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Determinants of Financial Sustainability of Financial Intermediaries: Evidence from Sri Lanka

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Abstract

This paper provides interesting insights into the practices of banks and institutional setting in Sri Lanka. The sustainability and stability of banks that makes up an economy's banking system should be sound at all time. This paper aimed at analyzing the determinants of banking sector stability in Sri Lanka. The study used a broad set of macro and bank level data covering 22 commercial banks for the period 1996-2016. The fixed effect GLS panel data model tested in this paper sets the relationship between bank stability measure; Z-score and business environment which includes bank characteristics and the elements of macro environment. The analysis of the study revealed lower level of Z-scores and thus lower level of bank stability, indicating a higher risk associated with the commercial banking sector in Sri Lanka. From among the variables tested, strong evidence was found for a positive effect of bank efficiency on bank stability and a negative effect of credit growth on bank stability. At macro level, bank stability is promoted at a higher rate when the economy is more developed and stable. The results imply that efficiency of commercial banks needs to be further improved and regulatory and policy environment should be strengthened to manage the credit growth at the bank level. Further, it is suggestive to strengthening bank supervision and other financial infrastructure in order to ensure sustainability of the banking sector. Thus, the present paper contributes the current banking literature by unveiling the explicit and unforeseen economic implications associate with individual bank operations and macro imbalance which are particularly unique in underdeveloped countries.

Keywords: bank stability; financial sustainability; bank efficiency; credit growth; Z-score; banking sector; Sri Lanka

JEL Classifications: C51; G21; G28; E32

Introduction

Banks play a salient intermediary role in any economy. Hence, banks' performance is crucial for the growth of an economy. This is because, they mobilize and allocate much of societies' funds and hence account for economic growth through capital accumulation. Besides this efficiency function of banks, stability of the bank firm is also essential since any instability in the banking system can lead a large cost to the society as whole. Banks are possibly more exposed to instability. Also, any instability in the banking system can cause more devastating effects compared to instability in other industries. Therefore, stability in banking system has long been viewed as vital for ensuring economic development. This economic rationale of stability concerns is broadly discussed in the existing theoretical and empirical literature.

The Banking sector plays a prominent role in the economic development of any country. Financial depth of an economy generally depicts the size of the financial sector relative to the economy. Financial depth demarcates the level of development across economies meanwhile highlighting contribution that financial sector makes on each country. For instance, according to the world bank statistics, private credit to GDP in high-income countries such as Europe, Canada, Australia is averaged at 103 percent. It is more than 4 times the average private credit to GDP in low-income countries. Banking sector stability of a country however determines the financial sustainability and secures positive implications of financial sector development in the long run. Clear disparities can be observed among countries with respect to the level of financial stability of banking sectors. For example banking sector stability measured with Z-score; which captures the probability of default of a country's banking system, is quite high in countries such as Luxemburg, Jordan and Panama and quite low in countries such as Burma, Iceland and Venezuela (Bankscope, 2017). This suggest that the financial stability does not necessarily related to the income level of a country.

Financial system of Sri Lanka is dominated by the banking sector which consists of licenced commercial banks and licenced specialized banks. The Licensed Commercial Banking sector plays a prominent role in the economic development of Sri Lanka. As at end 2019 the total assets of commercial banking sector represented approximately 54% of the financial sector assets and 76% of the total banking sector assets (CBSL, 2019). Though there are 26 commercial banks operates in the country the stability of the financial system is largely depends on six largest commercial banks. Banks being the financial intermediary and the major source of finance for the private sector, the development in the banking sector affects economic development to a great extent. The financial services industry in Sri Lanka adopted many changes with the broader range of reforms introduced by the government and the industry in the past two to three decades. Hence, the banking sector in Sri Lanka at present, reflects these reforms and includes elements of a modern financial system. As a results, the contemporary banking institutions are active in all aspects of financial services. The present level of development and the competition in the banking sector in Sri Lanka has drastically been influenced by the reforms in the financial-services sector together with the development in information and communication technologies (ICT) and globalization of the industry.

However, the individual banks that makes up the banking system should manage their internal affairs effectively in order to uphold the trust placed on it by the stakeholders. This is because, the sustainability and stability of banks that makes up the banking system of an economy should be sound at all time. These arguments, together with the unique institutional environment in Sri Lanka, necessitating the identification of the determinants of banking stability in Sri Lanka. Hence, this paper aims at analyzing the determinants of banking sector stability in Sri Lanka. The analysis is based on a wide-ranging set of bank level panel data and macro data over the sample period of 1996 to 2016. The sample covers 22 commercial banks which represent the whole commercial banking sector in Sri Lanka. In this paper Estimated Generalized Least-Squares (EGLS) model estimated with a bank specific fixed effect attempts to establish the relationship between bank stability measure proxied with Z-score and business environment with bank specific factors and the state of the business cycle.

The present paper contributes to the literature is three distinct ways. First, to measure bank stability it uses the Z-Score; a statistically derived combination of most significant variables. Second, it also uses theoretically and empirically proven macroeconomic indicators to test their ability to predict the financial health of the Sri Lankan banking system. Third, the analysis takes into account the degree of banking sector competition measures with Panzar Rosse H-Statistic and thus analyze the leaner relationship between stability and bank competition in addition to the other determinants of banking system stability. The present study focused only on licensed commercial banking sector of Sri Lanka. However there are only six banks which are considered to be major players of the Sri Lanka banking sector. Therefore their behaviour is quite different than that of

small banks in the market. However the generalizations of the study are brought by considering all the banks in the commercial banking sector.

Literature Review

Many theoretical and empirical studies conducted in recent years paves the path for a substantial research interest by opening a debate of determinants of banking system crises and instability. For example, after studying both industrial and emerging market economies Demirguc-Kunt and Detragiache (1998, 2005) found that lower level of real economic growth, high inflation and high real interest rates impact significantly on the probability of a banking crisis. However, covering 50 emerging economies between 1977 and 1997, study of Hardy and Pazarbasioglu (1999) concludes that national factors are relevant only for banking instability, whereas international factors play a role in determining banking crises.

Further, Berger et al. (2017) explained that the concentration and the competition in the bank market are the key determinants of the stability of the banking sector. By taking the special role of information asymmetry between banks and borrowers, this group of theories highlights the effects of adverse selection and moral hazard problems which in turn affect the stability of the banking industry (Broecker, 1990; Sharpe, 1990; Petersen and Rajan, 1995). Consequently, greater bank competition gradually wears out the market power and thus lessens profit margins. This will finally results in decreased franchise value of all the banks. This in turn encourages banks to go for more risky loans to increase their profits. This encouragement of banks to increase their overall risk exposure, creates financial instability in the bank market (Liyanagamage, 2018). However, some recent literature has arisen contrary to this argument and predicts positive implications of bank competition on their financial stability. They argue that higher interest rates charged on borrowers in less competitive markets make their repayment harder and/or encourage them to shift into more riskier projects. (Boyd and De Nicolo, 2005). Hence the opposite repercussions are expected with more competition. However, in the long run effect of bank competition on bank stability is a mix of positive and negative effects in developing countries (Liyanagamage, 2015).

Fell and Schinasi (2005) highlights the importance of macro-economic activities on financial stability and state that financial stability must be in harmony with the nature of the economy. They further states that financial stability is determined by the extent of integration and interaction with all economic activities in the market. The importance of balance sheet information in determining financial stability and position of a bank in the market compared to other banks were highlighted in the study of Van den end (2006). De Haan and Poghosyan (2012) show that return volatility in US banks decreases due to bank size. This happens since the banks' ability to remain profitable and sustainable for the near future increases with the size of the bank. The opposite happens, if a bank cannot utilize its held assets to generate revenues, but liabilities and other obligations will have to be met as and when they mature (Bowa, 2015). On the other hand, efficient management of bank resources has implications on its performance. The results of the econometric investigation done by Baltas et al (2018) however prove that leverage and other profit efficiency indicators are better predictors of future profits compared to current indicators including other measures of bank risk. According to the findings of Gomez (2015), relative instability of banks are associated with undercapitalization, a large share of the interbank credits in structure of liabilities, overdue credits, poor quality of credit portfolio, aggressive credit policy and less stable resource base in some cases. According to Athanasoglou et al. (2008) internal factors are within the scope of the bank to control and however they differ from one bank to another.

Stability determinants changes with the ownership structure of the bank. At this end Diaconu and Oanea (2014) compare the bank stability determinants between commercial banks and cooperate banks. Their findings conclude that the financial stability of co-operative banks is mainly influenced by GDP growth and interbank offering rate for 3 months. However, their findings do not provide any significant difference or similarity between two types of banks which use two different approaches.

The measurement financial stability is also one main feature that has been discussed in banking literature. Although there are no any consensus among researchers, Z-score has been extensively used in literature to measure stability at the institution level (Cihak and Hesse 2010; Ozili, 2019). It explicitly compares profitability and capitalization with earning volatility. Z-score shows a clear negative relationship to the probability of financial institution's risk. Z-score were used by Andries and Capraru (2011) for their analysis on 17 Central and Eastern European countries during 2004- 2008. Their findings highlighted some improvements in bank stability and explained these improvements with the process of harmonization of national regulatory

framework with the European Union acquis. Findings of Ozili (2018), however conclude his study with a large number of variables that affect on bank stability in Africa. Among those indicators banking efficiency, foreign bank presence, banking concentration, size of banking sector, government effectiveness, political stability, regulatory quality, investor protection, corruption control and unemployment levels were found as significant. This study further highlights that the significance of these variables depends on the banking stability proxy employed and the period of analysis.

Methodology

The primary objective of the present paper is to identify the determinants of bank stability in the Sri Lankan commercial banking sector. The analysis is based on a wide-ranging set of bank level panel data and macro data for the 20 years starting from 1996. The sample covers 22 commercial banks. Four commercial banks were excluded from the sample as they were available only for few years during the sample period. The stability model tested in this paper establishes the relationship between the bank stability measure and business environment with bank specific factors and the state of the business cycle. The elaborated model is shown as Equation 1 below.

$$Stab_{it} = \alpha_{it} + \beta_1 MS_{it} + \beta_2 CrGr_{it} + \beta_3 Eff_{it} + \beta_4 Hsta_t + \beta_5 CrPvt_t + \beta_6 TAGr_t + \beta_7 GDP_t + \beta_8 RInt_t \quad \text{.....(Equation 1)}$$

Loan market share (*MS*), credit growth (*CrGr*) and bank efficiency (*Eff*) of individual bank were incorporated in the model to test the effect of bank specific effects or in other words micro level impact. In order to control for the industry level effects on bank stability, banking sector competition (*Hstat*), credit to private sector (*CrPvt*), and assets growth in the banking sector (*TAGr*) were used. To control any effect from macro environment, the general level of development (*GDP*) and real interest rate (*RInt*) were incorporated to the Equation 1. The dependent variable of the model is bank financial stability (*Stab*); the Z-score. The variables and their definitions are given in the Table 1.

Table 1: Definitions of variables

Variable	Definition	Expected Relationships
<u>Dependent variable:</u>		
Stability	Z-score	
<u>Bank level Explanatory variables:</u>		
Loan Market Share (<i>MS</i>)	Individual share of bank loans to the total loans of the banking sector	+/-
Credit Growth (<i>CrGr</i>)	Change in total credit during the year proportion to the previous year.	+
Bank Efficiency (<i>Eff</i>)	Banking sector efficiency measured through DEA	+/-
<u>Industry level variables:</u>		
Competition (<i>H stat</i>)	Panzer-Ross H statistic (degree of competition is measured the elasticity of bank revenues relative to its input prices)	+
Credit to private sector (<i>CrPvt</i>)	Credit to private sector measured with the ratio of total banking sector credit to the private sector.	-
<i>TAGr</i>	Growth of banking sector assets. Ratio of change in total assets to the previous year assets	+
<u>Macro level variables:</u>		
<i>GDP</i>	GDP per capita measured with log value of GDP per capita	+
<i>RInt</i>	Real Interest rate measured (annual average treasury bill rate deflated by inflation rate)	-

The GLS estimator of Equation 1 incorporates bank specific, industry specific and macro-economic factors. For the purpose of testing the effect of bank specific factors, market share of individual bank (share of bank loans of a bank against the total loans of the banking sector) and the size of the bank (Log value of the individual bank's total assets) were used. Sri Lankan banking sector consist of few systemically important banks. The purpose of incorporating the Size variables in the model is therefore to test whether larger commercial banks in Sri Lanka are better protected with regulators' 'too-big-to-fail' policies. Though there are inconsistencies on the direction of the relationship, both variables can have an effect on the degree of risk exposed by the bank. In addition, banks risk taking behaviour is generally adjust with their growth prospects. This relationship has been examined and confirmed in earlier studies (e.g Schaeck and Cihak, 2008). Therefore, Credit growth of the bank has also been included in the model to absorb any impact that faster growing banks would have on risk exposure of banks. Further, efficiency score of the bank were included to test whether more efficient banks are more stable.

The Equation 1 also incorporates two more variables as; commercial banks credit to private sector and the general level of development in the banking sector, in order to analyze the industry level effect that would have on bank stability. Credit to private sector is a signal of banking sector development as well as allocative efficiency of the banking sector. The commercial bank loan market is moving away from risk free government loans when they allocate larger among of banks' credit to the private sector. Hence, the financial health of the bank could be directly or indirectly affected by the amount of credit to private sector. On the other hand, the degree of assets growth of the banking sector is also a signal of the general level of development in banking sector. The purpose of including this variable is to test if banks expose to more instability due to their growth efforts. Therefore, through these two variables study expects to capture any industry level on the level of bank stability. Further the model incorporates for macro-economic effects with real GDP and real interest rate. Thus, $Stab_{it}$ in Equation 1 is the financial soundness of the individual bank at a given year.

The panel regression model given in Equation 1 was tested following the procedure of Estimated Generalized Least-Squares (EGLS) with a bank specific fixed effect. The reason for following estimated procedure is that the assumption of correlation that exist between time series with its own past and future values in bank revenues. Further, cross-section weights estimations of the EGLS procedure corrects the presence of cross-section heteroskedasticity. The bank specific fixed effect is established to capture any unobservable effects that cause bank stability.

In the empirical analysis, the study aims at analyzing individual bank stability than systemic stability of the banking sector. Therefore, in this study bank's financial stability is measured with the Z-index. Z index measures the overall bank risk. It is a statistically developed measurement combining several more relevant variables to capture revenue variations. Thus, Z-index provides more accurate interpretation about the overall risk of a firm. The precise way of measuring Z-score is as follows.

$$Z = \left(\frac{ROA + E/A}{\sigma ROA} \right) \quad \text{_____} \quad \text{(Equation 2)}$$

ROA in the equation 2 is the bank's return on assets, whereas E/A and σROA are the equity to assets ratio (capitalization ratio of the bank) and standard deviation of return on assets (return volatility) respectively. Equity to asset ratio is an indicator that measure the proportion of assets that financed with equity capital. Therefore, it signifies banks' leverage level as well. Hence Z-index differentiate itself from other financial ratios, as it represents the profitability, leverage level and return volatility in a single indicator. Accordingly, the Z-Index of a bank in a particular year rises with profitability however drops with return volatility and leverage level of the bank. Thus, a bigger value of Z-Index implies higher bank stability and hence lower level of risk of a bank and vice versa. The Z-index has been used in many of recent banking studies such as Schaeck and Cihak, (2008); Berger et al, (2017) in order to capture the stability level of banks.

Findings and Discussion

The average Z-score estimated for the sample period reveal a quite low value, and was reported as 18.37, however shows a high variation among the sample as its standard deviation was 14.22. Which indicates that Z-score of individual banks are spread out over a large range of values, and hence there are significant differences exists among bank's stability. The smaller value of Z-score suggests a higher level of risk for the

whole banking sector and thus indicates more instability. Lower level of profitability experienced by the sector, high fluctuations of profitability within the sample period, high variations of profitability across the banks together with low capitalization levels (or high leverage) may have caused the lower level of stability in the Sri Lankan banking sector. According to a study done by Burger et al, (2008), the average Z-score of the Sri Lankan banking sector is quite lower compared to most of the developed countries, for which mean Z-score found as 56.76 for a sample of 23 developed countries during the period 1999-2005.

The average Z-scores of the Sri Lankan banking sector had been lying in the range of 10.7 and 25.5 throughout the sample period. The average Z scores of state banks, private domestic banks and foreign banks are separately shown in figure 1, in order to get a comparative understanding. As shown in the figure, the two state banks show more instability. And this instability is quite persistent throughout the sample period. The stability level of domestic private banks had been decreasing during the period 1996 to 2001 and shows a slight increasing pattern thereafter. The foreign banks show a downward trend in their financial stability until it reaches a minimum in 2002 and a rapid increasing pattern thereafter. Until year 2004 the domestic private banks have had comparatively a low risk profile. However, after 2004, foreign banks have stood as the most stable sub banking sector.

Figure 1: Z-scores of state, domestic private and foreign banks

Source: Calculations by the author

The foreign banks operated in Sri Lanka holds a small market share and their clientele is mostly the corporate banking customers. They however derive a greater volume of business from their corporate customers. Thus, their aim mostly to serve this customer base, particularly in the areas of trade finance. These foreign banks reach their larger corporate clientele through customized banking services such as financing asset and liability needs and temporary cash management assistance and providing other value-added services. The creditworthiness of this corporate clientele is relatively higher. Therefore, credit risk of foreign banks operated in Sri Lankan is mitigated to a greater extent with the relatively better creditworthiness of their clientele. Comparatively, the NPL's of state banks are very high as they are catering to the financial needs of the public including public enterprises. The comparatively different stability levels stem from these factors. However, according to the above calculations, the degree of stability of all domestic banks moves around a very small range. This reveals that Sri Lankan banks face difficulties in improving their performance towards a more stable environment. Low assets quality, inadequate risk management capabilities and impact of global market risk could be the reasons for this lower level of stability in the banking sector.

This section presents the results of the main analysis and attempts to analyze causes for bank stability against the determinants proposed in equation 1. First, the possible multicollinearity was addressed with the aid of a correlation coefficient matrix. As no variable shows any strong correlations with each other, VIF values (Table 2) were taken to decide on the final model.

Table 2: VIF values of independent variables

Variable	VIF value
<i>MS</i>	1.44
<i>Eff</i>	1.33
<i>TAGr</i>	1.17
<i>H stat</i>	1.34
<i>CrGr</i>	1.32
<i>CrPvt</i>	1.64
<i>RGDP</i>	1.04
<i>RInt</i>	1.6
Average VIF	1.37

As per the results presented in Table 3, the VIF values for all the variables were below 2 and average VIF was closer to 1. Therefore, all the variables were considered in the final model as they are free from multicollinearity. Then, the Equation 1 was estimated as an Ordinary Least Squares model with a bank specific fixed effect. A significant degree of persistence was found in relation to the dependent variable – stability, as its first-order autocorrelation was found as 0.64. Therefore, the lagged Stability variable was incorporated in the model as an explanatory variable. The outcome of the regression analysis including statistical relationships and model fit statistics are presented in Table 3.

Table 3: Results of the regression analysis -Equation 1

Explanatory Variable	Coefficient
<i>C (constant)</i>	-0.1139*
<i>MS</i>	-0.0707
<i>Eff</i>	0.0589***
<i>TAGr</i>	-0.1160
<i>H Stat</i>	0.0778
<i>CrGr</i>	-0.0212**
<i>CrPvt</i>	0.0973
<i>RGDP</i>	0.8026**
<i>RInt</i>	0.2478**
<i>Stab_(t-1)</i>	0.7700***
<i>Adjusted R²</i>	0.79
<i>D-W stat</i>	2.03

Note: The dependent variable of the regression is Z score (bank stability). *Stab_(t-1)* is the lag dependent variable. ***, **, and * indicate the level of significance at 1%, 5%, and 10%, respectively.

According to the results of the estimated panel regression model only efficiency of the bank and credit growth found as statistically significant bank specific determinants whereas real GDP growth and real interest rate as macro level determinants. As shown in Table 3, the stability of a bank is positively affected by the level of efficiency of such bank. And this relationship is statistically significant at 1% level. Efficient banks are better in managing their non-performing loans and thereby mitigating bank credit risk. Hence, this finding is particularly true with regard to efficient banks as they can improve their financial stability with efficient management of credit risk. Non-parametric frontier approach: data envelopment analysis (DEA) was the method used to calculate the efficiency scores of individual banks. The cost efficiency is used and calculated in the current study as the measure of efficiency of the commercial banking sector. The findings are consistent with Berger and DeYoung (1997). Bank efficiency is often reflects its ability to turn resources in to revenue. Therefore, bank efficiency is a better indicator of overall performance of bank operations. Some recent developments taken place in Sri Lankan banking industry with regard to bank operations might have contributed for the positive relationship found with respect to banking sector efficiency and stability. These findings highlight the ability of efficient banks in pushing the whole banking system to be resistant to shocks and instability.

The found coefficient for credit growth is negative and statistically significant at 5% level of significance. This reveals that banks with higher credit growth are more resilient to instability. This particular relationship in Sri Lankan banking sector can be explained through the nexus between liquidity and credit risk. In one hand liquidity risk is a profit lowering risk. Profit lowering had debilitating impact on stability and thus the

sustainability of the bank. On the other hand, this can be explained with the adverse impact the liquidity can have on credit risks (Diamond and Rajan, 2005). Being the main source of finance, the demand for bank loans is high in Sri Lanka. However, banks will not be able to meet the demand of the depositors if too many investments are funded with loans. This will result in deteriorating bank assets in turn encouraging depositors to claim their money back. This intensify the liquidity problem and increase credit risks simultaneously. This financial behavior is evident with the statistically significant negative relationship between credit growth and financial stability among Sri Lankan commercial banks.

However, the findings of the above analysis do not support evidence for any significant impact of the degree of bank competition and bank loan market share on banking sector stability in the short run. As the study of Liyanagamage (2015) found, the relationship between bank competition and financial stability in Sri Lanka takes a U shape in the short run. This study suggests that the degree of bank competition in the country should be higher than 0.42 (H statistics) in order to enhance stability in the banking sector. This could have perhaps the reason for the found insignificant coefficient pertaining to bank competition in the present study. In banking systems of countries like Sri Lanka, comprises of a few larger banks. Therefore, the bank supervisory authorities specially monitor the performance of these larger banks due to the debilitate effect that failures of such banks have on the whole financial system. Therefore, "too-important to fall" policies of the authorities to safeguard these banks might have set-off the potential negative effects of bank size on financial stability.

The evidence of the impact of macro environment on bank stability is very strong in the context of Sri Lanka. Both real GDP growth and real interest rate indicate strong positive influence on bank stability. Both coefficients are significant at 5% level of confidence. The positive and significant coefficient values indicate the importance of macroeconomic development and economic stability to the banking sector stability and sustainability. Increase in interest rate would tend to improve the net interest margin of the bank and hence improve the profitability of the bank. The probability of banks instability is comparatively less in Profitable periods. On the other hand, higher interest rate discourages unnecessary loans and thus reducing the probability of credit risk of the bank. The inflation adjusted general level of economic growth and interest rate further highlight the indirect impact of inflation dynamics on the bank stability.

In general, inflation signals macro-economic imbalances. High inflation discourages investments as it makes it hard for businesses to determine prices. At the same time high inflation degrades the repayment capacity of borrowers, in turn making inflationary situation a hard time to the lending bank. Therefore, macro-economic imbalance can have a compelling impact on banking sector stability. This economic implication is evident through the coefficient found in relation to real GDP in Sri Lanka. In addition, coefficient found for lag stability variable proves its statistically significant effect on bank stability, stressing the importance of stability level of preceding years on determining the stability in the present year.

Several efforts were taken to keep the model estimation more efficient. The Equation 1 employed White's correction and hence estimates are heteroscedasticity consistent. The statistics presented in last two rows in Table 3 provide additional information on the explanatory power of the model. The adjusted R^2 of the model was reported as 0.79, which says that the model proposed in this study explains around 79% of variations in financial stability in Sri Lankan banking sector. The constant value of the regression model was 0.1139. The interpretation for comparatively higher constant value of the model is twofold. First, it raises the question about the explanatory power of the variables incorporated in the model to adequately predict the expected relationship. Generally, the error terms of the explanatory variables of the models developed in the context of underdeveloped countries are comparatively high. Hence, the statistical significance of the model in explaining the stability levels of Sri Lankan banks expected be low. If that is the case, adding more explanatory variables should deteriorate the constant of the model considerably. The Second interpretation is the behavioural unpredictability of financial stability among Sri Lankan banks. Particularly, the recurrent fluctuations in economic activities and their immediate and unforeseen interactions might have affected the outcomes of findings of this kind of studies in developing countries. The DW stat of the model is within the decision range says that the model tested in this study is free from autocorrelation.

Conclusion

This paper attempted to examine the determinants financial stability of financial intermediaries in Sri Lanka. Bank stability scores measured in Z-score were first estimated by using bank level data from 1996 to 2016. The study then performed an analysis to explore the determinants of financial stability of the banking sector. The expected outcome of a stable and sustainable banking sector of an economy is to promote economic growth through efficiency in financial resource allocation and enhance access to financial resources. The study finds strong evidence of positive effects of bank efficiency on bank stability and a negative effect of credit growth on bank stability.

At macro level, these effects are further extended and promote bank stability at a higher rate when the economy is more developed and stable. These results imply that efficiency of commercial banks needs to be further enhanced and hence micro level bank regulations and policy measures should be taken by the authorities to manage the credit growth. The level of financial stability of the banking sector in Sri Lanka is at a low level compared to developed as well as some of the developing economies. The empirically proven micro and macro impacts in this study emphasizes the importance of an economic environment which promotes bank stability in Sri Lanka. Empirical results found in this study supports indirect evidence for the positive implications of liberalization policies have exerted on the environment in which banks operates at present. Thus, the findings of the study point out the necessity of continuous financial reforms and appropriate monitoring mechanisms and Central Bank intervention to nurture a more stable banking sector for the country.

Thus, in order to ensure financial sustainability of the banking sector, careful precautions must be taken to create a sound banking system in the short run. Strengthening bank supervision and other financial infrastructure such as payment and securities settlement systems, clearing systems and trading platforms would reinforce the long-lasting stability in the whole banking system. The role of infrastructure service providers such as credit rating agencies, credit information registries and financial information providers also need to be further strengthened for creating more conducive and secured environment for bank operation. Strong financial and bank Regulatory framework which consists with laws and rules always helps smooth functioning of banks' intermediary role. The existing regulatory framework of the country should be further strengthened and frequently updated to match the changing requirements of the dynamic bank operations in contemporary economy.

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