

AN EMPIRICAL ANALYSIS OF MACROECONOMIC FACTORS AFFECTING ON THE DEPOSIT MOBILIZATION OF PRIVATE COMMERCIAL BANKS IN MYANMAR

Nwe Ni Tun

Lincoln University College, Malaysia

Corresponding Author's Email: nwenituncbm@gmail.com

ABSTRACT

Deposit mobilization is a crucial source of working fund of banks. It is also important for the growth of economy. Higher savings contributes to higher investment. This in turn, leads to higher economic growth. Given this background, deposit mobilization plays a vital role for banks as well as economy.

Hence, this paper examines to explore the impact of macroeconomic factors which include real interest rate, GDP per capita, money supply and average exchange rate on deposits mobilization in the case of private commercial banks in Myanmar.

This study targets 24 private Commercial Banks which include a sample. The relationship between deposit and macroeconomic factors is examined using quarterly data for the period from fiscal year 2013/14 to 2017/18. The required secondary data are obtained from quarterly financial statistics bulletin of Central Bank of Myanmar and Statistical Year Book published by CSO, Myanmar.

Data is analyzed with inferential such as correlation analysis and multiple regression analysis, and descriptive analysis using Statistical Package for Social Sciences software (version 23).

The study finds that real interest rate, GDP per capita and exchange rate have a positive and significant effect on the deposit mobilization while money supply has a negative and insignificant impact on deposit of private banks. Hence, the study recommends that the policy makers should ensure adopting appropriate macroeconomic policies because macroeconomic factors such as real interest rate and real GDP per capita affect the increase of deposit mobilization.

Keywords: *Macroeconomic Factors, Deposit Mobilization, Private Commercial Banks*

INTRODUCTION

One of the common goals of any economy is to achieve sustainable economic growth. A sound, stable and well-developed financial system plays a crucial role for economic growth. It facilitates the financial intermediation process of flow of funds between the surplus fund form savers and deficit fund to borrowers. Then, it ensures the financial resources to be allocated efficiently for promoting economic growth and development. Healthy economy requires a healthy financial sector that is at the service of people (Lagarde, 2019).

Banking sector in Myanmar is dominant in its financial sector and the share of banking sector is nearly 90% of total financial sector assets (Foerch, Thein & Waldschmidt, 2013). Therefore, banking sector must be systematically important financial systems. Undeniably, instability of banking sector may adversely impact not only on the financial system but

also on the whole economy as they interlink each other.

According to Mistry & Savani (2015), banks are the backbone of the economy of the country because they play significant role in the effort to attain stable prices, high level of employment and sound economic growth.

Banks play financial intermediary role of mobilizing fund from savers and making them loan to investors. Basically, the main source of profits of banks can be received from the difference in the interest rates paid to depositors and charged to borrowers. Therefore, deposits are main source of working funds of economy as well as main source of funds for the banks. According to Selvaraj (2016), deposits are the life blood of a banking institution as they constitute the chief source of funds to undertake lending operations. In this context, deposit plays vital role for banks.

Thus, this paper analyses the determinants of macroeconomic factors on deposit mobilizations of private commercial banks in Myanmar. Based on related

theoretical literature and previous empirical research, this paper elaborated the impacts of macroeconomic variables including GDP per capital, real interest rate, money supply and exchange rate on deposit mobilization. This result may fill the research gap especially in this area and contribute to the authorities in adopting appropriate policies in attracting deposit mobilization in Myanmar.

Statement of the Problem

Economic policy of Myanmar aims at achieving inclusive and continuous development. To achieve these aims, the Government adopted 12 points of economic policy. The vision of Myanmar Government for financial sector development is to be a competitive, integrated, and efficient financial system that is appropriately regulated and supervised so that it efficiently mobilizes savings to finance sustainable economic growth.

Thus, the financial sector is required to be supportive from the above vision. Therefore, with the assistance of World Bank and International Monetary Fund, Financial Sector Development Strategies 2015-2020 was developed to be a stable, efficient and inclusive financial sector.

Aside from Financial Sector Development Strategies 2015-2020, Myanmar has financial inclusion goals which include increasing the portion of financial inclusion, enhancing financial products and services for the people by 2020 (MAP, 2015). In this context, one of the objectives of financial inclusion roadmap is to increase regulated savings and increase the number of formal savings accounts potentially from 2.4 million to 4.4 million accounts (MAP, 2015).

A FinScope survey, FMT (2013) was conducted to analyze the financial services and products, financial access, drivers of financial products and services utilization, barriers to utilization of and access to, financial products and services. The survey found that 17% of adult people and 18 years and older people have bank accounts whereas the rest portions are unbanked. The survey recognized the less of saving practice of the people in Myanmar.

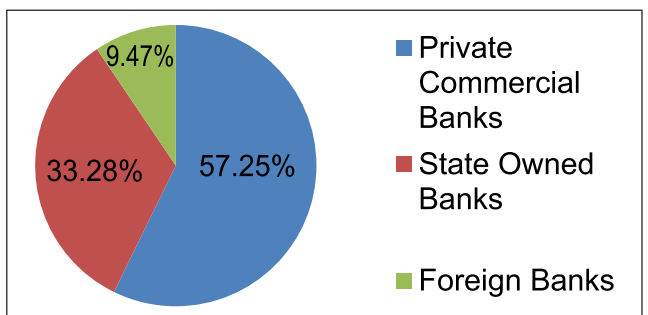
Thus, in order to meet the above-mentioned objectives of the economy, the financial sector plays a vital role including enhancing efficient mobilization of saving and increasing access to financial products and services in Myanmar. In this respect, banks take part an important role for collecting different types of deposits and providing financial services for the business and economy. Generally, banks accept deposit in the types of

demand deposit, saving deposit and fixed deposit. Among them, saving deposit is the largest proportion of deposit.

On analysis of deposit, the total amount of bank deposits in Myanmar increased year by year. Nevertheless, it is a need to enhance bank deposit compare to other ASEAN countries. In 2015, the ratio of bank deposit to GDP in Myanmar was 29.23% while other emerging ASEAN countries such as in Cambodia (54.33% of GDP), Philippines (62.89% of GDP), and Thailand (116.16 % of GDP) (IMF, IFS). As such, there is a need to find the strategies to improve deposit of the domestic banks in Myanmar.

At present, the banking sectors in Myanmar comprise 4 State owned banks, 25 private commercial banks and 13 foreign banks branches. Among them, the asset of private commercial banks is the largest portion of 57.25% of total asset of banking sector (Figure 1). Therefore, the private commercial banks are crucial in the banking sector and need to analyse the factors influencing to attract the mobilization of deposits for the economy as well as for their source of fund.

There may be a few studies in relation to the area of mobilization in deposit in Myanmar. However, this study will specifically focus on determinants of macroeconomic factors affecting the deposit mobilization by using secondary data. Thus, there may be a contribution to the filling of research gap with regards to this area in Myanmar.



Source: Quarterly Financial Statistics Bulletin, Central Bank of Myanmar

Research Objectives

The main objective of this study is to analyze the effect of macroeconomic factors on deposit mobilization of private commercial banks in Myanmar.

Specific objectives

The specific objectives of the study are as follows:

- 1) To analyze the effect of real interest rate on domestic mobilization of private commercial banks in Myanmar.

- 2) To identify the impact of GDP in terms of income on domestic mobilization of private commercial banks in Myanmar.
- 3) To highlight the effect of exchange rate on domestic mobilization of private commercial banks in Myanmar.
- 4) To evaluate the impact of money supply on domestic mobilization of private commercial banks in Myanmar.

LITERATURE REVIEW

This study includes the relevant theoretical review, empirical review and the conceptual framework with regards to the study of determinants of macroeconomic variables on deposit mobilization.

(A) Theoretical Review

Interest Rate and Saving

The determinant of interest rates on savings (deposit) remains a controversial issue. Interest rate liberalization (proxied by real deposit rate) contributed to economic growth through its influence on savings (Cobbinah, 2011).

According to Mankiw (2010), the real interest rate is the nominal interest rate corrected for the effects of inflation. The nominal interest rate is the sum of the real interest rate and the inflation rate. According to the Fisher equation, the nominal interest rate can change due to two reasons such as real interest rate change and inflation rate change.

There are some economic theories related to the interest rate. In classical theory, the interest rate is determined by saving and investment alone (Pal, 2018). Investment is inversely related to interest rate while saving is positively related to interest rate.

According to the Neo-classical Theory of Interest or loanable funds theory of interest, the rate of interest is determined by not only savings but also hoarded wealth, bank loans, disinvestment wealth are another sources of funds available for investment to the borrowers (Pal, 2018).

GDP per capita and deposit

The marginal propensity to save

There are many economic theories and empirical evidences that showed the positive relation of people income and savings. In Keynesian economics, the marginal propensity to save showed the saving-income

relation.

Money Supply

A Model of the Money Supply

Mankiw (2010) examined the determinants of the money supply. The below equations show the relation of money supply and the monetary base:

$$M = C + D \text{-----}(1)$$

$$B = C + R \text{-----}(2)$$

$$M = m \times B \text{-----}(3)$$

According to the first equation, the money supply (M) can be defined as the sum of currency (C) and demand deposits (D). The second equation mentions that the monetary base (B) is the sum of currency (C) and bank reserves (R). Then, the money supply is proportional to the monetary base (B). Thus, an increase in the monetary base increases the money supply by the same percentage.

Money Supply and deposit

Mushtaq & Siddiqui (2016) mentioned two possible ways for the relation of money supply and deposit. If money supply increase, loanable funds may be cheaper, thus reducing cost of borrowing for corporate and individual customers. Therefore, consumption will be increased and reduce savings. Thus, money supply and deposits will have an inverse relationship. However, there may be argument that as more money is supplied to the economy, more deposits could put in banks accumulating the fund for transactional and investment purposes.

(B) Empirical review

Interest rate and deposit

There is controversial consensus about the empirical literature regarding the relation between saving and real interest rate. Depending about macroeconomic fundamentals of individual economy, the findings may differ from one country to that of another.

Gaire (2010) studied the effect of real Interest rate and saving behavior in the case of Nepal. The findings showed that the real interest rate has strong positive relation with gross domestic saving ratio in Nepal in the study period of 1975 to 2010.

According to the study of Okun (2012) in Kenya, the findings indicated the need of commercial banks to monitor the interest on deposits carefully.

Sunday (2012) studied the impact of interest rates on

savings and investment in the context of Nigeria using the data for a period of 1970 to 2008. The analysis revealed that interest rates have a positive and significant impact on aggregate savings in Nigeria.

Mashamba, Magweva & Gumbo (2014) analyzed the relationship between banks' deposit interest rates and deposit mobilization in Zimbabwe for the period 2000-2006. The study found it positive and significant between deposit interest rate and deposit. It was concluded that deposit interest rate is an important determinant of deposit mobilization in Zimbabwe. Hence, an increase in savings products with a higher return can positively affect deposit growth in Zimbabwe.

Moyo & Roux (2018) analyzed the impact of interest rate reforms on economic growth through savings and investments in Southern African Development Community for the period 1990-2015. The study revealed that the real deposit rate has a positive effect on savings.

GDP per capita

Tareq (2015) examined the paper on "Savings Mobilization Behavior of Nationalized Commercial Banks in Bangladesh" using a Log-linear model over the period 1992-2006. The study found that the income and the literacy level of the individuals are the most important factors affecting the savings mobilization in the case of Nationalized Commercial Banks of Bangladesh.

Boadi, Li, & Lartey (2015) investigated the determinants of bank deposit in Ghana using quarterly data over the periods of 1991 to 2012. The study found that the economic growth based on Gross Domestic Product (GDP) defined as GDP income proxy had a strong existence. It indicated that once the economy grows there is a greater likelihood of an increase in bank deposits.

Garo (2015) examined the determinants of deposit mobilization and related costs of commercial banks in Ethiopia using the data over the years from 2001/2 to 2012/13, and questionnaires and interviews with senior bank officers of seven banks. The study found that the growth per capita income is the most significant factor in affecting the bank deposits.

Anthony (2012) examined the impact of bank savings and bank credits on Nigeria's economic growth from 1970-2006 and found the values of GDP per capita had a positive and statistically significant relationship with the size of saving.

Teshome (2017) examined the determinants of Commercial Banks deposit in Ethiopia, in the case of Ethiopian commercial banks using data from the year 1999/2000 to 2014/2015. The results of random effect model indicated the positive and statistically significant impact of real GDP on the level of deposit.

Mashamba, Magweva & Gumbo (2014) examined the relationship between Banks' deposit interest rate and deposit mobilization in Zimbabwean Commercial Banks for the period of 1980 to 2006. The finding revealed the strong relationship between commercial bank deposits and level of economic activity in Zimbabwean.

Moyo & Roux (2018) analyzed the impact of interest rate reforms on economic growth through savings and investments in SADC countries for the period 1990-2015. The study found that income captured by GDP per capita growth has positive impact on savings.

Exchange rate

An exchange rate is the rate at which one currency will be exchanged for another. It is also recognized as the value of one country's currency in relation to another currency.

Garo (2015) mentioned in the study that exchange rate of domestic country to USD increases, deposits of local country will deplete in the process of importing goods and services. Then, local deposits in banks will reduce. There is inverse relationship. A rise in exchange rates might lead to lower levels of deposit.

Ngula (2012) analyzed the determinants of deposit mobilization and its role in economic growth in Ghana during the study period of 1980-2010. The study found the negative significant influence of exchange rate between the Ghanaian cedi against the US dollar on bank deposit accumulation. The study concluded that there might have been the phenomenon of currency substitution over the period of estimation.

Garo (2015) studied the determinants of deposit mobilization and related costs of commercial banks in Ethiopia for the period covering 2001/2-2012/13 through questionnaires and interviews with senior bank officers of seven banks. The analysis showed that the branch expansion, the money supply, the exchange rate of Birr to USD and general inflation are the most significant factors of deposit volume in Ethiopia.

Ostadi & Sarlak (2014) studied the effective factors on the absorption of bank deposits to increase the relative share of Isfahan Sepah Bank during the period of 1379 to 1389. The results indicated that the effects of e-

banking parameters such as the relative contribution of POS and ATM and production (GDP) on bank deposits are positive and significant while the effects of inflation and exchange rates on deposits are negative and significant.

According to the study of Bhattarai (2018) titled on "the impact of bank specific and macroeconomic variables on investment of commercial banks in Nepal" based on secondary data for the period of 2009/10 - 2015/16, the analysis showed that non-interest income, credit to deposit ratio, GDP and exchange rate are the major factors affecting the investment of commercial banks. And, exchange rate has negative effects on investment of commercial banks in Nepal.

Money supply and Exchange Rate

Garo (2015) revealed the study on determinants of deposit mobilization and related costs of commercial banks in Ethiopia for the period of (2001/2-2012/13) through questionnaires and interviews made to senior bank officers of seven banks. The analysis shows that money supply, the exchange rate of Birr to USD and general inflation are the most significant factors of deposit mobilization activity.

According to the study of Jibrin, Danjuma, & Blessing (2014) on private domestic savings mobilization by commercial banks and economic growth in Nigeria during the period covering 1986/2010, the results found strong determinants of money supply and per capita income on private domestic savings for the period. It was also revealed that unethical banking practices by Nigerian commercial banks have rendered interest rate impotent to drive savings mobilization (Jibrin, Danjuma, & Blessing, 2014).

Azu-Nwangolo & Ogechi, (2018) examined the effect of financial deepening on customer deposit of Nigerian commercial banks using time series data for the period of 1981-2017. The study found that narrow money supply has negative but insignificant effect on total customer deposit of commercial banks while private sector credit, board money supply and money outside the bank have positive effect on customer deposits of commercial banks. The researcher concluded significant impact of financial deepening on total customer deposit and the need to deepen the policies to enhance the performance of the Nigeria financial market.

Money Supply and Interest rate on Deposit

Mushtaq & Siddiqui (2016) examined the effect of interest rate on bank deposit with two models' relation to non-Islamic countries and Islamic countries. The result

showed that real interest rate and money supply variables have positive significant impact on bank deposits while inflation have positive insignificant impact on bank deposits of non-Islamic countries. On Islamic countries, the result indicates that money supply and inflation have positive significant impact on bank deposits of Islamic countries while interest rate has positive insignificant impact.

Mashamba, Magweva & Gumbo (2014) analyzed the relationship between savings rates and deposit mobilization in Zimbabwe using secondary data during the period 1980 to 2006. The findings showed a positive and statistically significant relationship between financial deepening (broad money supply to GDP ratio). The researchers noted the consistent findings with economic theory and an increase in money supply will result in households saving some for future consumption and for investment purposes.

RESEARCH METHODOLOGY

Population of Study

This study will target 24 private Commercial Banks in Myanmar as of March 31, 2017 published in the CBM's Website. All 24 private commercial banks constituted the study as a sample.

Source of Data and Data Collection Method

To meet the research objectives, the researcher focused on secondary data sources. The secondary sources of data are extracted from annual reports of Central Bank of Myanmar and website from CSO, Myanmar. Quarterly Data over the years from 2013/14 to 2017/18 of private commercial banks is gathered.

Data Analysis Technique

In order to comply with the objectives of this research, inferential analysis is used. The regression analysis was used to describe and evaluate the relationship between the dependent variable and the independent variables. The multiple linear regression models are adopted to identify and measure possible factors that could affect the macroeconomic factors on commercial banks deposit.

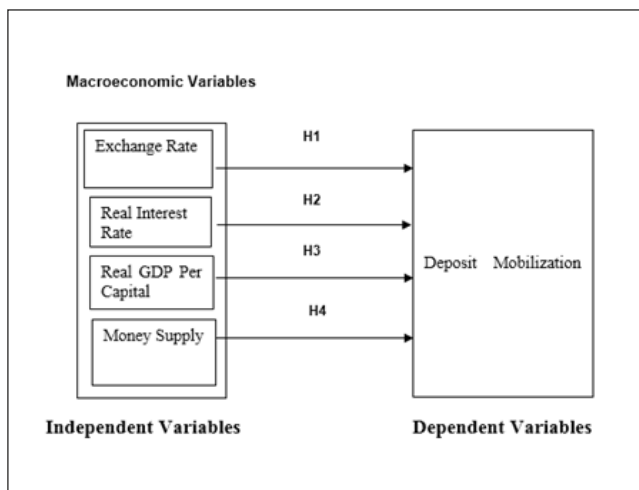
To get the comprehensive understanding of objectives of the study, in examining the quantitative data, the Statistical Package for Social Sciences (SPSS) software (version 23 for window) will be applied to analyze the data.

Theoretical Framework

This section is discussed on conceptual framework based on the theoretical and empirical findings. Before

finalizing the conceptual framework, the research has done pilot test to determine the suitable macroeconomic determinants on deposit mobilization in Myanmar. Then, final conceptual framework can be concluded as follows:

Figure 1: Conceptual Framework of the Study



Sources: Developed by researcher

Research Hypotheses

The below hypothesis of this study was identified based on the specific objectives and conceptual framework of the study:

Hypothesis 1: Average Exchange Rate has a significant effect on deposits mobilization of private commercial banks in Myanmar.

Hypothesis 2: Real Interest Rate has a significant effect on deposits mobilization of private commercial banks in Myanmar.

Hypothesis 3: GDP Per Capita has a significant impact on deposits mobilization of private commercial banks in Myanmar.

Hypothesis 4: Money Supply (Narrow money supply to GDP) has a significant impact on deposits mobilization of private commercial banks in Myanmar.

Based on theoretical views and empirical review, the linear regression equation of this research can be shown as follows:

$$DEP = \alpha + \beta_1 AER + \beta_2 RIR + \beta_3 GDP + \beta_4 MS + \mu$$

The variables, symbols, measurement and expected sign can be found as below in table 1:

Table 1: Variables, Notation, Measurement and Expected Sign

Variable	Notation	Measurement	Expected Sign
Deposit	DEP	Sum of current deposit, savings deposit and time deposit (measured in MMK).	
Average Exchange Rate	AER	Average Reference Exchange Rate of Myanmar currency (MMK) to USD.	-
Real Interest Rate	RIR	Central Bank's Policy rate minus inflation rate.	+
GDP per Capita	GDP	The gross domestic product of a country divided by its total population.	+
Money Supply	MS	The narrow money which included currency in circulation plus demand deposit to GDP.	+/-
	α	intercept (or) regression constant	
	β	Estimated coefficient	
	μ	The stochastic error term of the linear regression model.	

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 presents the descriptive statistics of macroeconomic factors affecting the deposit mobilization. The model indicates the characteristics of statistical mean and standard deviation.

Table 2: Descriptive statistics of Macroeconomic Factors affecting the Deposit Mobilization

Descriptive Statistics			
	Mean	Std. Deviation	N
Deposit	15.0810	6.39009	20
AER	1166.3395	166.01294	20
RIR	3.20200	2.73113	20
RGDP	1405.0724	191.24305	20
MS	0.6500	0.38240	20

Source: SPSS output computed by Author (2019)

Regression outputs

A regression model was developed to analyze the effects of the macroeconomic factors on the deposit mobilization of private commercial banks in Myanmar and it can be shown in table 3.

Table 3: Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.984 ^a	0.968	0.960	1.28547	1.842

a. Predictors: (Constant), AER, RIR, RGDP, MS
b. Dependent Variable: Deposit

Source: SPSS output computed by Author (2019)

Model summary of table 3 shows that $R=0.984$ which indicated a high positive relationship between the variables. It is found that R^2 is 0.968. Then, the model summary shows that the adjusted R Squares is 0.968 which implies that the independent variables such as real interest rate, per capita GDP, money supply and average exchange rate explained the variations on dependent variable of deposit mobilization by 97%. The value of Durbin-Watson (DW) indicates the autocorrelation for the model. The study shows that the DW value is closed to 2 and the autocorrelation is minimal.

Analysis of Variance (ANOVA)

In order to test the fitness of the regression model and to find out the results of significant, the researcher used the ANOVA table as shown in table 4. F -value showed 113.628 by sig 0.000. It means that the results are statistically significant at 0.000 level which was less than 0.05 or 5% level.

Table 4: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	751.046	4	187.762	113.628	0.000 ^b
	Residual	24.786	15	1.652		
	Total	775.833	19			

a. Dependent Variable: Deposit

b. Predictors: (Constant), AER, RIR, GDP, MS

Source: SPSS output computed by Author (2019)

Coefficients Results

The researcher used the multiple regression model to analyze the relationship between the macroeconomic factors such as real interest rate (RIR), GDP per capita (GDP), money supply (MS) and average Exchange rate (AER) affecting the deposit mobilization of Private Commercial Banks in Myanmar at a significant level of 1 percent and 5 percent using SPSS software version 23 of IBM. The coefficient results for the regression equation were presented in table 5.

Table 5: Coefficients Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error				Beta	Tolerance
1	(Constant)	-30.480	2.311		-13.192	0.000		
	AER	0.019	0.004	0.501	4.296	0.001	157	6.378
	RIR	0.439	0.135	0.188	3.253	0.005	0.639	1.565
	RGDP	0.016	0.004	0.476	3.659	0.002	0.126	7.930
	MS	-0.998	0.882	-0.060	-1.131	0.276	0.764	1.308

a. Dependent Variable: Deposit Mobilization

Source: SPSS output computed by Author (2019)

Deposit= -30.48 + 0.019 Average Exchange Rate + 0.439 Real Interest Rate + 0.016 GDP Per Capita – 0.998 Money Supply

Depending on the table 4, independent factors such as real interest rate, GDP per capita and exchange rate have a positive and significant effect on the deposit mobilization while money supply has a negative and insignificant impact on deposit of private banks at 5% significance level. Among them, the real interest rate was found to have the strongest relationship with a factor of 0.439.

The study found the observed significant value (P value) of 0.000 and independent variables such as real interest rate, GDP per capita, average Exchange rate and money supply are less than 0.05. Thus, the study accepts H_1 , H_2 , H_3 and H_4 . Hence, the regression test shows that there is a significant relationship between independent variables such as real interest rate, GDP per capita, money supply and average exchange rate, and dependent variable of deposit mobilization.

VIF (Variance Inflation Factor) is used as an indicator of multicollinearity. As a rule of thumb by Gujarati (2003), all VIF value results show less than 10 and the multicollinearity is not a concern.

Average Exchange Rate and deposit

The analysis shows that the average annual exchange rate was a positive and significant effect on deposit mobilization which is different to the initial expected sign.

If the exchange rate of domestic country to USD depreciates, imports will be expensive. Then, more domestic currency will need for imports. As a result, deposit of domestic banks will decrease.

However, the sign is different with initial expected sign. In this context, the reason can be investigated on the finding of this result. During the study period from 2013/14 to 2017/18, the values of imports increased more than the values of exports in Myanmar. Although, there is not the evidence of inverse relation with exchange rate of domestic country to USD and local deposit for the study period, the growth rate of deposit of banking system during the study period from 2013/14 to 2017/18 were decreasing trend compared with before the study period from 2001/2002 to 2012/13.

Real Interest Rate and deposit

In the case of real interest rate, evidence is found the

positive and significant relationship between real interest rate and private commercial banks' deposits which is same as expected sign. An increase in real interest rate makes bank deposit of private commercial banks increase. The results support the findings of (Gaire, 2010; Sunday, 2012; Okun, 2012; Mashamba, Magweva & Gumbo, 2014; Teshome, 2017 & Moyo & Roux, 2018).

GDP Per Capita and deposit

The study showed that the positive and significant relationship between GDP per Capita and private banks' deposits which is similar sign of initial expectation. An increase in GDP per Capita makes bank deposit of private commercial banks increase. A higher income will lead to enhance deposit. The result is consistent with the findings of (Boadi, Li & Lartey, 2015; Teshome, 2017; Mashamba, Magweva & Gumbo, 2014 & Moyo & Roux, 2018).

Money Supply and deposit

In the case of money supply, there exists negative but insignificant relationship between narrow money supply to GDP and private banks' deposits. An increase in narrow money to GDP makes bank deposit of private commercial banks decrease. The result supports the findings of Azu-Nwangolo & Ogechi (2018) who studied the relation of financial deepening and deposit mobilization of commercial bank in Nigeria.

The narrow money supply includes currency in circulation and demand deposit. The explanation for the inverse impact of narrow money supply on deposit may be that during the study period, currency in circulation included significant portion of about 80% of narrow money supply and the rest portion of demand deposit which can be withdrawn based on customer desire. Consequently, the increase of narrow money supply may impact on the decrease deposit on private commercial banks in the case of Myanmar.

CONCLUSION

The main objectives of this study are to examine the effect of macroeconomic factors on the deposit mobilization of private commercial banks in Myanmar using quarterly data over the period from FY 2012/2013 to 2017/18. Diagnostic tests were made for the linear regression model by using SPSS software version 23 before making regression analysis.

Based on the analysis, it can be concluded that macroeconomic factors including real interest rate, real GDP per capita, average exchange rate have positive and significant impact on the deposit mobilization of private commercial banks in Myanmar while money supply (narrow money supply to GDP) has no significant effect on the deposit mobilization of private commercial banks in Myanmar. However, the sign of the average exchange rate is different from the expected sign.

Therefore, the study recommends enhancing the deposit mobilization in Myanmar as follows:

- (1) Adopting appropriate macroeconomic policies are crucial on the reason that macroeconomic factors such as real interest rate and GDP per capita have positive and significant effect on deposit mobilization.
- (2) According to the economic theory, the high inflation may reduce the rate of return and discourage saving. Therefore, policies for reducing domestic inflation rate should be adopted. Monetary policy and fiscal policy should be complementary with each other to attract the positive rate of return by controlling inflation. Policies for reducing the financing of government budget from central bank would contribute to low inflation. Then, the adopting appropriate deposit rates are important to stimulate people to save more money and then enhance mobilizing of deposits.
- (3) Since GDP per capita showed positive and significant effect on mobilization of deposit, higher incomes may increase deposit. Therefore, the policies to promote GDP growth are essential for the economy.

SUGGESTION FOR FURTHER RESEARCH

This study focused to find the determinants of macroeconomic factors such as real interest rate, GDP per capita, money supply and average exchange rate that affect the deposit of private commercial banks in Myanmar. There will be comprehensive results of the analysis if the additional factors and more required data are included. Therefore, this study suggests for future studies to include additional macroeconomic factors in order to expand the more comprehensive finding of these results.

REFERENCES

- Anthony, O. (2012). Bank Savings and Bank Credits in Nigeria: Determinants and Impact on Economic Growth. *International Journal of Economics and Financial Issues*, 2(3), pp 357-372.
- Azu-Nwangolo & Ogechi, B. (2018). Financial Deepening and Deposit Mobilization of Commercial Banks in Nigeria: A Time Variant Model. *Indian Journal of Finance and Banking*, 2(2), pp 1-14.
- Bhattarai, B.P. (2018). Impact of Bank Specific and Macroeconomic Variables on Investment of Commercial Banks in Nepal. Proceedings of 102nd ISERD International Conference, Bangkok, Thailand, 5th-6th February. Retrieved From: http://www.worldresearchlibrary.org/up_proc/pdf/1389-152212852259-64.pdf
- Boadi, E.K., Li, Y. & Lartey, V.C. (2015). Determinants of Bank Deposits in Ghana: Does Interest Rate Liberalization Matters? *Modern Economy*, 6(9), pp 990-1000.
- Cobbinah, N.E. (2011). The Impact of Bank of Ghana Policy Rate on Commercial Bank Lending Rate. The Study of Barclays Bank Ghana. Institute of Distance Learning, Kwame Nkrumah University of Science and Technology. Retrieved From: <http://ir.knust.edu.gh/bitstream/123456789/4887/1/Cobbinah%20Nicholas%20Ekow.pdf>
- Gaire, H.N. (2010). Real Interest Rate and Saving Behavior in Nepal. *Banking Journal*, 2(1), pp 16-34.
- Garro, G. (2015), Determinants of Deposit Mobilization and Related Costs of Commercial Banks in Ethiopia. A Research Project Paper Submitted to the Department of Management College of Business and Economics. Retrieved From: <http://etd.aau.edu.et/bitstream/handle/123456789/13420/Giragn%20Garro.pdf?sequence=1&isAllowed=y>
- FMT. (2013). FinScope Myanmar 2013. Finmark Trust. Retrieved From: <https://finmark.org.za/finscope-myanmar-2013/>
- Foerch, T., Thein, S. & Waldschmidt, S. (2013). Myanmar's Financial Sector- A Challenging Environment for Banks. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Germany.
- Gujarati, D.N. (2004). *Basic Econometrics*. 4th edition. Tata McGraw Hill. India.
- Jibrin, M.S., Danjuma, I. & Blessing, S.E. (2014). Private Domestic Savings Mobilization by Commercial Banks and Economic Growth in Nigeria. *Beykent University Journal of Social Sciences - BUJSS*, 7(1), 2014, pp 1-22.
- Lagarde, C. (2019). The Financial Sector: Redefining a Broader Sense of Purpose. 32nd World Traders' Tacitus Lecture. Retrieved From: <https://www.imf.org/en/News/Articles/2019/02/21/sp022819-md-the-financial-sector-redefining-a-broader-sense-of-purpose>
- Mankiw, N.G. (2010). *Macroeconomics*. 7th edition. Worth Publishers. US.
- MAP. (2015). Myanmar Financial Inclusion Roadmap 2014 – 2020: Creating Financial Inclusion through Leadership Towards a Market Based Approach. Retrieved from: https://www.lift-fund.org/sites/iftfund.org/files/publication/UNCDF_myanmar_fi_roadmap_3_Apr_2015.pdf
- Mashamba, T., Magweva, R. & Gumbo, L.C. (2014). Analysing the relationship between Banks' Deposit Interest Rate and Deposit Mobilisation: Empirical evidence from Zimbabwean Commercial Banks (1980-2006). *IOSR Journal of Business and Management (IOSR-JBM)*, 16(1), pp 64-75.
- Mistry, D.S. & Savani, V. (2015). A Comparative Study of the Profitability Performance in the Banking Sector: Evidence from Indian Private Sector Bank. Paper presented at the XVI Annual Conference Proceedings, January. Retrieved From: http://www.internationalseminar.org/XVI_AIC/T55a_pdf/2Dharmendra%20S%20Mistry.pdf
- Moyo, C. & Roux, P.L. (2018). Interest Rate Reforms and Economic Growth: The Savings and Investment Channel. MPRA Paper, March. Retrieved From: https://mpra.ub.uni-muenchen.de/85297/1/MPRA_paper_85297.pdf
- Mushtaq, S. & Siddiqui, D.A. (2016). Effect of Interest Rate on Bank Deposits: Evidences from Islamic and Non-Islamic Economies. *Future Business Journal*, 3(1), pp 1–8.
- Ngula, I.B. (2012). Determinants of Deposit Mobilization and its Role in Economic Growth in Ghana. MBA Thesis Submitted to the Institute of Distance Learning (IDL), Kwame Nkrumah University of Science and Technology (KNUST), Kumasi – Ghana, September. Retrieved From: <http://ir.knust.edu.gh/xmlui/bitstream/handle/1234567>

- 89/4950/NGULA%2c%20ISAAC%20BELIGNA.pdf?sequence=1
- Okun, D.M. (2012). The Effect of Level of Deposits on Financial Performance of Commercial Banks in Kenya. Research Project Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Business Administration, University of Nairobi, October. Retrieved From:http://erepository.uonbi.ac.ke/bitstream/handle/11295/12539/Okun_The%20effect%20of%20level%20of%20deposits%20on%20financial%20performanc%20of%20Commercial%20Banks%20in%20Kenya.pdf?sequence=4
- Ostadi, H. & Sarlak, A. (2014). Effective Factors on the Absorption of Bank Deposits in Order to Increase the Relative Share of Isfahan Sepah Bank. *International Journal of Academic Research in Economics and Management Sciences*, 3(4), pp 139-149.
- Pal, R. (2018). Theory of Interest Rate. Retrieved From:<https://www.researchgate.net/publication/323388526>
- Sunday, K.U. (2012). The Impact of Interest Rates on Savings and Investment in Nigeria. An Unpublished MBA Thesis Submitted to the Faculty of Business Administration, University of Nigeria, Enugu Campus, March. Retrieved From:<http://www.unn.edu.ng/publications/files/images/SUNDAY,%20KINGSLEY%20UCHE.pdf>
- Selvaraj, N. (2016). Marketing Problems Encountered by First Generation Entrepreneurs - A Study with Reference to Madurai in Tamilnadu. *Journal of Accounting & Marketing*, 5(4), pages 3.
- Tareq, M.A. (2015). Savings Mobilization Behavior of NCBs in Bangladesh. *Australian Journal of Business and Economic Studies*, 1(2), pp 79-92.
- Teshome, F. (2017). Determinants of Commercial Banks Deposit in Ethiopia. Thesis Submitted to: The Department of Accounting and Finance, College of Business and Economics of Addis Ababa University, January. Retrieved From:<http://etd.aau.edu.et/bitstream/handle/123456789/3470/Fisseha%20Teshome.pdf?sequence=1&isAllowed=y>