Corporate Risk and firm's financial performance: evidence from listed banking, finance and insurance companies in Sri Lanka

Dabarera, G S M

Jayasinghe, J E

Hemantha, W D S

Abeysinghe, H E D

De Alwis, A P

Department of Accounting, University of Sri Jayewardenepura

Abstract

Corporate risk and financial performances in organisations had been of mounting importance when it comes to the research arena during the past few decades and is still heavily discussed globally nowadays. A noticeable dearth of research is there in the studies that have been done on the relationship between risk and financial performance in organisations. This study identifies the impact of corporate risk on Financial Performances of Banking, Finance and Insurance sector in Sri Lanka.

This study identifies the risk under the tools of Capital risk and Liquidity risk and financial performances under Return on Assets and Return on Equity. Capital risk is measured by total capital to risk weighted assets, whereas Liquidity risk is measured by loans to deposit ratio.In order to analyze this information, annual reports of organizations in selected sector are examined as secondary data for the period of 2013 – 2017. As per the Colombo Stock Exchange, there are 72 organizations in Banking, Finance and Insurance sector in Sri Lanka (i.e. Population) among that 56 organizations are selected for the study (i.e Sample). The data collected from annual reports was analyzed through SPSS and EViews models. With reference to prior researches done on risk management and financial performances we hypothesis that there is a positive relationship of the impacts of risk management towards financial performances in organizations and it will be applied in this study also.

Our findings will be of interest to the policy makers, future researches as well as to the general public and any third party who are keen on risk management procedures and financial performances of commercial bank sector.

Keywords: Banking, Finance and Insurance sector, Financial Performance, Corporate Risk, Sri Lanka

1. Introduction

Business environment is becoming more complex due to global competition, deregulation, downsizing and advancement in technology. Within this complex environment corporate risk has become a core function of business process. No business will be profitable if these risks are not managed properly. The organizations in Banking, Finance and Insurance sector are also facing a dynamic environment since they trade an extensive range of financial assets and liabilities. In addition, seeks for greater financial innovations and the promotion of greater shareholder value resulted in mergers and acquisitions in Banking, Finance and Insurance sector, disclose for more risks. Further, these financial institutions are exposed to both their clients and their own risks.

The information provides by risk management reduces the uncertainty in decision making. Assuming that the organization wants to manage its risks in some way a number of methods can be used based on the organization. These methods will limit the risks and the overall risk management strategy may define how the risks will be managed and the way these methods will interact. Some of these methods of managing risks are avoid risks, transfer risk, pool risk, risk reduction, risk sharing, diversification, hedging risks etc.

In this study the independent variable of corporate risk is examined under Capital risk and Liquidity risk. Capital risk is measured by total capital to risk weighted assets whereas Liquidity risk is measured by loans to deposit ratio.

2. Literature review

This chapter looks at the literature on corporate risk and the specific determinants of financial performance in financial institutions and also stating some studies that have previously been studied on the effect of risk management on the financial performance of commercial banks. In summary this gives a theoretical foundation to the topic of study.

Risk is generally referred to as the possibility of danger, loss, injury or other adverse consequences and major risks faced by banks including credit, market, interest rate, liquidity and operational risks (Bessis, 2002). A general risk management framework includes four major components – risk identification, risk measurement, risk mitigation and risk monitoring and reporting (Bessis, 2002). Banks are required to have strong risk management systems (Bank Negara Malaysia, 2008; Blunden, 2005). In addition to compliance purposes, identifying corporate risk are essential for internal use to ensure the safety and accuracy of the institutions as well as the whole financial system. (Aebi et al., 2012) argue that although

most banks still highlight asset growth and a reduction of operational costs as the main contributors to profitability, risk management plays an important role as the support function.

2.1 Theoretical Review

This section explains some of the specific theories that can be related to the topic of study on risk management and the effect it has on the financial performance of organizations. The theories are Portfolio Theory and Financial Economic Theory as discussed below:

Portfolio Theory

Modern Portfolio Theory (MPT), a theory put forth by Harry Markowitz in his paper "Portfolio Selection," (published in 1952 by the Journal of Finance) is an investment theory based on the idea that risk-averse investors can construct portfolios to optimize or maximize expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward. It is one of the most important and influential economic theories dealing with finance and investment.

A portfolio is the collection of different investments that make up an investor's total holding. A portfolio might be:

a) The investments in stocks and shares of an investor;

b) The investments in capital projects of a company.

Portfolio theory, which originates from the work of Markowitz, is concerned with establishing guidelines for building up a portfolio of stocks and shares, or a portfolio of projects. The same theory applies to both market investors and to companies with capital projects to invest in.

According to Markowitz (1952), investors focused on assessing the risks and rewards of individual securities in constructing their portfolios. Since the 1980s, companies have successfully applied modern portfolio theory to market risk. While each company's method varies, this approach involves periodically evaluating the quality of credit exposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolios' expected losses. This system enables management to identify changes in individual credits, or portfolio trends in a timely manner. Based on the changes identified, credit identification, credit review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner.

Financial Economic Theory

Carter et al. (2006) suggested that organizations risk management is quick to increase firm value in the presence of capital market flaws such as bankruptcy costs or underinvestment problems. According to Carter et al. (2006) risk management can increase shareholder value by balancing financing and investment policies. When raising external capital, firms may under invest. Derivatives can be used to increase shareholder value by coordinating the need for and availability of internal funds. Conflicts of interest between the shareholders and debt holders can also lead to underinvestment. An underinvestment problem can occur when leverage is high and shareholders only have a small residual claim on a firm's assets, thus the benefits of safe but profitable investment projects accumulate primarily to bondholders and may be rejected (Bessembinder,1991). A credible risk management can mitigate underinvestment costs by reducing the volatility of firm value. As the underinvestment problem is likely to be more severe for firms with significant growth and investment opportunities, various measures such as the market-to-book ratio, research and development to sales ratio, capital expenditure to sales, net assets from acquisitions to size are used for testing the underinvestment hypothesis.

Determinants of Financial Performance

Financial performance is company's ability to generate new resources, from day-to-day operations, over a given period of time and performance is gauged by net income and cash from operations. According to Toutou and Xiaodong (2011), financial performance is a general measure of how well a bank generates revenues from its capital. It also shows a bank's overall financial health over a period of time, and it helps to compare different banks across the banking industry at the same time. The bank's financial performance generally can be recognized as its stability and profitability. The stability refers to its risk factors and profitability refers to its financial return.

The determinants of bank financial performances can be classified into bank specific (internal) and macroeconomic (external) factors (Al-Tamimi, 2010; Aburime, 2005). Internal factors are individual bank characteristics which affect the performance of banks and are influenced by internal decisions of management and the board. The external factors are

sector-wide or country-wide factors which are beyond the control of the company and affect the bank's profitability.

1) Capital Adequacy

Capital is one of the bank specific factors that influence the level of bank profitability. It is the amount of funds available to support the bank's business and act as a safeguard in case of adverse situations (Athanasoglou et al. 2005). According to Dang (2011), the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis.

2) Asset Quality

The bank's asset is another bank specific variable that affects the profitability of a bank. The bank asset includes among others current asset, credit portfolio, fixed asset, and other investments (Athanasoglou et al., 2005). In most cases the loan of a bank is the major asset that generates the major share of the banks income and it is the major asset of commercial banks from which they generate income. The quality of loan portfolio determines the profitability of banks. The loan portfolio quality has a direct bearing on bank profitability. The highest risk facing a bank is the losses derived from negligent loans (Dang, 2011). Thus, nonperforming loan ratios are the best proxies for asset quality. It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. This is so because high nonperforming loan affects the profitability of the bank. Thus, low nonperforming loans to total loans shows that the good health of the portfolio a bank. The lower the ratio the better the bank performing (Sangmi and Nazir, 2010).

3) Management Efficiency

Management Efficiency is represented by different financial ratios like total asset growth, loan growth rate and earnings growth rate. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of these ratios used to measure management quality is operating profit to income ratio (Sangmi and Nazir, 2010).

4) Liquidity Management

Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. According to Dang (2011) adequate level of liquidity is positively related with bank

profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits.

5) Macroeconomic Factors

The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability are some of the macroeconomic variables that affect the performances of banks. For example, the trend of GDP affects the demand for banks asset. During the declining GDP growth, the demand for credit falls which in turn negatively affect the profitability of banks. On the contrary, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of business cycle. During boom the demand for credit is high compared to recession (Athanasoglouet al., 2005).

2.2 Empirical Review

This section describes literature related to research topic. Scholars have carried out extensive studies on this topic and produced mixed results; while some found that risk management impact positively on banks financial performance, some found negative relationship and others suggest that other factors apart from risk management impacts on bank's performance. Mwangi (2013) found a negative relationship between liquidity risk and financial performance in the study he conducted to identify the impact on liquidity risk on profitability in banks of Kenya. Findings from Getahun (2015) revealed a significant correlation between credit risk and financial performance of banks. This was further supported by the study performed by Jorion.P (1996) which he concluded that there's a significant relationship between credit risk and profitability in banks at Sweden.

Ellul, A. & Yerramilli V. (2010) investigated on whether a strong and independent risk management is significantly related to bank risk taking and performance during the credit crisis in a sample of 74 large bank holding companies. They constructed a risk management index which was based on five variables relating to the strength of banks risk management. Their findings indicated that banks with high risk management index value in 2006 had lower exposure to private-label mortgage-backed securities, were less active in trading offbalance sheet derivatives and had a smaller fraction of nonperforming loans, a lower downside risk and a higher Sharpe Ratio during the crisis years 2007-2008. Al-Khouri, R. (2011), on his study "Assessing and the Risk Performance of the GCC Banking" assessed the impact of

bank's specific risk characteristics, and the overall banking environment on the performance of 43 commercial banks operating in 6 of the Gulf Cooperation Council (GCC) countries over the period 1998-2008. Using fixed effect regression analysis, results exhibited that credit risk, liquidity risk and capital risk are the major factors that affect bank performance when profitability is measured by return on assets while the only risk that affects profitability when measured by return on equity is liquidity risk. Saleem S. (2011), on his paper "Do Effective Risk Management Affect Organizational Performance" assesses the current practices of risk management in Pakistani software development sector. Based on the data, collected from 25 organizations working in software development sector, the results indicated that risk management practices were not broadly used by the organization(s); furthermore most of the organizations did not have documented risk management policy properly. Therefore, these organizations could not deal with the risks systematically and sometimes faced negative consequences for the non-systematic approaches. However, few companies had implemented certain risk management techniques and are enjoying high performance.

There have been debate and disagreement on the impact of risk management and bank's financial performance.

2.3 Theoretical gap

As observed in section 2.2 studies regarding corporate risk and firm performances have depict contrasting results, with some studies indicating positive results while some indicating negative results.Therefor,further investigation is required in this regard.

Further, there was less evidence in Sri Lankan context regarding the relationship of corporate risk and financial performance of bank, insurance and finance institutions. Hence this study tries to fill the gap of not addressing effects of corporate risk and financial performances in Sri Lankan context and tries to identify the impact of corporate risk on the financial performances of banking, finance and insurance sector in Sri Lanka.The next section describes the methodology implemented in the study.

3. Methods

This section explains the research approach, population and sample, operationalization of the variables and the analysis adopted in the study.

3.1 Research approach

To successfully analyze the relationship between corporate risk and financial performance of bank, insurance and finance companies of Sri Lanka, a quantitative approach was used as in the literature (Davies 2015).

3.2 Population and sample

Out of the 299 companies listed in Colombo Stock Exchange bank, finance and insurance sector which includes 72 companies as at 28th February 2018 was considered as the population.

Out of the 72 companies in bank, finance and insurance sector, 56 financial institutions were selected as the research sample. It excludes Arpico Finance PLC, Vanik Incorporation, Vallibel Finance, Central investment and finance PLC and Entrust Securities since they do not have recent financials published.

Furthermore, following companies were excluded as those were mentioned twice under the bank, finance and insurance companies list published by CSE.

1. The Finance
2. SMB Leasing
3. Sinhaputhra Finance
4. Seylan Bank
5. Nations Trust Bank
6. Hatton National Bank
7. Citizens Development Business
8. Finance PLC
9. Ceylinco Insurance PLC

Furthermore, the data was collected through annual reports published by the quoted public companies. All required annual reports were obtained through the CSE website. Annual reports relating to most recent five years at the time of data collection were considered for the research. Accordingly, the research considers data from 2013 to 2017.Since the research considers data from five years, it avoids unusual one-off situations which can occur in one period.

3.3 Conceptual diagram

Based on the literature survey carried out, the following conceptual model that distinguishes the relationship between corporate risk and financial performance of the entities could be developed.
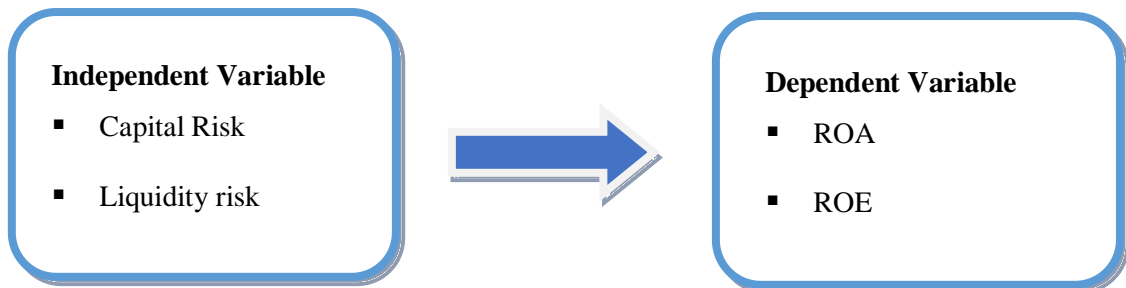
Figure 1: Relationship between corporate risk and financial performances
Source: Author constructed

The conceptual model hypothesis that capital risk and liquidity risk positively affect financial performance, return on assets (ROA), return on equity (ROE) used as dependent variables.

3.4 Hypotheses

Based on the above conceptual diagram following hypothesize were derived,

H1: There is a positive relationship between capital and liquidity risk and the financial performance of bank, finance and insurance companies. (Return on Asset)

H2: capital and liquidity risk and the financial performance of bank, finance and insurance companies. (Return on Equity).

Following section explains the operationalization of the variables considered in this study.

3.5 Operationalization

In this model financial performance is the dependent variable which will be measured by Return on Assets ratio and Return on Equity ratio. The study will include two independent variables as follows,

- Capital risks as measured by total capital to risk weighted assets
- Liquidity risk as measured by loans to deposit ratio

These independent variables are the indicators of financial risk management which affect profitability of the financial institutions.

Table1: Operationalization of variables

Variable	Measurement	Related Study
Capital Risk	Total capital risk to weighted assets	Ogilo.F (2012)
Liquidity risk	Loans to deposit ratio	Davies et al (2015)
Return on Assets	Percentage of Return on Total Assets	Mwangi(2013)
Return on Equity	Percentage of Return on Equity	Karr.J (2012)

Source: Author constructed

3.6 Analytical Strategies

In order to identify overall interpretation on the data base, descriptive analysis was adopted by means of frequency analysis and correlation analysis. Next, the study employed panel data regression analysis to explore the association between firm's risk and firm's financial performance which was measured through ROA and ROE.

Multiple regression analysis on panel data basis was decided as appropriate as the sample contained data collected from 56 companies over five years period. EViews software was used for this purpose. The Hausman test was conducted to estimate which model is appropriate for the panel regression.

The general regression equation is as follows,

$$ROA/ROE = \beta0 + \beta1CAD + \beta2LDR + \varepsilon$$

4. Findings and discussion

This section include the findings based on descriptive statistics, correlation and regression analyses.

4.1 Descriptive statistics

As the initial step, researcher has performed a descriptive analysis in order to provide an overall interpretation on the data base. In this regard, researcher has built up a table to represent basic measures namely, mean, minimum, maximum and standard deviation.

Table 2: Descriptive Analysis

Variables	N	Min	Max	M	SD
ROA	280	-14.71%	67.7%	2.72%	.0907
ROE	280	-61.17%	93.96%	19.08%	.6303
Capital Risk	280	0.15%	241.59%	48.59%	.4504
Liquidity Risk	280	0.18%	203.57%	20.93%	.0528

Source: Author Constructed

According to the above Table 2, Return on Assets (ROA) ranges from – 14.71% to 67.7% with a mean of 2.72%. As the standard deviation of ROA is .0907, it can be concluded that the deviation of ROA in banking, finance and insurance industry is less significant even though there are few outperforming and underperforming companies in the industry. Moving forward, minimum Return on Equity (ROE) of this industry is -61.17% and the maximum is 93.96%, while having a mean of 19.08% with a standard deviation of .6303. Similar to ROA, deviation of ROE is also insignificant.

Capital risk has ranged from 0.15% to 241.59% as there are companies exposed to high capital risk as well as low capital risk companies within the industry. Average capital risk of 48.59%, indicates that the industry is exposed to an average of 48.59% capital risk. Standard deviation of .4504 indicates the fact that most of the companies within the banking, insurance and finance industry have capital risk which is closer to the industry average.

According to Table 2, industry's minimum liquidity is 0.18% and maximum is 203.57%, with an average of 20.93% and it indicates that few companies operate in the industry have high liquidity positions while some has a very low liquidity position.

4.2 Correlation Analysis

The correlation analysis indicates the relationship between the two variables and the significance of the relationship. Hence the researcher has performed a correlation analysis to identify the relationship between the performance measures and risk ratios.

Table 3: Correlation Analysis

Measures	Return on Assets	Return on Equity	Capital Risk	Liquidity Risk
Return on Assets	1			
Return on Equity	0.0257	1		
Capital Risk	0.4354	0.4194	1	
Liquidity Risk	0.1845	0.2743	0.1159	1

Source: Author Constructed

According to the above analysis, there is a positive relationship between capital risk and the company performance measures. However, this positive relationship is insignificant as the correlation of ROA, ROE with capital risk and liquidity risk are 0.4354, and 0.4194 and 0.1845, 0.2743 respectively.

Correlation analysis was performed considering only two variables at a time.Therefor, correlation alone cannot provide a conclusion on multivariate basis. To further analyse the relationship between corporate risk and financial performance, a panel regression analysis on multivariate basis was performed. Panel regression analysis is superior to correlation analysis as it allows using more independent variables at a time.

4.3 Regression Analysis and discussion

The multiple regression analysis was used to determine the relationship between risk measures and financial performance in order to arrive at conclusions.

Out of the two techniques which is used to analyse panel data sets ie.Fixed effect model and random effect model, to decide which method to be employed, Hausman test was carried out. Test results of all the two scenarios indicated that random effect should be used as the P-value was more than 0.05.

The following regression equations are formulated to demonstrate the relationship between firm's risk and financial performance.

$$ROA = \beta 0 + \beta 1 CAD + \beta 2 LDR + \varepsilon$$

$$ROE = \beta 0 + \beta 1 CAD + \beta 2 LDR + \varepsilon$$

Where,

ROA=Return on assets

ROE=Return on equity

CAD=Capital adequacy ratio

LDR=Loan to deposit ratio

Ɛ=Error term

The following table indicates the results obtained through multiple regression analysis.

Table 4: Multiple Regression Analysis

Variables	Model 1 (ROA)		Model 2 (ROE)	
	Coef	**z**	**Coef**	**Z**
Liquidity Risk	0.253576	0.9304	-0.197360	0.2120
Capital Risk	0.216749	0.0043	0.045730	0.0136

Table 5: Results of model 1

Effects Specification
ROA

R-squared	0.509241	Mean dependent var	0.027207
Adjusted R-squared	0.423927	S.D. dependent var	0.090796
S.E. of regression	0.089703	Sum squared resid	2.228929
F-statistic	4.419579	Durbin-Watson stat	1.791271
Prob*(F-statistic)*	0.012900		

The result of the fit test for Model 1, ie.ROA which is presented in the above table 5 depicts a coefficient of determination of $R^2 = 0.50(50\%)$ and adjusted R^2 of 42%.Accordingly, 50% effect over dependent variable(ROA) is explained by the independent variables(CAR,LDR). Moreover, The Durbin Watson is 1.791271 which lies within the acceptable region and indicates a low auto serial correlation which is common in time series data. This confirms the statistical reliability of the model.

Based on the results for the model 1, the relationship between CAR and ROA has a coefficient of 0.216749, which indicates a weak positive correlation between the variables with a p value of 0.043.Since the p value is below 5%, researcher reject null hypothesis and

accept the alternative hypothesis which states that there is a significant relationship between capital risk and firm's performance.

Consequently, coefficient of LDR and ROA is 0.253576 signifying a positive correlation between the variables with a p value of 0.9304.Accordingly the null hypothesis is accepted which indicates there is no significant relationship between liquidity risk and firm's performance. This result is in line with the work of Ogilo and Mugenya (2015).

Table 6: Results of model 2

| **Effects Specification** | | | |
ROE			
R-squared	0.470946	Mean dependent var	0.190804
Adjusted R-squared	0.430224	S.D. dependent var	0.630371
S.E. of regression	0.630441	Sum squared resid	110.0953
F-statistic	0.968798	Durbin-Watson stat	1.830123
Prob*(F-statistic)*	0.380821		

Model 2 indicates the relationship with ROE. According to the above table 47% effect over the return on equity ratio which is measured by R-square is described by the independent variables.

Based on the results for the model 2, the relationship between CAR and ROE has a coefficient of
0.045730 which indicates a positive relationship among the variables with a p value below 5%.Therefore it is concluded that CAR has a significant influence over the performance of Return on equity ratio.

When considering the relationship between LDR and ROE it was noted that the p value is above 5%.Therefore,the null hypothesis is accepted which declares that there is no significant relationship between LDR and ROE.

Below table summarizes whether the hypotheses are supported or not based on the regression analysis.

Table 7: Supportiveness of hypothesis

Hypothesis	Alternative Dependent Variable	Supported or not
H$_1$:There is a positive relationship between capital and liquidity risk and the financial performance of bank, finance and insurance companies. (Return on Asset)	CAD LDR	Supported Not supported
H2: capital and liquidity risk and the financial performance of bank, finance and insurance companies. (Return on Equity).	CAD LDR	Supported Not supported

5. Conclusion

Corporate Risk in the companies are becoming a viral part of a banking, finance and insurance sector in Sri Lanka. The companies expend more time and money on identifying corporate risk and overcoming those risks. This study is about the relationship between the corporate risk and the financial performance of the above-mentioned sectors. Different entities face different types of corporate risks which may differ based on the industry. This topic becomes one of a major topics after the financial crisis which was happened before. When an entities environment is highly changing, they need to identify and manage their corporate risk. Previous researchers have concentrated so much on credit risk how it affects financial performance but they did not concentrate on other types of risks. This study tries to drill down many of the risks affected to the financial performance.

This study identifies the risk under the tools of Capital risk and Liquidity risk and financial performances under Return on Assets and Return on Equity. Capital risk is measured by total capital to risk weighted assets, whereas Liquidity risk is measured by loans to deposit ratio. In order to analyze this information, annual reports of organizations in selected sector are examined as secondary data for the period of 2013 – 2017. As per the Colombo Stock Exchange, there are 72 organizations in Banking, Finance and Insurance sector in Sri Lanka (i.e. Population) among that 56 organizations are selected for the study (i.e Sample). The data collected from annual reports was analyzed through SPSS and EViews models. . In order to identify overall interpretation on the data base, descriptive analysis was adopted by means of frequency analysis and correlation analysis. Next, the study employed panel data regression analysis to explore the association between firm's risk and firm's financial performance

which was measured through ROA and ROE. Multiple regression analysis on panel data basis was decided as appropriate as the sample contained data collected from 56 companies over five years period. EViews software was used for this purpose. Based on the Hausman test, cross section random method was selected for multiple regression analysis. Accordingly, cross section random method was performed separately to analyse two dependent variables i.e ROA and ROE. Based multiple regression analysis on panel data, we identified that there is a positive relationship between Capital Adequacy ratio with both ROA and ROE. Furthermore, there is a negative relationship between loan to deposit ratio with both ROA and ROE.

This study is important to banking, finance and insurance sectors when try to achieve high financial performance. Our findings will be of interest to the policy makers, future researches as well as to the general public and any third party who are keen on corporate risks and financial performances of banking, finance and insurance sector in Sri Lanka. However, the findings from this study would not be applicable for a long period because the economic conditions are changing time to time.

References

Al-Tamimi, H. and Al-Mazrooei M., (2007). 'Banks' Risk Management: A Comparison Study ofUAE National and Foreign Banks', *The Journal of Risk Finance*, Vol. 8 No. 4, pp. 394-409

Alzorqan.S. T. (2014).'Bank liquidity risk and performance: An empirical study of the banking system in Jordan'. *Research Journal of Finance and Accounting* .Vol.5. Issue:12.

Bassey, F. A. (2016). 'Liquidity management and the performance of banks in Nigeria', *International Journal of Academic Research in Accounting*, Vol. 6 Issue (1), pp.41–48.

Hassan A. (2009). 'Risk Management Practices of Islamic Banks of Brunei Darussalam.'.*Journal of Risk Finance*, Vol. 10 Issue: 1, pp. 23–37.

Kolapo T. F. (2012). 'Credit Risk and Commercial Banks' Performance In Nigeria: A Panel ModelApproach'. *Australian Journal of Business and Management Research* Vol. 2.Issue. 02, pp. 31-38.

Paul N. E. (2005).'Structure, performance, and risk management of financial institutions', *Agricultural Finance Review,* Vol.65 Issue: 2,pp.183-200.

Saleem S. (2011). 'Do Effective Risk Management Affect Organizational Performance?',*EuropeanJournal of Business and Management* ,Vol 3,Issue:3.

Siti Zaleha Abdul Rasid, Che Ruhana Isa, Wan Khairuzzaman Wan Ismail, (2014) "Management accounting systems, enterprise risk management and organizational performance in financial institutions", Asian Review of Accounting, Vol. 22 Issue: 2, pp.128-144, https://doi.org/10.1108/ARA-03-2013-0022

Smirlock, M., (1985). 'Evidence of the Relationship between Concentration and Profitability of Banking', *Journal of Money, Credit and Banking*, Vol. 17, pp.69-83.

Stulz R. (2008). 'Risk Management Failures: What Are Theyand When Do They Happen?', *Journal of Applied Corporate Finance*, Volume 20 Issue 4, pp. 58-67.

Cse.lk. (2018). CSE - Colombo Stock Exchange. [online] Available at: https://www.cse.lk/home/market [Accessed 31st Jul. 2018].