactly and conclusively agree with what other studies established since there is a slight variation in the variables used. However, there seems to be a general view that cash flow has a positive relationship with the performance of organizations. For instance, Soet, Muturi and Oluoch (2018) in a study on the effect of operating cash flow management on the financial performance of mutual funds in Kenya, found out that operating

cash flow management had significant and positive effect on return on assets and positive but not significant effect on return on equity. Still on the same line of research Ndungu and Oluoch (2016) carried out a study on the effect of operational cash flow management on the market performance of public construction firms in Kenya. The results revealed that cash flows from operations have a positive effect of market performance of construction companies.

The study further revealed that the general model from panel data regression portrayed a statistically significant relationship between capital adequacy and the financial performance of insurance companies in Kenya. The findings slightly concur with the position maintained by Almazari and Alamri (2017) who assert that capital adequacy denotes the ability and competence of a firm that may be used to determine how well the firm addresses the risks it is faced with. It also relates to what way the firm is capable to make decisions founded on the corporate strategy. They also assert that capital adequacy is a very significant factor especially ascertaining the prices of various products and optimization of returns from a firm's activities.

## **CONCLUSIONS**

Insurance companies in Kenya have positive ROA, an indication that they are able to generate at least 20 percent profit from the assets they have. The insurance companies also maintained good quality assets between the periods 2014 to 2018 thus enabling them to generate significant income. A significant variation in the total assets possessed by insurance firms was evident with some firms accumulating huge volume of assets and others having small volumes of assets. A statistically significant positive correlation exists between cash flow and asset quality of the insurance companies in Kenya. Capital adequacy has a statistically significant effect on the financial performance of insurance companies in Kenya. However, the regression coefficient for asset base was positive meaning that it was positively related to financial performance.

## **REFERENCES**

- Abata M. A. (2010), *“Financial Accounting Theory and Practice”*. El- Toda Ventures Limited, Mushin, Lagos.
- Abata, M. A. (2014) Asset Quality and Bank Performance: A Study of Commercial Banks in Nigeria. *Research Journal of Finance and Accounting*, 5(18) 39-44
- Abba, G. O., Okwa, E., Soje, B., & Aikpitanyi, L. (2018) Determinants of Capital Adequacy Ratio of Deposit Money Banks in Nigeria. *Journal of Accounting and Marketing*, 7(2): 271
- Abbadi, S., & Abbadi, R. (2013) The Determinants of Working Capital Requirements in Palestinian Industrial Corporations. *International Journal of Economics and Finance*; 5(1) 65-75
- Aboagye, A. Q., & Tieu, J. (2010), “Are Ghanaian MFIs’ Performance Associated with Corporate Governance? *Corporate Governance*, 10 (3) 307 – 320
- Achou, F. T., & Tegnuh, N. C. (2008), *“Bank Performance and Credit Risk Management”*, Master Degree Project School of Technology and Society, University of Skovde Press

- Akenga, G. (2015) Effect of Liquidity on Financial Performance of Firms Listed at the Nairobi Securities Exchange Nairobi. *International Journal of Science and Research*, 6 (7) 279-285
- Allen, T., McAleer, M., Powell, R., & Singh, A. (2013) *A Capital Adequacy Buffer Model*. TI Tinbergen Institute Discussion Paper, 2013-168/III
- Almazari, A., & Alamri, A. (2017) the Effect of Capital Adequacy on Profitability: A Comparative Study between Samba and Saab Banks of Saudi Arabia. *International Journal of Economics, Commerce and Management*, 5(11), 88-102.
- Al-Sabbagh N. M., & Magableh A. H. (2004) *Determinants of capital adequacy ratio in Jordanian banks*. Unpublished Research Dissertation.
- Archer, S., Ahmed Abdel Karim, R., & Sundararajan, V. (2010). Supervisory, regulatory, and capital adequacy implications of profit-sharing investment accounts in Islamic finance. *Journal of Islamic Accounting and Business Research*, 1(1), 10-31.
- Athanasoglou, P., Brissimis, S., & Delis, M. (2005). *Bank-Specific, Industry-Specific and Macroeconomic Determinants of Bank Profitability*, Economic Research Department, Bank of Greece, Working Paper No, 25, June, 2005, available at <http://www.bankofgreece.gr/publications/pdf/paper200525.pdf>, last accessed on 16 Oct, 2018.
- Babakova I. V. (2013) *Raising the Profitability of Commercial Banks*, BLATEC, 11
- Blose, L. E. (2001) Information asymmetry, capital adequacy, and market reaction to loan loss provision announcements in the banking industry. *Q Rev Econ Finance* 41: 239-258.
- Brounen, D., & Eichholtz, M., (2001) Capital Structure Theory Evidence from European Property Companies: Capital Offerings, *Real Estate Economics*, 21(4).
- Byeongyong, C. (2002). "An Empirical Investigation of Market Structure, Efficiency, and Performance in Property-Liability Insurance", Temple University.
- Carl-Erik S., Bengt, S., & Jan W. (2003). Model assisted survey sampling. *Springer*. pp. 9–12.
- Carton, R., & Hofer, C. (2010) "Organizational Financial Performance: Identifying and Testing Multiple Dimensions." *Academy of Entrepreneurship Journal*, 16 (2): 1-22
- Chartered Institute of Management Accountants (CIMA) 2008: Performance Measurement Topic *Gateway Series No. 9* (On-line): [www.cimaglobal.com/documents](http://www.cimaglobal.com/documents). Retrieved on 11th October, 2018.
- Chisti, K. A. (2012). The impact of Asset Quality on Profitability of Private Banks in India. *Journal of African Macroeconomic Review*, 2(1).
- Choi G (2000) The macroeconomic implications of regulatory capital adequacy requirements for Korean banks. *Economic Notes* 29: 111-143.
- Ćirović, M. (2007). *Bankarstvo, Naučno društvo Srbije, Beograd*.
- Drobez and Fix R., (2003) *What are Determinants of Capital Structure? Some Evidence for Switzerland*, WWZ working paper no.4/03, 2003.
- Federal Deposit Insurance Corporation (2018) *Asset Quality. RMS Manual of Examination Policies*. Federal Deposit Insurance Corporation.
- Goddard, J., Molyneux, P., & Wilson, J. (2004). The profitability of European banks: a cross-sectional and dynamic panel analysis. *Manchester School* Vol.72 No.(3), 363-381.
- Gosh, D., & Gosh, S. (2011) *Management of non-performing assets in public sector banks: Evidence from India*. International Conference on Management, pp: 750-760.

- Gropp, R., & Heider, F. (2010) The determinants of Bank Capital Structure. *Review of Finance*, 14(4), 587-622
- Hassan, M. K., & Bashir, A.H. (2003) *Determinants of Islamic banking profitability*. In 10th ERF annual conference, Morocco 7.
- Horngrén, C. T., Datar, S. M., & Foster, G. (2006). *Cost Accounting: A Management Emphasis*, New Jersey: Pearson Prentice Hall
- IRA (2017) *Insurance Industry Report for the Period January – December 2017*. Fourth Quarter Release, Insurance Regulatory Authority.
- Irawan, K., & Anggono, A. (2015) A Study of Capital Adequacy Ratio and Its Determinants in Indonesian Banks: A Panel Data Analysis. *International Journal of Management and Applied Science*, 1 (9) 98-101
- Jun, J. (2017) *7 Cash Flow Ratios Every Value Investor Should Know*. Old School Value, Rye.
- Khalid, A.C. (2012). The impact of Asset Quality on Profitability of Private Banks in India: Case Study of JK, ICICI, HDFC & YES Banks, *Journal of African Macroeconomic Review* 2 (1)
- Kosmidou, K., Tanna, S., & Pasiouras, F. (2005). *The Determinants of Profitability of Domestic UK Commercial Banks: Panel evidence from the period 1995-2002*, <http://respect.org/mmfc05/paper45.pdf>, last accessed on 16 Oct, 2018.
- KPMG (2016) *the Next Generation Customer: Kenya Insurance Survey Report*. KPMG Annual East Africa Insurance Survey, Nairobi, KPMG Advisory Services Limited.
- Laia, C. (2017) *Instruments for gathering data*. Research-publishing.net, Dublin Ireland.
- Maxwell, J. (2009). "Designing a qualitative study", in Bickman, L.; Rog, D. (eds.), *The State Handbook of Applied Social Science Research*, Thousand Oaks, CA: *Sage*
- Meritt, K. (2019) *6 Ways to Measure Cash Flow: Which is best for Your Business?* AccountingDepartment.com, LLC. Retrieved on 23/4/2019 from: <https://www.accountingdepartment.com/blog/6-ways-to-measure-cash-flow-which-is-best-for-your-business>
- Modigliani, F., & Miller, M., (1958) The cost of capital, corporation finance, and the theory of investment, *American Economic Review*, 48(3), 261-97.
- Modigliani, F., & Miller, M., (1963) Corporate Income Taxes and the Cost of Capital: A Correction, *American Economic Review*, 53(3), 433-443.
- Musyoka, B. (2017) *the Effect of Capital Adequacy on the Profitability of Commercial Banks in Kenya*. A Masters Research Project Submitted to the University of Nairobi.
- Myers, S.C., & Majluf, N. (1984). Corporate Financing and Investment Decisions when Firm have Information that Investors do not have. *Journal of Financial Economics*, Vol. 13 pp.187-221.
- Ngo, P. (2006). Endogenous Capital and Profitability in Banking. Available at <http://ideas.repec.org/p/acb/cbeeco/2006-464>, last accessed on 16 Oct, 2018.
- Olalekan, A. & Adeyinka, S. (2013) Capital Adequacy and Banks' Profitability. An empirical Evidence from Nigeria. *American International Journal of Contemporary Research*, 3(10), 87-93
- Onaolapo, A. A., & Olufemi, A. E. (2012). Effect of Capital Adequacy on the Profitability of the Nigerian Banking Sector. *Journal of Money, Investment and Banking*: <http://www.journalofmoneyinvestmentandbanking.com>
- Park, K. H., & Weber, W. (2006). Profitability of Korean Banks: Test of Market Structure versus Efficient Structure, *Journal of Economics and Business*, Vol. 58, pp.222-239.

- Peavler, R. (2019) Calculate the Solvency, Liquidity, and Viability of your Firm: important Ratios for Cash Flow Analysis, *The Balance Small Business*.
- Roos D. (2018) 5 Ways that Businesses Measure Cash Flow. Retrieved on 23/4/2019 from <https://money.howstuffworks.com/5-ways-businesses-measure-cash-flow.htm>
- Ross, S. A, Westerfield, R. W., Jaffe, J., Kakani, R. K. (2009). *Corporate Finance*, Tata McGraw-Hill Edition 2009, 8th Edition.
- Saona P. H. (2011) Determinants of the Profitability of the US Banking Industry. *International Journal of Business and Social Science* 2(22) 222-269
- Sathye, M. (2005). Market Structure and Performance in Australian Banking, *Review of Accounting and Finance*, Vol. 4, No2, pp.107-122.
- Simpson, S. N. Y, & Damoah, O. B. O. (2008): *An Evaluation of Financial Health of Non-Life Insurance Companies from Developing Countries: € e Case of Ghana*, 21st Australasian Finance and Banking Conference, December 16-18, 2008, Sydney
- Siraj, K. K., & Pillai, P. S. (2011). Asset quality and profitability of Indian scheduled commercial banks during global financial crisis. *International Research Journal of Finance and Economics*, 80, 55-65.
- Su, G. & Vo, H. T. (2010). The Relationship between Corporate Strategy, Capital Structure and Firm Performance: An empirical study of the Listed Companies in Vietnam, *International Research Journal of Finance and Economics*.
- Swamy, V. (2015). *Modelling Bank Asset Quality and Profitability: An Empirical Assessment*. Economics Discussion Papers, No 2015-27, Kiel Institute for the World Economy
- Udom, I., & Eze, O. (2018) Effect of Capital Adequacy Requirements on the Profitability of Commercial Banks in Nigeria. *International Research Journal of Finance and Economics* (165) 79-89
- Vieira,R. S. (2010). The Relationship between Liquidity and the Profitability: An Exploratory Study of Airline Companies between 2005 and 2008.