IMPACT OF BANKING SECTOR FINANCIAL PERFORMANCE ON ECONOMIC GROWTH IN SRI LANKA

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Abstract

The main objective of this study is to find out the impact of banking sector financial performance on Sri Lankan economic growth. In order to reach this objective, the ARDL test is applied to evaluate the Long Run relationship between the variables, and the Error correction model is applied to analyze the Short-run relationships between the variables. The GDP, return on equity, credit to the private sector, money supply, trade balance, and the FDI are the variables used in this research. The analysis was carried out with Secondary data for the period from 1998 to 2019 and the software of E-views 10 and Ms Excel are used to analyze the data. The ARDL Bound test results employed that there is a co-integrating relationship between the variables. According to this test, banking sector financial performance impact on Economic growth of Sri Lanka in long run. Further, this test suggests that, banking sector financial performance variable as return on equity, trade balance and credit to private sector have positive significant impact on economic growth in the long run. The Error correction model found that, banking sector financial performance has positive and significant impact on economic growth in short run. According to these results, this research emphasizes that, the return on equity by banks should be increased to drive economic growth of Sri Lanka.

Key words: Banking sector, Return on Equity, Economic growth, ARDL model

Introduction

Efficient and healthy financial system is an important and necessary component for faster economic growth. If a financial system is efficient, then it should show profitability improvements, increased funds intermediation, better prices for financial products and quality services for consumers. If the financial system is under tight regulation, financial markets would not function efficiently and the use of resources would not provide desired outcomes. There are many factors that can be treated as economic growth determinants. One of these factors is the financial system. The institutional framework of the financial system as well as its performance are no doubt important determinants of output growth.

Economic growth is considered the crucial objective of the world countries more than half a century. However, development process needs prerequisite requirements in order to satisfy human willingness and that may occur through financing investment and production. Specially in developing countries that are suffering many economic problems such as unemployment, poverty, low living standards and inflation. Thus, these countries always seek to maintain economic growth to increase their national income and to create more job opportunities in order to improve their living standards (Abusharbeh, 2017). Gross Domestic Product (GDP) annual growth rate in Sri Lanka averaged 5.44 percent from 2003 until 2020,

reaching an all-time high of 16.12 percent in the first quarter of 2012 and a record low of -1.60 percent in the first quarter of 2020.

Banking sector is one of the most important sectors for the economy to be able to function. Its importance as the 'life blood' of economic activity in collecting deposits and providing credits to states and people, households and business is unpredictable. The role of banks in economic growth is to remove the deficiency of capital by stimulating savings and investment. Banking system mobilizes the small and spread savings of the community, and makes them available for investment in productive enterprises.

Banks play a critical role within the Sri Lankan financial system, as they are engaged in provision of liquidity to the entire economy, while transforming the risk characteristics of assets. Banks also engaged in providing payment services, thereby facilitating all entities to carry out their financial transactions. On the other hand, banks can create vulnerabilities of systematic nature, partly due to a mismatch in maturity of assets and liabilities and their interconnectedness. Therefore, the soundness of banks is important, as it contributes towards maintaining confidence in the financial system, and any failure may have the potential to impact on activities of all other financial and non-financial entities, and finally economy (central bank of sri lanka, 2018). Most of the banks showed a tendency of expanding their branch network in urban areas within continuous development in the banking sector reflecting the greater demand for financial services in urban areas. Therefore, disparities in banking perception between the western region and other the regions resulted in an increase in regional economic and income disparities across the region. This will lead to economic growth.

Banks, which come under the service sector in Sri Lanka, play a crucial role in its economy contributing to about 60% of the GDP and employing about 40% of the total work force. The banking sector also holds about 55% of financial sector assets while the others are held by insurance and real estate companies. Banks in the srilankan financial system, as they are engaged in provision of liquidity to the entire economy, while transforming the risk characteristics of assets. Since an efficient banking sector is crucial for sustainable economic growth through minimizing the cost of funds, enhancing access to funding and improving investments an evaluation of the impact of the spread and growth of bank branches on banking sector efficiency in the post-war period is important for Sri Lanka. In 2019, Gross Domestic Product growth rate is 2.28 percent and Return on Equity is 10.3 percent.

This research is significance to identify the impact of banking sector financial performance on economic growth of Sri Lanka. It was help to evaluate the relationship between banking sector and economic growth in sri Lanka. This study Identified the causal relationship between banking sector financial performance and economic growth in Sri Lanka.

Literature Review

Mohammed Ayoub Ledhem and Mohammed Mekidche (2020) studied about economic growth and financial performance of Islamic banks: a CAMELS approach. The purpose of this paper is to investigate the link between the financial performance of Islamic finance and economic growth in all of Malaysia, Indonesia, Brunei, Turkey and Saudi Arabia with in the endogenous growth model frame work. This study applied dynamic panel system GMM to estimate the impact of the financial performance of Islamic finance on economic growth using quarterly data. The findings demonstrated that the only significant

factor of the financial performance of Islamic finance which effects the endogenous economic growth, is profitability through return on equity (ROE).

Mohamed Aymen Ben Moussa and Zohra Hdidar (2019) provided an explanation for bank profitability and economic growth: evidence from Tunisia. This research investigates the effect of economic growth on bank profitability using a sample of 18 banks in Tunisia over the period 2000- 2017. Return on assets, return on equity as indicators of bank profitability like dependent variable, the other bank specific variation, economic growth as independent variable.

Zineb Fahsi and Abderrahim Chibi (2019) have examined that the financial sector development and economic growth in Algeria: an ARDL bounds testing approach 1980-2017. The aim of this paper is to examine the link between financial sector development and economic growth in Algeria over the period 1980-2017, using the ARDL approach to co –integration analysis; in order to confirm whether reforms in the financial sector have had a positive impact on economic growth or not. The result shows that, in the long-run financial intermediary development has a positive but insignificant effect on economic growth, suggesting that financial development does not stimulate economic growth. The short run coefficients of financial intermediary development are negative and insignificant, because of the weakness relationship especially for the private sector.

Nahidul Islam et al. (2019) studied that the impact of banking sector financial performance on the economic growth in Bangladesh. The main objective of this study is that to examine the impact of banking sector financial performance on the economic growth in Bangladesh. To analyze this study has used descriptive methodology. The finding of this study provide evidence that bank size, return on equity, return on investment and operating profit growth rate have statistically significant influence on the gross domestic product.

Sari Suleiman Mohammed Malahimm and Abdullah Yusri Al Khatib (2018) have examined that the determinants of financial performance for the banks sector in Jordan. The objective of this study were to clarify and give a look at financial performance determinants for banks' sector in Jordan during the period 2012-2016. The study relied on descriptive analytical method. The study recommended bank' sector in Jordan to focus and analyze the profit margin besides to analyze the changes in other independent indicators to improve the financial performance for banks' sector in Jordan.

Mohammed T. Abusharbeh (2017) investigate that the impact of banking sector development on economic growth: empirical analysis from Palestinian economy. This study examines the impact of some banking sector indicators (credit facilities, depositors fund, the number of branches and interest rate) on gross domestic product using quarterly data from the period of 2000 to 2015. The main purpose of this paper is to provide an empirical evidence through examining the relationship between banking credits supply and economic growth in Palestine. To analyze this study has used least square model and regression analysis. The finding of this study that more funding to economic sectors tends to enhance and improve economic conditions in Palestine partially local productivity in public and private sectors.

Bolonda Thilakaweera et al. (2016) studied that bank outreach and performance: evidence from banking efficiency in Sri Lanka. This study evaluates the impact of geographical dispersion of bank branches and their growth on banking sector efficiency in Sri Lanka for the period 2006-2014. This study employs

double –bootstrap, semi- parametric truncated regression model based on data envelopment analysis. This study suggests that geographical dispersion of the banking sector can be used as a policy tool to achieve broad- based inclusive growth for emerging and rapidly growing economies such as Sri Lanka.

Research Problem

The banking sector is playing an important role in the Srilankan economy. However, in the current situation the banking sector is facing many problems. Doller rate is increasing day by day. In our central bank, we do not have enough reserve for issue currency notes. So that our currency devalued in the foreign market. Sri Lanka has recently been facing a danger of falling into economic malaise, with increase debt levels and a political crisis, which show the country's debt rating being dropped. Further, Sri Lanka was little affected by the 1997-1998 Asian financial crisis. Due to this availability of a large amount of credit based on short-term capital inflows generated a highly leveraged economic climate and pushed up assets prices eventually began to collapse causing individuals and companies to default on debt obligation. So that the research problem was identified as try to find the impact of banking sector financial performance on economic growth in Sri Lanka after the 1998.

Research Objective

Main objective

The main objective of this research was to find out the impact of banking sector financial performance on Sri Lankan economic growth.

Sub objectives
➢ To analyze the short-term relationship between banking sector financial performance and economic growth.
➢ To evaluate the long-term relationship between banking sector financial performance and economic growth.

Methodology

This study is based on secondary data. For the study, the dependent variable is the economic growth proxy variable is Gross Domestic Product (GDP) whereas Return on Equity, Credit to Private Sector, Money Supply, Foreign Direct Investment, and Trade Balance are independent variables. Data were analyzed to identify, describe and explore the impact of banking sector financial performance on economic growth in Sri Lanka since 1998. Data were obtained from secondary sources such as annual statistics of Sri Lanka recognized by the central bank of Sri Lanka, World Bank open data, research articles, and various related websites. In this study time, series data were analyzed using E-views 10 statistical analysis software.

Data analysis begins with the testing of the unit root of the series to confirm whether the data are stationary or not. Augmented Dicky Fuller (ADF) and Phillips Perron (PP) unit root tests are used in this study. ARDL estimation was used to examine the short–run and long-run relationship among the variables. Diagnostic testing on data series thus offers information regarding how these data might be modeled.

The general model is:

$$GDP = f(ROE, FDI, CPS, MS, TB)$$

This model can be rearranged in natural logarithm form:

$$lnGDP_{it} = \beta_0 + \beta_1 lnROE_{it} + \beta_2 lnFDI_{it} + \beta_3 lnCPS_{it} + \beta_4 lnMS_{it} + \beta_5 lnTB_{it} + U_{it}$$

Results And Discussion

Unit Root Test Results

The order of integration of the variables is investigated first. The stationary test is performed first in levels and then in first difference to establish the presence of unit roots and the order of integration in all the variables. The results of the Augmented Dickey- Fuller (ADF) and Phillips Perron (PP) stationary test in the table 1 show that the variables are integrated of order one.

H_0: variable is not stationary

H_1: variable is stationary

Below the results of the stationary test show that all variables are non-stationary at levels but stationary at the first differences. According to ADF test results, LNGDP, LNROE and LNCPS unit root at 5% significance and LNTB, LNMS and LNFDI unit root at 1% significance. At the same PP test results, LNROE, LNCPS and LNFDI unit root at 5%significance and LNGDP, LNTB and LNMS unit root at 1% significance level. All variables are significant at the first difference. So we can use ARDL estimation.

Table 1: Stationary Test Results

Variables	P value: ADF test (Intercept only)		P value: PP test (Intercept only)	
	Level	1st Diff	Level	1st Diff
LNGDP	0.2274	0.0133**	0.2265	0.0002*
LNROE	0.1781	0.0103**	0.1781	0.0106**
LNCPS	0.8962	0.0170**	0.8775	0.0212**
LNTB	0.0311	0.0004*	0.0291	0.0000*
LNMS	0.9901	0.0001*	0.9422	0.0002*
LNFDI	0.0014	0.0092*	0.0729	0.0431**

Source: Estimated by researcher

*Note: ** significant at 5% level, * significant at 1% level*

Lag Length Selection Criteria

Table 2 present the lag order selection criterion of Vector Auto Regressive (VAR) model. The lag chosen was the one with the lowest Akaike Information Criteria value.

Table 4.2: VAR Lag Order Selection Criteria

Lag	Log L	LR	FPE	AIC	SC	HQ
0	57.17273	NA	6.72e-11	-6.396591	-6.106870	-6.381755
1	116.4712	66.71073*	5.34e-12*	-9.308894*	-7.280849*	-9.205042*

Source: Estimated by researcher

Indicates Lag Order selected by the criterion.

As table 2 shows, one lag were used in the ARDL model. All the given variables are integrated at order one. It indicates lag 1 as an optimal lag to be used for LR, FPE, AIC, SC, and HQ.

ARDL Bound Test Results

H_0: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$ (there is no co-integration among the variables)
H_1: $\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq 0$ (there is co-integration among the variables)

Table 3: ARDL Bound test results

F- Bound test 95% level of confidence		
F- statistics	Lower Bound [1(0)]	Upper Bound [1(1)]
13.52094	2.39	3.38

Source: Estimated by Researcher

Table 3 shows the bound test for ARDL (111000) model. In above table, F statistics is 13.52094 and the upper bound value is 3.38 at 5% significance level. Here F statistics is greater than upper bound level. Through this we can reject null hypothesis; there is no co- integration among the variables and accept there exist long co-integration between the variables.

Long Run Relationship between the variables

According to the result of ARDL test we can get following equation. It defines the long run relationship among variables.

*EC=LNGDP+(1.6450*LNCPS+0.7069*LNTB–2.4935*LNMS+0.3283*LNROE+2.8283)*

Table 4: ARDL Long Run coefficients

LNROE	LNTB	LNMS	LNFDI	LNCPS	R²
0.328266*** (0.0807)	0.706862* (0.0042)	-2.493528 ** (0.0165)	-0.125663 (0.4287)	1.644960 *** (0.0535)	0.975744

Source: Estimated by Researcher

*Note: *** significant at 10% level, ** significant at 5% level and * significant at 1% level*

The results show that the Banking sector financial performance variable as return on equity on Economic growth recorded a positive (0.3283) coefficient and significant at 10% level. Implying that, in the long run dependent variable as LNGDP increases by approximately 0.328 percent for every 1 percent of independent LNROE. At the same LNTB has positive relationship with LNGDP at 1% level. When the increase in one percent of LNTB increases 0.7 percent of LNGDP. There is a negative relationship between the LNMS and long run economic growth. This means in the long run LNGDP decreases by approximately 2.49 percent for every one percent increase of money supply. LNFDI has negative relationship but insignificant impact on LNGDP in the long run. LNCPS has positive relationship with long run LNGDP at 10% level. So LNCPS increases by one percent increase the LNGDP at 1.64 percent in the long run period.

 Diagnostic Test

Conducting numerous diagnostic tests is a vital step in time series modeling. Diagnostic testing on data series thus offers information regarding how these data might be modeled. When is assessed, diagnostic test can be applied to appraise model residuals, which also help as tests of model competence.

Table 5: Residuals and Stability Diagnostic tests.

Diagnostic test	P- value	Conclusion
Serial correlation (Breusch- Godfrey serial correlation LM test)	0.6103	No serial correlation
Heteroscedasticity (white test)	0.4058	No Heteroscedasticity
Normality (Jarque-Bera test)	0.6528	Error is normally distributed
Ramsey test for model specification (Ramsey RESET test)	0.6539	No Omitted variables

Source: Estimated by Researcher

Error Correction Model

The Error Correction Term (ECT) denotes one period lag residuals of the co integrating vector between dependent and independent variables. ECT explains the speed of convergence of short run disturbances towards the long run equilibrium.

Table 6: Result of Error Correction Model

Lag order	D(LNROE)	D(LNTB)	D(LNMS)	D(LNFDI)	D(LNCPS)	ECT(-1)
0	0.578933*** (0.0599)	0.406832 *** (0.0889)	-4.632131 * (0.0056)	-0.102815 (0.5845)	4.714889* (0.0029)	-1.323914** (0.0499)
1		0.83091 *(0.0090)			-1.762227 **(0.0123)	

Source: Estimated by Researcher

*Note: *** significant at 10% level, ** significant at 5% level and * significant at 1% level*

From the above table Error Correction term is a negative (-1.323914) significance at 5%. The coefficient of ECM terms present the speed of adjustment in the long run due to a stock in short run and it imply that speed of adjustment toward the long run equilibrium is 100%. LNROE has positive relationship with GDP in the short run at 10%. This means that 1% increase in return on equity will increase economic growth by 0.57% in the short run. LNTB has positive relationship in the present economic growth. When LNTB increases by 1 percentage that will increase by 0.4% at present LNGDP. In the lag one period LNTB has positive relationship with short run LNGDP at 5% significance level. When the past period trade balance increases by 1% that will increase the present GDP at 0.83%. LNMS has negative relationship with LNGDP at 1% significant level in the short run. This means that 1% increase in money supply will decrease economic growth by 4.63 percent in the short run. LNCPS has positive relationship in the present LNGDP at 1% level. When CPS increases at one percentage that will increase 4.7% in the GDP at short run. In lag one period LNCPS has negative relationship with the short run GDP at 5% significance level. Once the past period LNCPS increases by 1percentage that will increase the present GDP at 1.76 percent.

Conclusion

The banking sector play a major role in Srilankan Economy. In this study, we examined the impact of banking sector financial performance on economic growth in Sri Lanka. For this purpose, the study used secondary data from 1998 to 2019. The dependent variable is Gross Domestic Product and the main independent variable is Return on Equity. Trade Balance, Credit to Private Sector, Money Supply and Foreign Direct Investment are the control variables. For the analyzing purpose in descriptive analysis Scatter diagram used for identifying the correlation between dependent and independent variables.

Result of the stationary test as ADF and PP show that all the variables are non- stationary at levels but stationary at first difference. Due to this ARDL model was used to identify the co-integration relationship and long run relationship. Under the lag length selection criteria, all the variables are integrated at order one. It indicates leg 1 as an optimal lag to be used for LR, FPE, AIC, SC and HQ criterions. And also estimating the ARDL model with Automatic lag selection was ARDL (111000) identified as best model among the top 20 models. According to the ARDL Bound testing we can confirmed the co integration among the variables at 5 percent significance level. There is positive long run relationship between

LNROE, LNCPS with LNGDP at 10 percent significant level. LNFDI has insignificant impact on LNGDP in the long run.

From the Diagnostic test results probability values are higher than 0.05 critical value respectively. This implies that the residuals are normally distributed, there is no serial correlation problem, and the residuals are homoscedastic. It also denotes that the functional form of the model is well specified. In the Error Correction Model, ECT explains the speed of convergence of short run disturbances towards the long run equilibrium. In this study ECT is negative and significant at 5 percent level. All the variables are significant impact on LNGDP in the short run. But LNFDI only insignificant impact on LNGDP at short run relationship.

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