The impact of Portfolio Structure on Financial Performance of listed private Commercial Banks in Sri Lanka

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Introduction

The banking sector has become an extremely competitive powerful industry in the world today. There are many different kinds of banks are operating their business in Sri Lanka. Portfolio, product portfolio and portfolio management concepts were tested on many occasions in developed markets and developing markets widely. But especially the bank portfolio structure has not been widely studied and largely missing from the literature.

Research Questions

Q_1: What is the relationship between portfolio structure and financial performance?
Q_2: What is the impact of portfolio structure on financial performance?

Objectives of the Study

1. to identify the relationship between portfolio structure and financial performance.
2. to investigate the impact of portfolio structure on financial performance.

Literature Review

Ludsana and Nirujah (2014) examined the impact of service portfolio structure on performance in a listed hotel in Sri Lanka. The study covered 15 listed hotels over the period of 2009 to 2013 and a negative relationship was observed between income from accommodation, food, ROCE and ROA. Likely income from other operating service and ROA and ROCE also negatively related. David and Dionne (2005) found that the majority of large banks to a certain degree intuitively diversify the loan portfolio. Also, they found that due to the size of large banks it is assumed that loan portfolio diversification will happen naturally. Velnampy and Pratheepkanth (2012) found that the portfolio system has a positive association

with Performance. The overall result of efficiency and effectiveness performance of portfolio system was high view in the portfolio structure. According to the system, the efficiency and effectiveness performance rate is 60% as high level.

Methodology

The quantitative approach is considered to be a suitable approach for this study. Portfolio structure such as income from deposits, income from loans and income from pawning are measured through ratios which selected banks recorded as at 31st of December of each year. Based on the Purposive sampling method the researcher selected only 10 banks.

Conceptual Framework

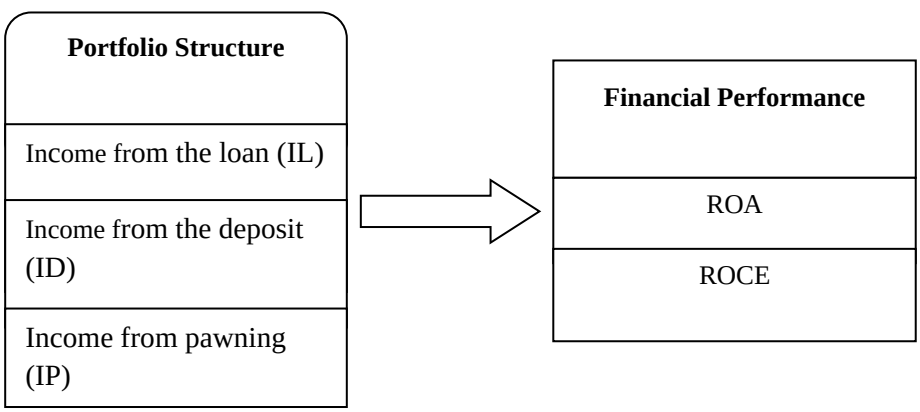

Figure 1: Conceptual Model

Hypotheses of the Study

H_{0a}: There is no significant impact of IL on ROA.
H_{1a}: There is a significant impact IL on ROA.
H_{0b}: There is no significant impact of ID on ROA
$H_{1b:}$ There is a significant impact of ID on ROA
H_{0c}: There is no significant impact of IP on ROA.
H_{1c}: There is a significant impact of IP on ROA
H_{0d}: There is no significant impact of IL on ROCE.
H_{1d}: There is a significant impact of IL on ROCE.
H_{0e}: There is no significant impact of ID on ROCE.
H_{1e}: There is a significant impact of ID on ROCE.
H_{0f}: There is no significant impact of IP on ROCE.
H_{1f}: There is a significant impact of IP on ROCE.

Results and Discussions

Correlations Analysis

According to the Table 1, the IL is negatively correlated with ROA and ROCE which is significant at 0.1 level. The ID is positively correlated with ROA with the R-value of 0.094 but it is not significant. As well as the ID is positively correlated with the ROCE with the r- the value of 0.066 but it is also not at a significant level. The IP is positively correlated with ROA with the R-value of 0.278 which is significant at a level of 0.1. The IP is negatively correlated with the ROCE with the r- the value of -0.002 but it is not at a significant level.

Table 1: Correlations Matrix

Variables	IL	ID	IP	ROA	ROCE
IL	1				
ID	0.762**	1			
IP	0.728**	0.722**	1		
ROA	-0.026*	0.094	0.278*	1	
ROCE	-0.016	0.066	-0.002	-0.020	1

*p<0.1 correlation is significant at 0.1 level
**p<0.05 correlation is significant at 0.05 level
***p<0.01 correlation is significant at 0.01 level

Impact of Portfolio Structure on ROA and ROCE

Table 2: Pooled regression analysis

	ROA			ROCE		
Variables	Cof	Se	sig	Cof	Se	Sig
IL	-0.9418	0.4238	0.031**	-0.0653	0.1187	0.585
ID	0.0403	0.4042	0.921	.0964	0.1132	0.399
IP	0.9259	0.3106	0.005***	-0.0201	0.0870	0.818
Intercept	1.229	3.2854	0.710	.1213	0.9203	0.896
R Squared	0.1882			0.0160		
Adjusted R^2	0.1353			0.0482		
F- Value	3.55			0.25		
P- value	0.0214			0.8618		
Durbin-Waston	1.179			1.823		

Table 2 shows the impact of the portfolio structure of both models. In the model 1, R square value of 0.1882 denotes that 18 % of the observed variability in ROA can be explained by the differences in the independent variables. Remaining 82% variance in the ROA is attributed to other variables. The F value is 3.55, that is significant at 0.05% (p =0.0214). That the previous researchers (Ludsana & Nirujah 2014) also found that there is a significant impact of portfolio structure on ROA at 0.01% (p=0.006) with the F value of 7.128. There may be the reason for

the portfolio structure has been significantly impacting on firm performance the ROA ratio consist the total assets so, the bank's total assets are a higher value than others such as liabilities, equity and also may say that profit or losses. Model 2, that the square of the R square is 0.0160, which indicates that the three indicators of banks portfolio structure determinants explain 0.16% of the variation in ROCE collectively.

Significant of Portfolio Structure on ROA and ROCE

Table 3: Significant of portfolio Structure on ROA and ROCE based on Pooled regression

Variables	ROA	ROCE
IL	Negative significant	Negative insignificant
ID	Positive insignificant	Positive insignificant
IP	Positive significant	Negative insignificant

The above table 3 describes the significance of the portfolio structure on ROA, ROCE, according to that IL has negative significant relationship on ROA, ID has a positive insignificant relationship on ROA and IP has a positive significant relationship on ROA. IL and IP have a negative insignificant relationship on ROCE, ID has a positive insignificant relationship on ROCE. That's means portfolio structure (IL, IP and ID) has no significant with ROCE.

Table 4: Hypothesis direction based on the Pooled regression

Variables	ROA		ROCE	
	H_0	H_1	H_0	H_1
IL		Accepted H_{0a}	Do not reject H_{0d}	
ID	Do not reject H_{0b}		Do not reject H_{0e}	
IP		Accepted H_{0c}	Do not reject H_{0f}	

Based on ROA the Hausman test prob > chi 2= 0.6706 since this value is more than 0.05. Therefore, RE is the most suitable for understanding the impact of portfolio structure on the financial performance of ROA. Based on ROCE the Hausman test prof>chi 2= 0.2966 since this value is more than 0.05. Therefore, RE is the most suitable for understanding the impact of portfolio structure on the financial performance of ROCE. Therefore, the final results of both models can be considered based on pooled regression and RE regression Analysis.

Regression result based on the Random Effect (RE)

Table 5: Portfolio structure on ROA based on RE regression

	ROA			ROCE		
Variables	Cof	Se	Sig	Cof	Se	Sig
IL	-0.7406	0.3787	0.051*	-0.0717	0.1216	0.555
ID	-0.0475	0.3854	0.902	0.1464	0.1188	0.218
IP	0.4558	0.2754	0.098*	-0.0290	0.0893	0.745
Intercept	5.7374	4.4018	0.192	-0.2723	1.0933	0.803
Wald chi	9.91			1.55		
Prob>chi	0.1652			0.6718		

The above table 5 shown the regression result based on the RE regression analysis. In order to identify the impact of portfolio structure on financial performance, the result of RE regression rewinds that it is capable enough of explaining a considerable fission of the total variability of 9.91 and 1.55. In this table Model, 1 represents the Wald chi value of 9.91 with insignificant of 0.1652 and IL has the negative coefficient of -0.7406 at the significant level of 0.051 ($p>0.1$) as well as IP has the positive coefficient of 0.4558 at the significant level of 0.098 ($p>0.1$). ID has the negative coefficient of -0.0475 at an insignificant level. Model 2, represent the Wald chi value of 1.55 with insignificant of 0.6718. IL and IP have the negative coefficient of -0.0717, -0.0290 at the insignificant level and ID has the positive coefficient of 0.1464 at the insignificant level. That's means portfolio structure (IL, IP and ID) has not been significant with ROCE

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Significant of Portfolio Structure on ROA and ROCE

Table 6: Significant of portfolio Structure on ROA, ROCE on RE regression

Variables	ROA	ROCE
IL	Negative significant	Negative insignificant
ID	Negative insignificant	Positive insignificant
IP	Positive significant	Negative insignificant

The above table 6 describes the significance of the portfolio structure on ROA, ROCE, according to that IL has negative significant relationship on ROA, ID has

a negative insignificant relationship on ROA and IP has a Positive significant relationship on ROA. IL and IP have the negative insignificant relationship on ROCE and ID have the positive insignificant relationship on ROCE. That's means portfolio structure (IL, IP and ID) has no significant with ROCE.

Table 7: Hypothesis direction based on the RE regression

Variables	ROA		ROCE	
	H_0	H_1	H_0	H_1
IL		Accepted H_{0a}	Do not reject H_{0d}	
ID	Do not reject H_{0b}		Do not reject H_{0e}	
IP		Accepted H_{0c}	Do not reject H_{0f}	

Conclusions and Recommendations

This study examined the impact of portfolio structure on performance in listed banks in CSE. The study covered 10 listed banks over the period of 2012 to 2016 and the major findings of the study are summarized below: There is negative significant relationship observed between IL and ROA at 0.05 levels, there is positive significant relationship observed between IP and ROA at 0.05 levels, there is positive relationship between ID and ROA but no significant impact. There is negative relationship observed between IL, IP and ROCE as well as there is a positive relationship between ID and ROCE but no significant impact, that means portfolio structure (IL, IP and ID) has no significant impact with ROCE based on Pooled Regression Analysis. There is negative significant relationship observed between IL and ROA at 0.1 levels, there is negative relationship observed between ID and ROA but no significant impact, there is positive significant relationship observed between IP and ROA at 0.05 levels. There is a negative relationship between IL, IP and ROCE as well as there is a positive relationship between ID and ROCE but no significant impact, that means portfolio structure (IL, IP and ID) has not been significant with ROCE based on RE Regression Analysis. Therefore, the overall result of both analyses revealed that there is a significant relationship between service portfolio structure and firm performance of ROA in Sri Lankan listed banks. However, there is no significant impact of portfolio structure on the financial performance of ROCE. It may be an inappropriate mix of portfolio structure. Furthermore, banks performance indicates negative and positive value in the financial year of last 5 years. Therefore, the firm must consider the structure of the portfolio to boost performance.

Banks should consider more diversify their service portfolio with the profitable service to enhance the performance to survive in the competitive environment by enlarging its service portfolio structure a bank can more effectively use its underutilized resources and capabilities. It should obtain more liquidity assets from the alternative investment opportunities and also it should correct the deviation between the liquidity and profitability it helps to the management to maintain the portfolio structure effectively. Banks must review their portfolio structure to find out the right mixture for the financial performance based on their capabilities Performance standards should be established and communicated to the investors.

References

David, H & Dionne, M 2005, 'Banks' loan portfolio diversification', *Qualitative Research in Financial Markets,* vol. 4, no. 1, pp. 6-25.

Ludsana N, Niruja, R, 2014, 'Service Portfolio structure & firm performance: A study on selected hotels in Sri Lanka', *ISCB,* University of Kelaniya, https://www.academia.edu/17011247/Service_Portfolio_Structure_and_Firm_Performance_A_Study_on_Selected_Listed_Hotels_in_Sri_Lanka.

Velnampy, T &Pratheepkanth, P 2012, 'Portfolio structure & performance: A study on the selected financial organization in Sri Lanka', *InternationalJournal of Business Management,* vol. 2, no. 2, pp. 1-9.