Sri Lankan Journal of Banking and Finance

An endeavor to share knowledge

Volume: 4 Issue: 02 December: 2021

EFFECT OF INCOME SOURCE DIVERSIFICATION ON FINANCIAL PERFORMANCE: EVIDENCE FROM SRI LANKA

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ABSTRACT

Decisions in income source diversification are very important in achieving the financial performance of finance companies. Also, diversification is one of the portfolio strategies to reduce the risk by combining various investments, and to increase the firms' financial performance indicating a sound financial strength of a company and a firmed guarantee of making the profitable investment to its depositors, shareholders, employees, and the economy at large. This study aims to investigate the effect of income source diversification on financial performance based on the data concerning finance companies listed at the Colombo stock exchange in Sri Lanka. This paper investigates the effect of income source diversification on financial performance based on the data concerning fifteen (15) listed finance companies in Sri Lanka during the period ranging from 2014 to 2020. The study measures financial performance in terms of Return on Assets, whereas income source diversification is measured by Herfindahl-Hirschman Index. Four control variables were considered namely firm size, firm age, operational efficiency, and debt to equity in order to strengthen the data analysis model. Findings of this study revealed that the HHI index and debt to equity ratio are negatively significantly correlated with financial performance while other correlations; firm size, age, and operational efficiency are insignificant at a 5% significant level. Regression

(R^2) result indicates that only 12.7% (approx.) variation in financial performance can be explained by the income source diversification and other 87.3% (approx.) variations come from other factors. Further, this study reiterated that the diversification is a sun shed for enlightening the investment process of any source with aiding through intermediation and performing through the portfolios for the finance companies, because, they always promptly concentrate the dynamic investment appraisal and management activities in Sri Lanka as well as abroad. Further, this study recommends that the managers in finance companies focus on different sources of revenue generation in order to minimize their level of risk through a diversification strategy to enhance efficiency. This study contributes to the finance sector literature of Sri Lankan markets.

Keywords – Income Source Diversification, Financial Performance Listed Financial Companies, Colombo Stock Exchange, Sri Lanka

1. INTRODUCTION

Diversification is one of the financial strategies used by financial institutions to gain competitive advantages from the existing and emerging investment markets. In other words, diversification is one of the portfolio strategies designed to reduce risk by combining various investments. In finance and investment planning, diversification improved cost efficiency through lower risk from diversification if it occurred; it lowered the required risk premiums on un-insured debt. In every country, finance is considered as the lifeblood for its economic development. It has a vital role that the finance should be provided to run the economic activities more effectively. The financial institutions have used some tools for establishing in market namely, value exchange, intermediation, risk transfer, and liquidly.

As Muthoni (2012) emphasized "Income source diversification o refers to financial institutions as well as shifting their income sources into non-intermediation income generating activities as opposed to the traditional inter-mediation income generating activities". Banks and finance companies have shifted their sales mix by diversifying income sources mainly into two sources; interest income and non-interest income. Non-interest income components include fees and commissions on loans and advances, other fees and commissions, foreign exchange trading income, dividend income and other non-interest income. Non-interest income increases bank franchise value and banks with higher non-interest income have higher market betas (Baele et al., 2007).

Financial performance is a measure of how sound financial strength of a finance company is and how is a guarantee to its depositors, shareholders, employees and the economy at large. Due to this fact, efforts have been made from time to time, to measure the financial position of each bank and manage it efficiently and effectively (Batiz-Lazo and Kassa, 2006). The financial performance (profitability and return on investment) of finance companies heavily depends on the net interest income-generating activities and the related activities' expenses. Due to some reasons, finance companies have changed their behavior of income sources, by increasingly diversifying into non-intermediary income generating activities. Rapidly changing financial environment, changing trends in the economy, customer's expectations, increased competition, regulatory pressure (Capital requirements), and the volatility of interest-based income have pushed the finance companies to think about the non-traditional ways of income generation. Finally, to survive in the intense competition of finance companies and to increase profitability, finance companies should need diversification in their income sources.

In this highly competitive financial environment, Finance companies are now more concerned about earning volatility and they are now in search of new means to generate revenue in addition to their conventional modes; called income source diversification (Ismail, et al., 2013). By engaging in those activities finance companies have been able to diversify their income sources as net interest income and non-interest income (Waithira, 2013). It contains Net Interest Income and Non-Interest Income as major revenue streams. As explained the difference between revenues generated by interest-bearing assets and the cost of servicing (interest burdened) of those particular liabilities, interest income components include: loans and advances, government securities, deposits and placement with banking institutions, other interest income. Net interest income can explain the deference between interest incomes received and interest payments make to liabilities. Net Interest income components are; loans and advances, government securities, deposits and placement with banking institutions, and other interest income. Finance companies in Sri Lanka are depending on interest base sources as their main income source.

Non-interest income components are the fees and commissions on loans and advances, other fees and commissions, dividend income, and other non-interest income. Non-interest income explained the pool of fiduciary activities income. include: service charges on fixed deposits accounts, trading revenue, fees and commissions from advisory, and underwriting fees and commission, fees and commissions from annuity sale, underwriting income from insurance and reinsurance activities, income from other insurance activities, and other non-interest income. According to the DeYoung & Rice (2004a and 2004b)) stated that non-interest income now accounts for over 40 percent of operating income

in the U.S. financial industry and their results suggest that well managed financial institutions rely relatively less on noninterest income and that institutes which stress customer relationships and service quality tend to generate more non-interest income. Moreover, the study found that the development of new financial technologies such as cashless transactions and mutual funds are associated with higher levels of noninterest income in the financial industry. They further stated that well-managed financial institutions expand more slowly into non interest activities, and that marginal increases in non-interest income are associated with poorer risk-return tradeoffs on average. For an effective income diversification strategy, financial institutions should not heavily rely on non-traditional ways of income generation (Huang & Chen, 2006). Non-interest income components are; fees and commissions on loans and advances, other fees and commissions, dividend income, and other non-interest income (Teimet, et al., 2011).

Accordingly, the growth of non-intermediation income activities suggests intermediation activities are becoming a less important part of strategies and strategically financial institutions have shifted their sales mix by diversifying in income sources (Teimet, et al., 2011). To survive in the intense competition, financial institutions need diversification in their income sources (Ismail, et al., 2013). In addition, they reported that some financial institutions are fully concentrated towards either interest income or non-interest income, which is also not a good strategy. There should be a balance between all sources of income, as over-diversification give rise to the volatility of the returns and risk of default. Ismail, et al. (2013) also stated that larger institutions have greater ability to diversify risk and should be safer in operation -and thus have lower cost of funding than smaller ones and larger institutions may have relatively better profitability than smaller ones (Teimet, et al., 2011). Income sources mean simply the way of income came from the organizations. As an example, an interest income comes from deposits, lending to the public, and non interest incomes come from advice services to customers, commission, and fee on services and profits or loss on trades and sales. Any organization should be required to document and report its financial and non-financial information to measure the financial performance which can be processed by calculating Return on Assets (ROA) or Return on Equity (ROE). ROE means how the profitability of the company is contributed by the value of shareholders' equity and it is calculated by net income divided by shareholders equity.

In the Sri Lankan context, there are lots of financial institutions which serve a variety of financial services to their customers while achieving the objective of earning profits (Ariyadasa et al., 2016). The financial stability of every organization is mainly depending on its financial performance and it also is affected by the diversification of its income sources. Financial performance is a subjective measure of how well a firm can use assets from its primary mode

of business and generate revenues. Moreover, it is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The relationship between income source diversification and financial performance remains a controversial one in both theory and empirical findings with positive, negative exemplified. Earlier studies showed positive and negative results about the relationship between income source diversification and financial performance of banking sector organizations abroad.

When finance companies were operating in a competitive environment, which companies should be needed to be more stable as they diversified the portfolios. Also results from cause to enhance performance, risk-adjusted returns for the finance companies and to survive in the stiff competition? The research problem arising leads to need for the study, because no clear answers were found within the literature reviewed in theory or in practice and the lack of researchers regarding this topic under Sri Lankan context. Further need to investigate the strategies to face the high competition within finance companies in Sri Lankan context motivated the researcher to conduct a study regarding this area. This study will be expected to find out that are there any impacts of income source diversification on the financial performance of listed finance companies in Sri Lanka

The finance companies in Sri Lanka operate in a competitive environment without any understanding of how to make a high profit through the funds invested in defeated sources of income. In this context, the main objective of this study is to examine the effects of income source diversification on the financial performance of listed finance companies in Sri Lanka. By linking this main objective, this study tries to fulfill these two specific objectives; to provide guidelines to informal entities to manage their limited resources within a competitive environment and to provide guidance to future researchers to conduct studies in the finance sector.

2. LITERATURE REVIEW

Banks are using non-trading income methods, diversification from traditional income methods, to enhance their profitability from last decades, (Kumar, Chaudhuri, & Sharma, 2019). The continuous development of non interest earning activities identified that the traditional interest-earning ways are reducing in importance and therefore banks are entering new markets thus diversifying their income sources. Over the last two decades, the global banking sector has faced major challenges that have destabilized interest income. Specifically, the sector continues to grapple with rising nonperforming Loans, competition from non-banking entities, and unprecedented growth in financial

technologies (Gololo, 2018; Dimitrios & Mike, 2016; Psillaki & Mamatzakis, 2017). Bank diversification can take different forms. However, due to regulatory limits, the focus is on income diversification. Income diversification refers to increasing the share of the fee, net trading profits, and other noninterest income within the net operating income of a bank (Gurbuz et al., 2013). In principle, income diversification is a shift from lending activities towards non-lending activities such as investment banking, trading, and insurance (Busch & Kick, 2009). Besides, Ebrahim and Hasan (2008) view income diversification as the expansion into new income-earning financial services away from traditional intermediation services. There were some theories stated by researchers in previous studies. Some of the particular theories are as follows. In this study, three theories were explained and namely, resource Based View theory, financial intermediation theory, and Modern Portfolio theory.

2.1 Resource Based View Theory

Waithira (2013) stated in his study that the theoretical perspective that has come to be known as the resource-based view of the Firm suggests that sustainable competitive advantage often originates inside the firm, and that strategy at the firm level is therefore driven by firm-specific resources and capabilities. The effectiveness of firm strategies depends on the utilization and exploitation of existing resources. To the extent that firms have pools of underused resources, these create unique, firm-specific opportunities for exploitation (Montgomery, 1994). The resource-based view of the firm suggests that diversification arises as firms attempt to leverage non-tradable firm-specific resources, among them human resources. Studies of diversification have long been a mainstay of economics as well as strategic management research (Hoskisson & Hitt, 1990). More skeptical views offered by agency theorists emphasize the benefits that diversification offers to firm managers themselves, often at the expense of its shareholders. Resource-based view theory generally assumes that firms are organized with a single product focus and face a homogeneous factor market. Based on those assumptions, a market power view of diversification emphasizes the benefits a firm may reap at the expense of its competitors and customers. Diversification is one such strategy for exploiting existing firm-specific resources: firm diversification can be understood as a process through which managers first identify resources that are unique to their firm, and then decide in which markets those resources can earn the highest rents. Some firm resources are ‘indivisible’ and therefore ‘sticky’, and, particularly if they are intangible, difficult, or impossible to trade in the market.

2.2 Financial Intermediation Theory

Financial intermediation is a process that involves surplus units depositing funds with financial institutions that then lend to deficit units. Waithira (2013)

and Stiroh (2004) identify that, financial intermediaries can be distinguished by four criteria: first, their main categories of liabilities (deposits) are specified for a fixed sum which is not related to the performance of a portfolio. Second, the deposits are typically short-term and of a much shorter term than their assets. Third, a high proportion of their liabilities can be withdrawn on demand. And fourth their liabilities and assets are largely not transferable. The most important contribution of intermediaries is a steady flow of funds from surplus to deficit units. According to Scholtens and Van Wensveen (2003), the role of the financial intermediary is essentially seen as that of creating specialized financial commodities. These are created whenever an intermediary finds that it can sell them for prices that are expected to cover all costs of their production, both direct costs and opportunity costs. If there is no cost of financial intermediaries between buyers and sellers, intermediates may not stay. Also, it stated perfect transformation of information is important for the intermediating process.

2.3 Modern Portfolio Theory

Hassan (2017) stated that the Modern Portfolio Theory depends on the concept that investors who are fearless to risk can create portfolios to maximize the return. The modern portfolio theory helps investors and investees to classify, estimate, and control both the type and rate of expected return and risk in any investments as a complex theory, and it will aid in quantifying the risk-return relationship and the hypothesis. Investors also used this theory in accepting and reimbursing risk. According to the above theories, basic theoretical knowledge can be derived for the researcher and it is needed and advisable to conduct the proposed study as expected by the researcher. By the Resource-Based View theory, it provides an explanation about how the firm can utilize their own resources in traditional ways and gains the competitive advantages through it. The firm's strategies mainly depend on its resources and arise opportunities to expand firm capabilities. The financial intermediation theory explains those financial companies' roles in a financial market. As roles, the finance companies take deposits from surplus units and it lends to deficits units. In accelerating country development, the finance companies should need to transfer the funds to needed parties. Modern Portfolio Theory is considered a new trended theory of financial theories. Modern Portfolio theory explains that if any organization trends to bear more and more risk it will affect to generate maximum return to the organization. On the basis of the light of the review of these three theories, the resource-based view of the firm suggests that diversification arises as firms attempt to leverage non-tradable firm-specific resources, among them human resources. For this stance, the theoretical link for financial intermediation is needed to validate the process of income source diversification and this is a process that involves surplus units depositing funds with financial institutions who then lend to deficit units to identify

distinguished financial intermediaries based on the criteria: main categories of liabilities (deposits) are specified for a fixed sum which is not related to the performance of a portfolio, deposits are typically short-term and of a much shorter term than their assets, a high proportion of their liabilities are can be withdrawn on demand and liabilities and assets are largely not transferable. The diversification is implemented after verifying the most important contribution of intermediaries which is a steady flow of funds from surplus to deficit units. Then the view of diversification through financial intermediation seems to be linked to the concept that investors, who are fearless to risk, can create portfolios to maximize the return and minimize the risk classifying, estimating, and controlling both type and rate of expected return and risk in any investments. Therefore, it is to conclude that diversification is a sun shed for enlightening the investment process of any source with aiding through intermediation and performing through the portfolios.

According to the above theoretical scorecard, the scenario will be addressed with the following empirical literature. Bailey-Tapper (2010) explained the relationship among non-interest Income, financial performance, and the macro economy from evidence on Jamaican panel data for the period of twelve years from 1999 to 2000, and the study also investigated there is a positive and significant relationship between financial performance (as measured by the ROA) and non-interest income for larger financial institutions. Ismail, et al, (2013) conducted a study of "Income diversification in financial institutions of Pakistan: a blessing or curse?" and that study aimed to fill the gap in the existing literature of Pakistan by empirically exploring the relationship between income diversification and performance for the period of 2006-2013. The result shows that there is a positive relationship between income diversification and the performance of financial institutions in Pakistan and results indicate that financial institutions can increase their performance with more diversification. Tarawneh, et al., (2017) investigated the impact of noninterest income on the financial performance of Jordanian financial institutions. The empirical findings of the study were noninterest income increases the profitability of financial institutions. Hassan (2017) investigated the effect of income diversification on the financial performance of commercial banks listed at the Nairobi Security Exchange. According to that income, diversification is a costly affair for commercial banks since it has a negative impact on financial performance.it also concluded that, the size and capital adequacy had a positive impact on financial performance while liquidity had a negative impact". This research also recommended to future researchers to those studies may consider the effect of diversification of income on the performance of Islamic banks or the impact of geographical diversification on performance on commercial banks. As Asif & Akhter (2018) reviewed, exploring the influence of revenue diversification on financial performance in the banking industry) have found that Revenue diversification, in the true spirit, increases the performance of the

banking sector, but it depends upon the size and market power of the particular institutions and country as well. The findings of current SLR revealed the fact that a great deal of research work has been done on commercial banks of Asian and European economies, however, a research gap exists for those countries where the dual banking system is prevailing. Researchers have used different models for analysis, i.e., multiple regression model, generalized methods of moments, and in some cases fixed and random-effects models. However, Alhassan (2015) investigated the relationship between income diversification and bank efficiency of Ghanaian banks in an emerging market that also tested the hypothesized relationship between income diversification and efficiency and found that Ghanaian bank operates at about 17 per cent below the efficient frontier. Further, he revealed that small banks are found to have low efficiency in cost compared to large banks.

By concentrating on the above theoretical and empirical insights, the authors revealed that the income source diversification is a footprint that the key decision-makers and financial specialists take for vibrating strategic and sustainable financial decision making, so that optimal financial performance can be achieved thereafter. Income source diversification on that extent through a scanned and in-depth policy framework is a vacuum for modern financial decision-making pertaining to the investment and lending in an optimal return perspective, Income source diversification is a strategic perspective as it preserves the way to achieve financial performance in a healthy manner. In this case, it would be highly beneficial to achieve the corporate objectives on wealth maximization plus social benefits. Therefore, the spirit of the above-mentioned literature shows the evidence to fulfill the research gap to reveal the impact of income source diversification on performance of banking and other investment companies in other countries However, in the Sri Lankan context, there was a lack of studies done by the researchers regarding the relation between income source diversification and financial performance specially in the financial sector. In order to fulfill this research gap, concentrating the following conceptual and hypothetical framework, the researcher is to find the relation between income source diversification and financial performance in Sri Lankan financial sector companies in Sri Lanka.

3. CONCEPTUAL FRAMEWORK AND HYPOTHESIS

The above theoretical and empirical insights show that there is a link between the income source diversification and financial performance, so that the following conceptual model is developed based on the variables deduced from the aforesaid literature understandings, implications, and originalities as such;

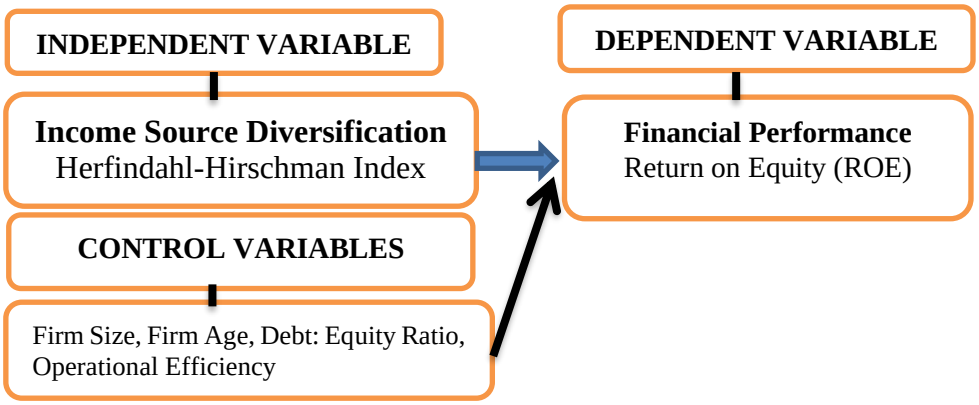

Figure 1: Conceptual Model

Source: Author Developed

In this conceptual framework, the independent variable is the income source diversification, which is measured in terms of the Herfindahl-Hirschman Index (HHI), whereas the dependent variable is the financial performance which is measured in terms of the Return on Assets (ROA). In addition, four control variables were used to strengthen the outcome of this study through the data analysis model to be constructed in the methodology. Accordingly, the study hypotheses were formulated based on the aforesaid theoretical and empirical insights, implications, and findings as discussed (Asif & Akhter, 2018; Hassan, 2017; Tarawneh, et al., 2017; Alhassan, 2015).

The hypothesis means that a tentative relationship between two or more variables builds up the researcher. Before establishing hypotheses, the researcher should clearly identify the key variables of the study. This study uses the statistical hypothesis approach to develop the hypothesis for the data analyzing part. Reasons for that the data was gathered by the researcher can test statistically.

H_1 There is a relationship between income source diversification and financial performance of Sri Lankan listed financial companies.

H_2 There is a relationship between firm size and financial performance of Sri Lankan listed financial companies.

H_{1b} There is a relationship between firm age and financial performance of Sri Lankan listed financial companies.

H_{1c} There is a relationship of operational efficiency and financial performance of Sri Lankan listed financial companies.

H_{1d} There is a relationship between debt-to-equity ratio and financial performance of Sri Lankan listed financial companies.

H_2 Income source diversification has an impact on financial performance of Sri Lankan listed financial companies.

Then, the researcher has chosen the methodology to collect the data and its analysis in order to generalize the findings for achieving the objectives of this study.

4. METHODOLOGY

4.1 Research Design

Research design is an essential part to be concentrated on. It is a strategy that a researcher formulates to conduct the whole research. Zikmund et al., (2013) iterated that the research design denoted methods and procedures for collecting and analyzing the needed information which comprises sampling methodologies, data collection techniques, data analysis, and cost schedules. Mainly, it includes the research method, selecting the population and sample, data collection, identification of variables, data modeling, data analysis and generalization of findings, etc. This study has used a descriptive quantitative data collection method as a research method. Quantitative research design is a numerical representation and explanation of the phenomena in observed data. It is a blueprint of the research as it shows how all of the major parts of the research connect with the project and coordinate to achieve the particular research objective. Further, research methodology is the specific procedures or techniques used to identify, select and analyze information about a topic. In a research paper, the methodology part allows the reader to critically evaluate a study's overall validity and reliability. This study is both longitudinal and explanatory. In general, a large collection of individuals or objects is the main focus of a scientific query and is also defined as a well-defined object. In this study, the researcher has selected 54 finance companies in Sri Lanka as a population of the finance companies which are listed in Colombo Stock Exchange (CSE) in Sri Lanka.

4.2 Sample Size

In this study, the sample consists of fifteen (15) listed finance companies out of 54 companies over the 2014 to 2020 period by using a convenient sampling method.

Secondary data was collected through the respective audited annual reports that were presented during the period as mentioned above, and these are freely available on the Internet (Through the website of the Colombo Stock Exchange

and the particular finance companies). Table 1shows the selected finance companies for the data collection purpose.

Table 1: Selected listed finance companies in Sri Lanka

No	Finance Company	Listing Code
1	Abans Finance PLC	AFSL. N0000
2	Alliance Finance Company plc.	ALLI. N0000
3	Central Finance company PLC	CFIN. N0000
4	Mercantile Investment and Finance PLC	MERC.N0000
5	Vallible Finance Plc.	VFIN. N0000
6	Associated Motor Finance Company PLC	AMF. N0000
7	Soft logic Finance PLC	CRL. N0000
8	Arpico Finance Company PLC	ARPI.N0000
9	Singer Finance (Lanka)PLC	SFIN.N0000
10	Senkadagala Finance PLC	SFCL.N0000
11	Bimput Finance PLC	BLI. N0000
12	LOLC Development Finance	NIFL.N0000
13	SMB Finance	SEMB.X0000
14	Sinhaputhra Finance PLC	SFL.P0000
15	Swarnamahal Financial services PLC	SFS.N0000

Source: Researcher's Data Collection, 2020

4.3 Measurement of Variables

This section is described to how the researcher has measured the variables identified through the literature review as well as the conceptual framework. In this case, there are three categories of variables that the researcher has taken into consideration as follows.

Independent Variable: According to the Herfindahl-Hirschman Index (HHI) model, Net interest income and Non-Interest Income (NII) is considered as an independent variable. NII includes loans and advances, government securities, deposits and placement with banking institutions, and other interest income. Non-interest income (NonII) includes fees and commissions on loans and advances, other fees and commissions, dividend income, and other non-interest income.

Dependent Variable: Dependent variable means that is changed or controlled on other variables which are independent variables. It means that a variable is affected by an independent variable. In this study financial performance is a dependent variable (Return on Equity (ROE)).

Control Variable: Control variables are unchanged and indirectly affected by the relative relationship between independent and dependent variables. As shown in Figure 1, this study used the four control variables for interpretation of results of the analyzing data namely, firm size, firm age, operational efficiency, and debt to equity.

Accordingly, the operationalization of all independent, dependent, and control variables is tabulated as follows.

Table 2: Operationalization of variables

	Variables	Indicators	Mathematical Expression	Reference
Independent Variable	Herfindahl-Hirschman Index	Index	$HHI=1-(NET/(NET+NON))^2+(NON/(NET)^2$	Tarawneh, et al. (2017)
Dependent Variable	Return on Equity (ROE)	Ratio	Profit After Tax / Shareholders Funds	
Control Variables	Firm Size	Ratio	Natural Logarithm of Total Assets	(Almazari, 2014)
	Firm Age	Number	Current year – Year of Establishment	
	Debt-Equity Ratio	Ratio	Total Debts / Total Equity	
	Operational Efficiency	Ratio	Total Operational Expenses / Net interest Income	(Almajali, 2012)

Source: Based on the survey data

5. RESULTS AND DISCUSSIONS

This study is conducted by using the techniques and procedures to describe and analyze the sample data into a meaningful context. There are three main data analysis tools used as; descriptive statistics, Pearson's correlation analysis, and regression analysis. The aim of this data analysis is to obtain the results from the data analysis to confirm the data analysis model and to find out the achievement of objectives through hypotheses testing. Figure 2 shows the graphical representation of sampled Sri Lankan listed finance companies on their financial performance (average of net interest income, other income, and net profits between periods in 2014 to 2020. In this study, the researcher has used the statistical package for social sciences (SPSS 95% & 99%) to analyze the data of the study.

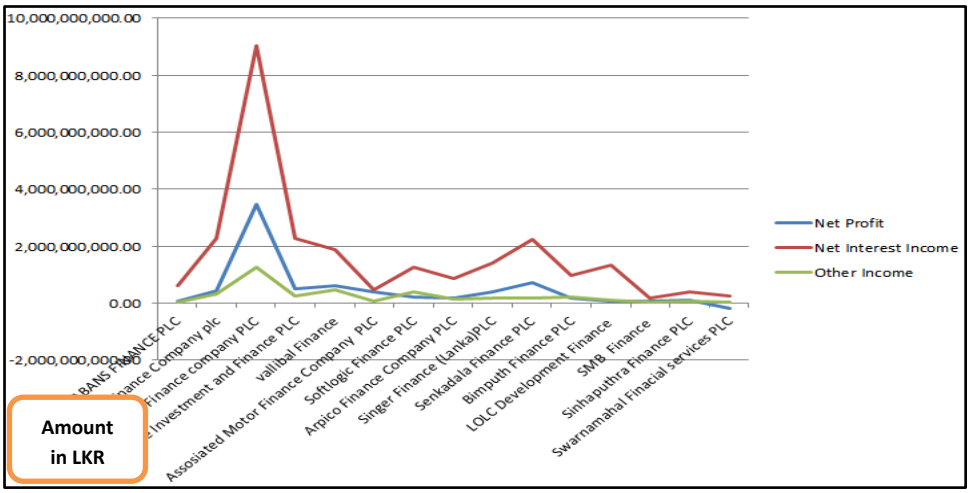

Figure 2: Income analysis, developed by researcher

Source: Based on survey data

5.1 Descriptive Statistics

First, descriptive statistics are used to describe the characteristics of a data set or nature of the data set of the sample within the data description, the study used mean and medium, and standard deviation to measure the descriptive characteristics of the studied sample. This research was purely secondary in nature. The data was collected from the annual reports uploaded on the official websites of particular finance companies as well as audited financial statements presented in the annual reports on the official website of the Colombo Stock Exchange. In Table 3, the researcher presents a descriptive analysis of the concerned variables associated with Sri Lankan-listed finance companies. This study considers ROE as a dependent variable and the independent variable (income source diversification) is measured expressed in terms of the Herfindahl-Hirschman index. In addition, the control variables are; firm size, firm age, debt to equity ratio, and operational efficiency. Mainly this analysis is helpful to identify the overall description of the variables used in the model. The summary of descriptive statistics contains the no. of observations, mean, standard deviation, minimum and maximum of one dependent variable, one independent variable, and four independent variables. The mean value is the sum of the observations divided by the total number of observations. The standard deviation is the square root of the variance and furthermore, it shows how close the data is to the mean. The variance describes the spreading of the data from the mean. It is the simple mean of the squared distance from the mean. Furthermore, the above table shows the average indicators of variables computed from the financial statements and the standard deviation that shows how much dispersion exists from the average value. Brooks, (2008) revealed

that a low standard deviation indicates that the data point tends to be very close to the mean, whereas a high standard deviation indicates that the data point is spread out over a large range of values.

Table 3 shows that descriptive statistics of the income source diversification on the financial performance of listed finance companies in Sri Lanka.

Table 3: Summary of the descriptive statistics Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
HHI	105	.00	.48	.2282	.10796
SIZE	105	8.83	10.93	9.9560	.47079
AGE	105	6.00	68.00	36.6000	20.27864
OE	105	.19	2.24	.6395	.25255
DE	105	-6.58	19.24	5.1460	4.17138
ROE	105	-68.76	276.39	12.8342	34.32188
Valid N (listwise)	105				

Source: Authors calculations based on survey data

As shown in the above table the data for the study was gathered from annual reports published by the finance companies that were totaling 105 observations from 15 companies. The average performance measured by ROE was 12.83 with a standard deviation of 34.32. The mean of income diversification (HHI1) was 0.2282 while the standard deviation was 0.108. The average firm size was 9.956 with a standard deviation of 0.470. The average Operational efficiency (OE) and Debt to equity (DE) were 0.6395, 5.146 with standard deviations of 0.2525 and 4.171 respectively.

5.2 Correlation Analysis

The researcher has the correlation analysis to measure the strength and direction of the linear relationship between the independent and dependent relationships in this study. The most widely-used type of correlation coefficient is Pearson r, also called linear or product-moment correlation. The values of the correlation coefficient are always between -1 and +1. A correlation coefficient of +1 indicates that the two variables are perfectly related positively; while a correlation coefficient of -1 indicates that two variables are perfectly related in a negative linear sense. A per the significance that Gujarati (2004) emphasized, a correlation coefficient of 0, indicates that there is no linear relationship between two variables. Table 4 shows the results obtained through the correlation analysis.

Table 4 -Correlation matrix

	HHI	SIZE	AGE	OE	DE	ROE
HHI	1.0000					
SIZE	-0.132	1.0000				
	0.139					
AGE	0.168	0.436**	1.0000			
	0.087	0.000				
OE	0.420**	-0.382**	-0.367**	1.0000		
	0.000	0.000	0.000			
DE	-0.086	0.226*	0.205*	-0.218*	1.0000	
	0.384	0.020	0.036	0.026		
ROE	-0.213*	0.023	0.062	-0.056	-0.254**	1.0000
	0.029	0.818	0.531	0.570	0.009	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Authors calculations based on survey data

Table 4 shows the outcomes of correlation analysis of all independent variables used in this study. Correlation analysis was used to test the relation with each other variable and as shown in the above table the result revealed that the independent variables are correlated with each other.

The correlation between HHI Index and ROE is -0.213 with a p-value of 0.029, it implies that there is a negative significant relationship between income source diversification and ROE at a 5% significance level. Then, the correlation between debt-to-equity ratio (control variable) and ROE is -0.254 with a p-value of 0.009, which implies that there is a negative significant relationship between debt-to-equity ratio and ROE at a 1% significant level. Other correlations of control variables; Firm Size, Firm Age and Operational Efficiency, and ROE indicate that those relationships are insignificant.

In summary, the correlation analysis shows the direction and degree of associations between variables. It does not allow the researcher to make cause and inferences regarding the relationship between the identified variables in this study. Hence, regression analysis which is discussed in the next subsection of the study gives assurance to overcome the particular shortcomings in examining the effects of selected proxies of the independent variable on the dependent variable.

5.3 Multiple Regression Analysis

In achieving the purpose of this study, the researcher used a linear regression model to investigate the effects of income diversification on financial

performance of finance companies. Here, HHI was used as determinant of income diversification. The HHI was regressed against to financial performance and there four control variables were used in this study, namely firm size, debt to equity ratio, debt to assets ratio and earning per share. According to the data analysis model for ROE, Table 5 shows the analyzed results in order to find the impact of predictors (HHI and SIZE, AGE, OE, DE) and the financial performance in ROE.

Table 5 - Model summary (R^2) – ROE

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	357[a]	0.127	.083	32.85895

a. Predictors: (Constant), DE, HHI, SIZE, AGE, OE
Source: Authors calculations based on survey data

As shown in the above table the coefficient of determination (R2) was 0.127. It was indicated that the income diversification, firm size, debt to equity, debt to assets, earning per share are jointly explained 12.7% of the variation of financial performance. It means that HHI and SIZE, AGE, OE, DE were only explained in 12.7% of variations in this study while remaining variations (87.3%) are explained by other factors. The next table (Table-6) is the ANOVA table, which reports how well the regression equation fits the data (predicts in ROA) and is shown below.

Table 6 – ANOVA

Model		Sum of Squares	df	Mean Square	F.	Sig.
1	Regression	15619.737	5	3123.947	2.893	.018
	Residual	106891.355	99	1079.711		
	Total	122511.093	104			

a. Dependent Variable: ROE

b. Predictors: (Constant), DE, HHI, SIZE, AGE, OE

Source: Authors calculations based on survey data

The above table indicates that the regression model predicts the dependent variable ROE significantly well. This indicates the statistical significance of the regression model that was run. Here the P-value is 0.018 which is less than 0.01, and indicates that the regression model statistically significantly predicts the

financial performance (ROE). This means that it is a good fit for the data. Table 7 shows the coefficient of regression and results.

Table 7 - Coefficients of regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.539	79.845		.157	.876
	HHI	-72.318	32.918	-.227	-2.197	.030
	SIZE	2.331	7.951	.032	.293	.770
	AGE	.127	.183	.075	.698	.487
	OE	2.101	15.531	.015	.135	.893
	DE	-2.413	.805	-.293	-2.998	.003

a. Dependent Variable: ROE

Source: Authors calculations based on survey data

HHI had a regression coefficient of -72.318 that indicates the effect of income diversification has a negative impact on the financial performance of listed finance companies. Meanwhile, more income source diversification may affect financial performance. The coefficient of HHI had a significant probability of 0.030. When the probability value is lower than 0.05 It indicated that the effect of income source diversification was statistically significant. The regression coefficient of firm size had a 2.331 with a p-value of 0.770 which indicates that the firm size had a positive effect on financial performance since the p-value was more than 0.05 then it was not statically significant. Firm age also had a 0.127 with a probability value of 0.487 that also indicates firm age has a positive effect on financial performance. Operational efficiency (OE) and debt to equity (DE) had 2.101, -2.413 with the probability of 0.893 and 0.003 respectively. A probability of OE was more than 0.05 therefore it was not statically significant. But the probability of DE is lower than 0.05 then was statically significant. As shown in the above table indicates the results of variation analysis. According to the above results, the model was found of F value as 2.893 with a significant probability of 0.018. When the F value was more than 1 then the variables studied in this study were jointly statically significant. If the F value was less than 1 and the p-value was more than 0.05 that indicated the model was statically insignificant. According to the above table, the regression model has a constant of 12.539, and HHI, SIZE, AGE, OE, DE have coefficients of -72.318, 2.331, 0.127, 2.101, and 2.413 as respectively. According to the above table, the resulting regression equation was:

$$\mathbf{Y= 12.539 - 72.318X_1 + 2.331X_2 + 0.127X_3 + 2.101X_4 - 2.413X_5}$$

5.4 Findings of the study

This study used the descriptive statistics, correlation and linear regression model for the analysing of data in this study. Based on the results obtained through data analysis, the following findings were noted.

1. Table 3 shows the mean and standard deviation of the variables. HHI had a mean of 0.2282 with std. deviation of 0.108 and ROE had a mean of 12.83 with std. deviation of 34.32 as target variables of the study.

2. On the basis of correlation values, the summary of significant movements is noted.

Table 8 - Findings of correlations

Dependent	Independent	HHI	SIZE	AGE	OE	DE
ROE	Pearson Correlation	-.213*	.023	.062	-.056	-.254**
	Sig.(2-tailed)	.029	.818	.531	.570	.009

Source: researcher analyzed data, 2020

According to Table 4 on the correlation matrix, the independent variable HHI is negatively correlated significantly with financial performance (ROE) at a 5% significance level. Also, the control variable Debt to equity ratio is negatively correlated significantly with financial performance (ROE) at a 1% significant level. The other control variables of Firm Size, Firm AGE, and OE are insignificant. However, the relationships among all independent and control variables with dependent variables exist as positively / negatively significant or insignificant. It means that there are associations between independent and dependent variables either positively or negatively significant and not. Therefore, the hypothesis H_1 is supported.

This study has investigated the effects of income source diversification on financial performance by using SPSS analytical methodology. According to Table 7**,** the result of income source diversification (HHI) had a negative effect on financial performance. It's mean that more income diversification may lead to lower financial performance. The results indicated that firm SIZE had a positive effect on performance. It means that if the firm size is increased by one unit it will lead to an increase in the performance by 2.331. AGE and OE also had a positive correlation with performance if those variables are increased one unit it will affect to increase performance by .127 and 2.101 respectively. DE

had a negative effect on financial performance. It's that DE increased by one unit then performance will fall by -2.413 units.

Table 5 indicates the coefficient of determination (R^2) was 0.127. Meanwhile, the variations including HHI, SIZE, AGE, OE, DE jointly represent 12.7% of variations and remained by other variables. In addition, the table indicates the final summary of the proposed model as shown in it the F value for regression was 2.893 with a significance of 0.018. Then the model was significant at the level of 0.05%. Thus, this model is enough to explain the effect of income source diversification on the financial performance of listed finance companies in Sri Lanka. Therefore, the R^2 value indicates that there is a low impact of income source diversification on the financial performance of Sri Lankan listed finance companies, so that Hypothesis 2 (H_2) is accepted. Table 9 shows the hypotheses testing and the support of those to achieve the study objectives.

Table 9 - Summary of the findings (Hypotheses testing)

Hypothesis	Independent	Dependent	Relationships (+/-)	Is there a relationship / Impact (Yes/No) *	Significant / Insignificant	Supported / Not supported
H_1	Income Source Diversification	Financial Performance		Yes		Supported
H1a	HHI	ROE	_	Yes	0.030	Supported
H1b	SIZE	ROE	+	Yes	0.770	Supported
H1c	AGE	ROE	+	Yes	0.487	Supported
H1d	OE	ROE	_	Yes	0.893	Supported
H1e	DE	ROE	_	Yes	0.003	Supported
H_2	Income Source Diversification	Financial Performance	Impact	Yes	Low	Supported

Source: Researcher analyzed data, 2020

6. CONCLUSION

6.1 Conclusion

This study was carried out with the purpose of establishing that there is an effect of income source diversification on the financial performance of listed finance companies in Sri Lanka. The results of this study reveal that Income source diversification has an impact on financial performance in the Sri Lankan financial industry. Managers of finance companies can focus on their income sources along with traditional sources of income to improve the profitability of their companies and minimize their risk levels. The diverseness of the finance industry in the modern era has become a subject of interest for the top management of banks, supervisors, directors, shareholders and stakeholders. According to the study findings through correlation matrix, there are only two negative significant relationships between HHI and Debt to Equity (OE), and ROE. Other correlations of control variables; Firm Size, Firm Age and Operational Efficiency, and ROE indicate that those relationships are insignificant. The result of regression indicated that income diversification recorded a low impact on financial performance concerning that "the coefficient of determination (R^2) indicates that the income diversification, firm size, debt to equity, debt to assets, earning per share jointly explained 12.7% of the variation of financial performance. It means that HHI and SIZE, AGE, OE, and DE were only explained in 12.7% of variations in this study while the remained variations (87.3%) are explained by other factors. The results of the F test indicated that income source diversification, firm size, firm age, operational efficiency, and debt to equity ratio have a strong effect on financial performance thus indicating the model was good enough in determining the effect of income diversification on financial performance.

6.2 Implications

Based on the statistical findings, it was noted that the theoretical review indicates the necessity of having managed the income source diversification is a wider effect to record its financial performance. Anyhow, the aim of the investment is to maximize the return through a strategic perspective. In this instance, the implementation of proper diversification strategy is an ideal way after verifying the most important contribution of financial utilization and intermediation. Therefore, the view of diversification through such financial utilization and intermediation is the utmost viable link to make depending on the concept that investors, who are fearless to risk, can create portfolios to maximize the return and minimize the risk classifying, estimating, and controlling both types and rate of expected return and risk in any investments. Also, diversification is a sun shed for enlightening the investment process of any source with aiding through intermediation and performing through the

portfolios. The results of this study help managers to improve the financial outlook of their companies by controlling income source diversification and business risk. As well as, these findings also present policy implications that finance companies may utilize their different income sources in a profitable way to reduce risk. Further, they should focus on their different income sources to prevail in a competitive investment and business environment. The revenue concentration of the managers in their finance companies increases the companies' risk taking. Therefore, the managers in finance companies should manage complexity by combining revenue sources to control agency costs, which reduce risk. Thus, when finance companies expand their income structure, they should align it with available resources.

6.3 Directions for Future Research

The study recognized that it had not thoroughly researched the status of each category of income that finance companies diversified into that influenced financial performance of the finance company. The study therefore recommends that another study be done to establish the other income sources that the finance companies diversified into that influenced financial performance of the finance companies in Sri Lanka. Also, the study recommends that another study should be done to augment the study findings on the sustainability of each of the diversified income sources.

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