

The Implications of Interest Rates on Private Saving with Reference to Myanmar

Nwe Ni Tun, Ibrahim Mohamed Mohamed Alrajawy, Amiya Bhaumik



Abstract: *The private saving is one of the fundamentals for economic development and growth of the country. Thus, the main purpose of this paper is to analyze the effect of interest rates on private saving in Myanmar over the period from fiscal year 2013-14 Q1 to 2018 Q2.*

This study investigates the private saving of Myanmar's banking sector which includes twenty seven private commercial banks, four State-owned banks and thirteen foreign bank branches. The quarterly data are obtained from secondary data sources collected from quarterly Financial Statistics Bulletin and annual reports of Central Bank of Myanmar, Statistical Year Books and Selected Monthly Economic Indicators published by CSO, Myanmar, as well as websites from commercial banks to investigate the effect of domestic interest rates on private saving.

Inferential analysis including multiple regression analysis and correlation analysis as well as descriptive analysis are applied to examine the effect of domestic interest rates on private saving with the use of Statistical Package for Social Sciences (SPSS) software (version 25).

The findings of the study reveal that all independent variables except from Treasury bill rate have significant impact on the savings while inflation and fixed deposit rate have adversely impact on savings. Among all independent variables, saving deposit rate is the most influent variable on attracting private saving. Therefore, the study concludes that policies for ensuring to adopt flexible interest rates structures and for maintaining reasonable inflation rate depending upon the macroeconomic conditions of the economy would be critical to mobilize private saving in Myanmar.

Keywords: Interest Rates, Savings, Banks, Myanmar.

I. INTRODUCTION

A. Background of the Study

A healthy banking system is backbone of the development and stability of the economy. Amongst the important functions of the banks, primarily banks play financial intermediary role of mobilizing fund from savers and making

them loan to investors [1]. Savings and investment play a key role in promoting economic growth [2]. The people's savings are the basis of investment resources of the country and are essential for economic development and growth. Increase of the savings will lead to the capital accumulation which will ultimately lead to the economic growth [3].

According to the national income accounts identity, saving equals investment. National saving is the sum of private saving and public saving. Private saving illustrates the saving of the private sector while public saving describes the saving. Total private saving in the banking system increased yearly and dramatically enhanced since FY 2016-17 [4]. As of FY 2016-17 Q4, private banks' savings indicated at the highest portion in the banking sector (approximately 77.42% of total savings) followed by State-owned Banks (approximately 18.37% of total savings) and foreign banks branches (approximately 4.21% of total savings).

The conduct of effective mechanism of monetary policy influences all activities of banking sector. Interest rate is one of the critical variables which persuade the depositors to deposit at the banks. According to Mankiw, (2010) [3] the interest rate is the return to saving as well as the cost of borrowing. A higher interest rate may reduce consumption and increase saving.

The interest rate is used to one of the monetary policy instruments of central banks to meet their objectives [5]. In accordance with the Central Bank of Myanmar (CBM) Law 2013, the CBM is implementing the monetary policy with the objective of maintaining domestic price stability using monetary policy instruments such as interest rate policy, minimum reserve requirements and open market operations. With regard to interest rate policy, the CBM determines suitable interest rates which are supportive in order to stabilize of the economy, to promote the investment and trade as well as to persuade the depositors. In analyzing the interest rate structure in Myanmar, different interest rates namely, Central Bank rate, deposit rate, maximum lending rate, Government Securities auction rates and deposit auction rates can be found. The CBM determines the policy rate, minimum deposit interest rate and maximum lending rates. Nevertheless, the interest rates on deposit auction rates, auction rates on government securities and interbank markets rates have been liberalized.

Central Bank of Myanmar changed its policy rate to 10 percent per annum from 12 percent per annum with effect from January 1, 2012. Depending on central bank rate, deposit and lending rates can be set within a range adopted by CBM. Saving deposit rates can be determined between 8 percent per annum and the Central Bank rate of 10 percent per annum.

Revised Manuscript Received on January 15, 2020

* Correspondence Author

Nwe Ni Tun*, Faculty of Business and Accountancy, Lincoln University College, Petaling Jaya, Malaysia. Email: nwenitun@luc.edu.my

Ibrahim Mohamed Mohamed Alrajawy, Centre for Post Graduate Studies, Lincoln University College, Petaling Jaya, Malaysia. Email: ibrahim@luc.edu.my

Amiya Bhaumik, Faculty of Business and Accountancy, Lincoln University College, Petaling Jaya, Malaysia. Email: amiya@luc.edu.my

© The Authors. Published by Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP). This is an [open access](https://creativecommons.org/licenses/by-nc-nd/4.0/) article under the CC-BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

The maximum bank lending rate was set at 13 percent per annum for secured loan. Nevertheless, on January 15, 2019, the CBM introduced a new interest rate structure on lending rate with two categories with effective from February 1, 2019. The first category at a maximum lending rate of 13 percent per annum is identified for secured loan with the collaterals including land and building, gold and gold jewelry, diamond and precious treasure, savings certificate, treasury bond, fixed deposit (time deposit), collateralizable securities and transferrable contracts, pledge, credit guarantee, and collaterals occasionally specified by the CBM. A second category at maximum lending rates of 16 percent per annum is applied for unsecured loan either with collaterals other than the above referenced for secured loan or without collateral [6].

CBM, (2019) a [5] given the macroeconomic fundamentals of the economy, the CBM has been conducting deposit auctions due to the requirement of tight monetary policy when call for sterilization for to absorb the excess liquidity in the economy since FY 2012-13. At present, the deposit auction with the terms of 14-day, 28-day and 42-day has been conducted with the market determined interest rates. All the banks must maintain 5 percent on total customer deposits as minimum reserve requirement at their accounts with CBM since April 2015. The commercial banks which fulfill the minimum reserve requirements adopted by CBM can participate at the deposit auction with their excess reserve at their accounts with CBM.

On behalf of the Ministry of Planning and Finance, the CBM conducts government securities auctions to promote market based mechanism for financing government budget deficit. The T-bill auction and T-bond auction have been conducted since January, 2015 and September, 2016 respectively. At present, the T-bill auction with maturities of 3-month, 6-month and 12-month has been conducted with market determined interest rates.

The present structure of Myanmar's banking sector includes four Stated-owned commercial banks, twenty-seven private commercial banks and thirteen foreign bank branches. Foreign bank branches started their operations in 2015 and allowed to deal with local cooperate in November 2018. As of end of Fiscal year (FY) 2017-18, in term of total assets of banking sector, the asset of private commercial banks stood at the highest portion with 57.25% of total asset of banking system, followed by State-owned banks and foreign banks branches [7].

A number of literatures have analyzed the level of deposit of banking system in Myanmar [6]. Although both private credit and deposits in the banking system have grown gradually, they remain low compared with other frontier and developing Asia countries and far below emerging Asia [8]. The Myanmar's financial sector remains lagging behind with its regional peers in the Association of Southeast Asian Nations (ASEAN) in terms of domestic credit to private sector and depositors with commercial banks per 1,000 adults.

Tun, (2019) [7] found a necessity to improve bank deposit comparing to other ASEAN countries as the proportion of bank deposit to GDP in Myanmar remained at 29.23% in 2015 contrasted with other ASEAN countries namely Thailand (116.16% of GDP), Philippines (62.89% of GDP) and Cambodia (54.33% of GDP). Moreover, in the form of

deposit, the portion of private banks' deposit in the banking system increased significantly since FY 2016-17.

Thus, this paper aims to identify the determinant of interest rates on private saving in Myanmar and will find out the strategies to enhance accumulation of private saving in the context of Myanmar.

B. Statement of the Problem

A higher saving rate contributes to the higher investment and thus leads to economic growth. The literature on the determinants of interest rates and savings remains questionable issues. Several literatures investigated the impact of interest rates on the level of savings in the Myanmar's banking sector. However, this study will explicitly concentrate on the influence of different kinds of interest rates which affect private saving in Myanmar by using inferential statistical methods. Thus, this study may bridge research gap relation to this area against the backdrop of Myanmar.

C. Research Objectives

The main objective of this study is to analyze the effect of interest rates on private saving in Myanmar for the period of FY 2013-14 Q1 to 2018 Q2. The specific objectives of the study are as follows:

- (1) To evaluate the impact of saving deposit rate on private saving in Myanmar.
- (2) To identify the effect of fixed deposit rate on private saving in Myanmar.
- (3) To assess the impact of Government Treasury bill Rate on private saving in Myanmar.
- (4) To determine the impact of deposit auction rate on private saving in Myanmar.
- (5) To find the impact of inflation rate on private saving in Myanmar.

II. LITERATURE REVIEW

A. Theoretical Review

Interest Rate:

Several authors analyzed the interest rates and their related theory of with different perspectives [9]. Interest rates are one of the notable variables in the economy. Changes in interest rates have important effects on individuals, financial institutions, businesses and the overall economy.

Keynes' Liquidity Preference Theory:

Keynes (1936) developed the Liquidity Preference Theory which is for the short term [10]. The rate of interest is postulated on the equality of the demand for money and supply of money in the money and capital markets. The theory is restricted consideration of only the demand and supply of money in the determination of the equilibrium rate of interest in the economy without integrating the demand for credit by different economic agents in the system.

Neo-classical Theory or The Loanable Funds Theory of Interest Rates:

According to Ogbulu *et. al.*, (2015) [10], the Loanable funds theory of interest rates attempts to provide a comprehensive treatment

of the factors bringing together elements of both the classical and liquidity preference theories by integrating in its postulation and analysis the total demand for loanable funds and total supply of loanable funds.

According to the loanable funds theory, the supply of loanable funds (aggregate savings) is positively related to interest rates while the demand for loanable funds (supply of credit demand) is expected to be inversely related to the rate of interest.

Neo-keynesian Theory of Interest or Hicks IS-LM Curve or Modern Theory of Interest:

According to Pal, (2018) [11], both the theories of classical' saving-investment theory and Keynes' liquidity preference theory are synthesized into a new theory known as Hicks' IS-LM model by Hicks and Learner. The model explains the joint determination of both rate of interest and real income [12]. The IS-LM model brings together the elements of the Keynesian cross and the elements of the theory of liquidity preference. The IS curve indicates the points that satisfy equilibrium in the goods market while the LM curve shows the points that satisfy equilibrium in the money market. The intersection of the IS and LM curves shows the interest rate and income that satisfy equilibrium in both markets for a given price level.

B. Empirical Review

This section contains empirical analysis of interest rates and inflation on the savings.

Interest Rate and Inflation on Savings:

The relationship between interest rates and savings (deposit) still exist a debatable issue examined the effect of interest rate on banks' deposit for non-Islamic and Islamic economies [13]. The result showed that real interest rate has positive significant impact on bank deposits of non-Islamic countries Islamic countries whereas interest rate has positive insignificant impact on deposit of banks in Islamic countries.

The findings investigated by Mashamba, Magweva, & Gumbo, (2014) [14] showed a positive and statistically significant relationship between deposit rates and deposit of banks for the study period in Zimbabwe during the study period from 2000 to 2006. The study recommended that banks should work out unbanked markets via expansion of branch, offering low cost accounts and increasing interest rates on deposits to attract more deposits.

The findings by El-Seoud, (2014) [15] revealed that nominal interest rate has positive and significant impact on national saving rate in the short run while its effect is positive and insignificant in the long run. The inflation rate has positive and significant impact on national saving rate for short run and the long run in Kingdom of Bahrain over the last twenty years from the study period.

Garu, (2015) [16] found the influence of deposit interest rate on deposit volume of Commercial Banks in Ethiopia during the study period of 2001-12 to 2012-13. Similarly, Jembere, (2016) [17] found that impact of interest rate on saving deposit of the bank in Ethiopia for the period of 2000-2014. Nevertheless, the contrary finding of Teshome, (2017) [18] showed that average deposit Interest rate had negative and significant effect on deposit of commercial banks in Ethiopia over the study period from 1999-2000 to 2014-2015 using random effect panel least square regression. The findings revealed that among other, deposit interest rate

and annual inflation rate were significant relationship with commercial banks' deposits.

Ekpung, Udude & Uwalaka, (2015) [19] investigated the effect of monetary policy on banking sector performance in Nigeria for the period from 1970 to 2006 using OLS regression technique. The study used bank's deposit liabilities as proxy for bank performance and other independents variables including exchange rate, deposit rate and minimum discount rate. The study found that deposit rate and minimum discount rate had a negative influence on the banks deposit liabilities in Nigeria. The study concluded that monetary policy plays a vital role in determining the volume of bank's deposit liabilities in Nigeria.

Boadi, Li & Lartey, (2015) [20] examined the influence of interest rate liberalization on bank deposits (specified in long term deposit) in Ghana using independent variables including real savings rate, real Treasury bill rate, exchange rate movement and gross domestic product and controlling variable of inflation and found the significance of all independent variables. The study recommended that Bank of Ghana should keep resilience upon interest rate liberalization in order to make surplus funds for investors as well as to reduce the level of inflation in Ghana.

Ferrouhi, (2017) [21] analyzed the determinants of bank deposits in Morocco for the period 2003-2014 using panel data regression. The findings indicated that deposits are positively correlated with banks size, with both internal and external funding, with interest rate on deposits and unemployment rate. In a study by Gunasekara & Kumari, (2018) [22], who investigated the influence factors of deposit mobilization in Sri Lanka revealed that deposit interest rate has a significant and positive impact on deposit mobilization.

The findings of the study using the data of 135 countries from 1995 to 2014 by Aizenman, Cheung & Ito, April (2017) [23] showed that the real interest rate affects private saving negatively whenever output volatility, old-age dependency, or financial development is over a specific limit and these effects are critical for the economy dependent upon a country's particular economic conditions.

Raza, Hena & Saeed, (2017) [24] found the positive relationship between interest rate and bank deposit while negative relationship between savings and interest rate of scheduled banks listed in the State Bank of Pakistan during the period of 2002 to 2016. The study by Aslam, (2018) [25] revealed that the interest rate had influence on the savings for both long - run and short - run in Sri Lanka for the period of 1977 to 2017 and recommended to consider interest rate friendly policy for enhancing the savings in Sri Lanka by the policy makers.

Er, Tugcu & Coban, (2014) [26] analyzed the short and the long-run relationship between saving, inflation, and economic growth in Turkey under the study period 2003:1 to 2012:2. The study revealed that saving, inflation and economic growth are counteracted while either inflation or economic growth has positive impacts on the savings in the Turkish economy. Nevertheless, there was no statistically significant relationship between the inflation and savings in the short-run and, the interest rates and savings in the long-run.

As per findings of the study of Orok, Okoi & Essien, (2017) [27]

showed that among others that there exist a significant and negative relationship amongst demand, savings and time deposit with inflation in Nigeria, and that interest rate impacted significantly and positively on saving and time deposit .

It is recommended among others evaluation of the marginal increment of deposit interest rate for savings and time Deposit through Central Bank of Nigeria Monetary Policy Committee at higher rate than inflation as an incentive to attract high deposit mobilization, and encouragement of increased trade activities geared towards increased money supply in the economy in Nigeria from 1994 - 2014.

III. RESEARCH METHODOLOGY

A. Population and Sample of the Study

CBM, (2019)b [4] As of September 2018, the present structure of Myanmar’s banking system includes four Stated-owned commercial banks, twenty seven private commercial banks and thirteen foreign bank branches. The study includes all banks as a study sample.

B. Source of Data and Data Collection Method

The researcher uses secondary data sources to comply with the research objectives. The required data are extracted from quarterly financial statistics bulletin of CBM, Statistical Year Books and Selected Monthly Economic Indicators published by CSO, Myanmar and websites of commercial banks.

C. Data Analysis Technique

Inferential analysis is used in order to observe the objectives of this study. The multiple linear regression models are adopted to identify the relationship between the dependent variable and the independent variables. The Statistical Package for Social Sciences (SPSS) software (version 25 for window) is applied to analyze the data to find the greater understanding of objectives of the study.

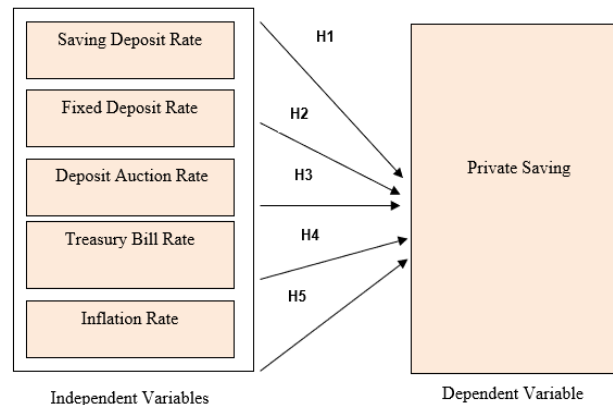
D. Theoretical Framework of the Study

The theoretical literature discussed above suggests that interest rates are related on the increase of the level of deposits and savings of banks. In this study, the researcher uses such different kinds of nominal term of average interest rates as saving deposit rate, fixed deposit rate, deposit auction rate and Government Treasury bill rate to analyze the effect of interest rates on savings in the banking system. The inflation rate is used as a control variable.

The relevant diagnostic tests including normality test, the test of autocorrelation and multicollinearity test are developed to determine the suitable variables and establish the model of linear equation. In order to test the normality of data for a normal distribution with the same mean and standard deviation of study sample, the researcher applies the Kolmogorov-Smirnov test (K-S) test and will assume that data may be normally distributed if p-value is higher than 0.05 [28]. After making diagnosis tests including normality test,

autocorrelation test, multicollinearity test for the above model and the final conceptual framework can be drawn as follows:

E. Conceptual Framework of the Study



E. Research Hypotheses

The following research hypotheses are derived based on the specific objectives and conceptual framework of the study:

Hypothesis 1: Saving Deposit Rate has a significant impact on private saving in Myanmar.

Hypothesis 2: Fixed Deposit Rate has a significant effect on private saving in Myanmar.

Hypothesis 3: Deposit Auction Rate has a significant impact on private saving in Myanmar.

Hypothesis 4: Government Treasury Bill Rate has a significant effect on private saving in Myanmar.

Hypothesis 5: Inflation Rate has a significant impact on private saving in Myanmar.

Depending on theoretical views and empirical reviews, the multiple regression of this study can be described with below model and equation:

F. Model Specification

Savings = f (Saving Deposit Rate, Fixed Deposit Rate, Deposit Auction Rate, Government Treasury Bill Rate, Inflation Rate)

$$DEP = \alpha + \beta_1 SDR + \beta_2 FDR + \beta_3 DAR + \beta_4 TBR + \beta_5 INR + \mu$$

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

Table 1: Summary of Variables, Notations, Measurement and Expected Sign

Variable	Notation	Measurement	Expected Sign
Private Saving	PS	Total Savings of banking sector described at CSO	
Saving Deposit Rate	SDR	Average of Nominal Saving Deposit Rate	+

Variable	Notation	Measurement	Expected Sign
Private Saving	PS	Total Savings of banking sector described at CSO	
Fixed Deposit Rate	FDR	Average of Nominal Fixed Deposit Rate (Proxy 1 year)	+
Deposit Auction Rate	DAR	Average of Nominal Deposit Auction Rate (Proxy 14 days)	-
Treasury Bill Rate	TBR	Average of Nominal Government Treasury Bill Auction Rate (Proxy 3-Month)	-
Inflation Rate	INR	Year on Year CPI Inflation Rate	-
	α	intercept (or) regression constant	
	β	Estimated coefficient	
	μ	The stochastic error term of the linear regression model	

IV. RESULTS AND DISCUSSIONS

This chapter contains the results and findings as well as discussion related to the analysis of findings.

A. Descriptive Statistics

The below table 2 describes the descriptive statistics of interest rates which impact the private saving by revealing the statistical mean and standard deviation.

Table 2: Summary of Descriptive Statistics

Variables	Mean	Std. Deviation	Minimum	Maximum
PS	21.8277	8.51273	8.69	37.28
SDR	8.289091	0.1037813	8.10	8.35
FDR	9.947182	0.0942507	9.72	10.00
DAR	4.3600	2.58215	0.25	6.96
TBR	6.2384	1.80758	4.00	8.18
INR	6.8632	2.62702	2.92	13.51
N (t)	22			

B. Summary of Regression Results and Determinants

The study reveals the multiple regression analysis in order to determine the relationship between independent factors such as saving deposit rate, fixed deposit rate, deposit auction rate, Government Treasury Bill rate and inflation rate which affect the private saving in Myanmar. The summary of regression results can be found in below Table 3.

Variables	Coefficients	Std. Error	t	p- Value	Collinearity Statistics	
					Tolerance	VIF
(Constant)	497.613	121.805	4.085	0.001*		

SDR	63.06	19.094	3.303	0.004*	0.178	5.631
FDR	-100.66	19.733	-5.101	0.000*	0.202	4.960
DAR	1.946	0.903	2.156	0.047*	0.128	7.788
TBR	0.289	1.367	0.212	0.835**	0.114	8.751
INR	-1.092	0.343	-3.183	0.006*	0.858	1.165

Dependent Variable: Private Saving
b. Predictors: (Constant), SDR, FDR, DAR, TBR, INR

F Value=17.582, F Significant = 0.000

R= 0.92, R Square= 0.846, Adjusted R Square=0.798, Durbin-Watson=1.651

* Represents significant at a 1% and 5% levels and ** represents not significant.

$$PS = 497.613 + 63.06 SDR - 100.66 FDR + 1.946 DAR + 0.289 TBR - 1.092 INR$$

The results mentioned above table 3 show that observed value (*P*-value) of 0.000 is significant at 1% level and the study accepts hypothesis of H1, H2, H3, H4 and H5. As the results indicated, *P* value of independent variables such as saving deposit rate, fixed deposit rate, deposit auction rate, inflation rate is less than 0.05 and they are statistically significant at 5% level while Government Treasury Bill rate is statistically insignificant. On analysis, independent factors such as saving deposit rate, deposit auction rate and Treasury Bill rate are found to have positive relationships with savings in Myanmar while fixed deposit rate and inflation rate are found to be negative relationships with savings in Myanmar. Among independent variables, saving deposit rate is found to be the strongest relationship on the level of savings with a factor of 63.06. According to a rule of thumb by Gujarati, (2009) [29], multicollinearity may not result as all VIF (variance inflation factor) values show less than 10.

In view of the model summary of table 3, the result of R of 0.92 indicates that the variables have a high degree of positive relationship. The adjusted R Squares of 0.798 describes that the independent variables, namely nominal term of average interest rates such as saving deposit rate, fixed deposit rate, deposit auction rate, Treasury Bill rate and inflation rate explain the variations on savings by 79.8%. According to Karadimitriou & Marshall, (2017) [30], the Durbin-Watson statistic should be within 1.5 and 2.5 and there is no autocorrelation. Given that, the value of Durbin-Watson (D.W) indicates to have approximately 2 and the autocorrelation is not present. As F-value of 17.582 with *P* value of 0.000 which is less than 0.01 or 1% significant level, the results are statistically significant.

C. Summary of Findings and Discussion

Saving Deposit Rate

In the case of saving deposit rate, evidence is found a significant at 1% level and the positive relationship between saving deposit rate and private banks' deposits in Myanmar. A rise in saving deposit rate leads to an increase of bank deposits of private commercial banks. This finding can be confirmed that saving deposit reached at approximately 70.71% of total savings on average over the study period.

Fixed Deposit Rate

The findings of the study indicate that fixed deposit rate is a significant at 1% level and adverse relationship with savings. The negative sign indicates that fixed deposit rate may not influence savings in Myanmar.

On the other hand, in analyzing the real data of deposits, the portion of individual deposits such as saving deposit, fixed deposit and other deposit stood at approximately 70.71%, 25.56% and 3.71% of savings respectively on average during the study period. Hence, the finding can be confirmed that fixed deposit rate may not have enough influence on savings in Myanmar.

Treasury Bill Rate

The findings of the study indicate that Treasury Bill rate has statistically insignificant at 1%, 5% and 10% levels and a negative relationship with savings. An increase in Treasury Bill Rate decreases the savings. It is consistent with expectation that an increase in Government Treasury bill rate may impact on increase in investing of Treasury bill and will lead to decrease of the level of savings.

Deposit Auction Rate

The study found a positive relationship between deposit auction rate and banks' deposit of commercial banks in Myanmar and significant level at 5%. As deposit auction is one of the monetary instruments of CBM for open market operations to control the excess liquidity of economy, its effect may not be seemed to be direct effect on savings. Nevertheless, the banks which fulfill the reserve requirement and have excess reserve at their accounts with CBM have chance to participate at the deposit auction. The excess reserve of banks may be included from different sources including some portions of savings. Thus, the positive relation of deposit auction rate and savings may be explained that depositors' money can be received at the deposit auction through participating banks.

Inflation Rate

The study found a negative and significant controlling impact of inflation on savings in Myanmar. A rise in inflation rate leads to decrease of real interest rate and thus, will cause less incentive of the depositors to save their excess money at the banks. This will lead to decrease the volume of savings.

V. RECOMMENDATIONS

Contingent upon the findings of this research, the study recommends below:

(1) As saving deposit rate has an influence on the increase of savings, it is important to make sure for receiving positive return on deposits for the savers. In contrast, the high saving rate is the cost of the financial institutions and affects the increase of borrowing cost of the businesses. The high lending rates discourage borrowing of businesses and thus, decrease production. Hence, policy for ensuring to adopt flexible interest rates structures depending on the macroeconomic conditions of the economy would be critical.

(2) Given the finding of adverse and significant impact between savings and inflation, maintaining low level of inflation rate would help to increase the savings by attracting the depositors to receive the positive return on their savings. In addition, the reasonable low level of inflation would help to contribute the stabilization of economy.

(3) Ensuring market determined interest rates of deposit auction rates could persuade banks to participate at the deposit auction with their excess fund and thereby absorbing excess liquidity in the economy.

VI. CONCLUSION

This study investigates the effects of interest rates on the private saving of banking sector in Myanmar for the study period from FY 2013-14 Q1 to 2018 Q2. The findings of this study show that nominal term of average interest rates such as saving deposit rate, fixed deposit rate, deposit auction rate and controlling factor of inflation rate have significant relationship on the increase of the volume of savings in Myanmar. Among all independent variables, saving deposit rate is the most influent variable for attracting accumulation of savings. Therefore, polices for ensuring to adopt flexible interest rates structures and for maintaining reasonable inflation rate depending on the macroeconomic conditions of the economy would be critical to increase the level of savings in Myanmar.

A. Suggestion for Further Research

This study is confined to independent variables such as nominal term of average interest rates including saving deposit rate, fixed deposit rate, Government Treasury Bill rate and deposit auction rate that determine the savings in Myanmar covering the study period FY 2013-14 to 2018 Q2. Thus, this study recommends for future investigations to incorporate additional independent factors with the extending the study period and analyzing the different usage of interest rates method those influence the saving in Myanmar to be more noteworthy outcomes.

REFERENCES

1. S. K. Hundie Savings, Investment and Economic Growth in Ethiopia. 2016.
2. N. Bairamli, V. Kostoglou. The Role of Savings in the Economic Development of the Republic of Azerbaijan International Journal of Economic Sciences and Applied Research Vol. 3 No 2, 99-110. 2010
3. N. G. Mankiw, Macroeconomics, 7th Edition, New York: Worth Publishers, 41 Madison Avenue, New York, 2010
4. CBM. (2019b). Quarterly Financial Statistics Bulletin. 2019 Retrieved from: https://www.cbm.gov.mm/sites/default/files/policy_relationship/quarterly_financial_statistics_bulletin_2018_voloume_ii.pdf
5. CBM. (2019a). Central Bank of Myanmar, FY 2018 Transaction Period Report, 2019.
6. IMF. IMF Country Report No. 19/100: International Monetary Fund. 2019
7. N. N. Tun, An Empirical Analysis of Macroeconomic Factors Affecting on The Deposit Mobilization of Private Commercial Banks in Myanmar. International Journal on Recent Trends in Business and Tourism, 3(2) 2019
8. X. Zeng, CD. Blancett, KA. Koistinen, CW. Schellhase, JJ. Bearss, SR. Radoshitzky, SP. Honnold, TB. Chance, TK. Warren, JW. Froude, KA. Cashman, JM. Dye, S Bavari, G. Palacios, JH. Kuhn, MG. Sun Identification and pathological characterization of persistent asymptomatic Ebola virus infection in rhesus monkeys. Nature Microbiology. 2017
9. FS. Mishkin, The Economics of Money, Banking, and Financial Markets 7th Edition 2004.
10. MO. Ogbulu, PC. Uruakpa, & CL. Umezina, (2015). Empirical Investigation of the Impact of Deposit Rates on Fund Mobilization by Deposit Money Banks in Nigeria. Journal of Finance and Bank Management, 3(1), 77-89.
11. R. Pal, Theory of Interest Rate. (2018)

12. N. G. Mankiw, *Macroeconomics* 7th Edition. New York: Worth Publishers, 41 Madison Avenue, New York, 2010
13. S. Mushtaq, & D. A. Siddiqui. Effect of interest rate on bank deposits: evidences from Islamic and non-Islamic economies, University of Karachi, Pakistan. 2016. Retrieved from: <https://mp.ra.ub.uni-muenchen.de/69245/>
14. T. Mashamba, R Magweva, LC. Gumbo 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*, vol 16 no. 1 pp 64-55. 2014
15. MSA. El-Seoud, The Effect of Interest Rate, Inflation Rate and GDP on National Savings Rate. *Global Journal of Commerce & Management Perspective*, 3(3), 1-7. 2014.
16. Garo, G. Determinants of Deposit Mobilization and Related Costs of Commercial Banks in Ethiopia, Giragn Garo Addis Ababa University 2015
17. D. Jembere, Y. Yihdego, (2016) Engineering Rock Mass Evaluation for a Multi-purpose Hydroelectric Power Plant: Case of Genale Dawa(GD-3), Ethiopia. *Geotechnical and Geological Engineering* 34(5):1593-1612
18. F. Teshome, Determinants of Commercial Banks Deposit in Ethiopia. 2017
19. G. Ekpung, C. Udude, H. Uwalaka. The impact of monetary policy on the banking sector in Nigeria. *International Journal of Economics, Commerce and Management*, 3(5), 1015-1031. 2015
20. EK. Boadi, Y. Li, VC. Lartey Determinants of Bank Deposits in Ghana: Does Interest Rate Liberalization Matters? *Modern Economy*. Vol 6 No. 9 pp 990-1000 (2015)
21. EM. Ferrouhi, Determinants of Bank Performance in a developing country: evidence from morocco. Vol 8, No. 1 pp 15 (2017)
22. H. U. Gunasekara, & P. Kumari. Factors Affecting for Deposit Mobilization in Sri Lanka. *International Review of Management and Marketing*, 8(5), 30 2018
23. J. Aizenman, YW. Cheung, & AH. Ito. The Interest Rate Effect On Private Saving: Alternative Perspectives No. 715 2017
24. H. Raza, A. Saeed, Determinants of Profitability in Banking Sector: An Evidence from Pakistan. *European Scientific Journal*. 2019; 15 (7): 35-48
25. A. Aslam, Interest rate dynamics on savings: Evidence from Sri Lanka. *World Scientific News*, 107, 224-232. 2018
26. PH. Er, CT Tugcu, & O. Coban. Investigating the link between savings, inflation and economic growth: an ARDL analysis for the case of Turkey. *Journal of Economics Finance and Accounting*, 1(2), 81-90. 2014
27. AB. Orok, IO. Okoi, & A. Essien Inflation and deposit mobilization in deposit money banks—the Nigerian perspective. *International Journal of Public Administration and Management Research*, 4 (4): 109, 21. 2017
28. A. Ghasemi, & S. Zahediasl, Normality tests for statistical analysis: a guide for non-statisticians. *International journal of endocrinology and metabolism*, 10(2), 486. 2012.
29. D.N. Gujarati, *Impact of Capital Structure on Firm Value: Evidence from Indian Hospitality Industry*. Tata McGraw-Hill Education. 2009.
30. L Caneparo, D Rolfo, H Van Reusel, F Bonavero, J Verbeke, A Hudson-Smith, N Karadimitriou, S Marshall, *Semantic Analysis of Public Spaces in Brussels, London and Turin: A Taxonomy of the Interventions*. Public Space conference, Brussels, 2017



Amiya Bhaumik, Professor of Lincoln University College, Malaysia. He is the Founder and Former Vice-Chancellor of Lincoln University College, is purely from the field of education.

AUTHORS PROFILE



Nwe Ni Tun, is Deputy Director General, Central Bank of Myanmar and Research Scholar of Lincoln University College, Malaysia. She is interested in the research areas of Economics, Banking, Finance, Management and Accounting. She published a number of research papers in various international journals.



Ibrahim Mohamed Mohamed Alrajawy, Associate Professor of Centre for Post Graduate Studies, Lincoln University College, Malaysia. Dr Ibrahim has completed Doctorate in Business Administration from UiTM, Malaysia.