

Impact Of Banking Financial Crisis To Country Economic Sectors' Performance: Case Of Tanzania Banking Industry

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Abstract: *The paper investigated the impact of banking financial crisis on performance of country economic sectors by assessing the impact of credit crunch caused by banking industry financial crisis to the country gross domestic products (GDP) growth from economic sectors such as agricultural, tourism, mining and industrial sectors. The variables tested by using the two-step dynamic panel data analysis indicate that the banking financial crises have negative impact on the performance of agricultural, mining and industrial economic sectors to country gross domestic products (GDP) growth. Hence the credit crunch in banking industry to agricultural, tourism, mining and industrial sectors affects the GDP negatively. The findings of this study are of great value in understanding the financial crisis in banking industry, their impacts in performance of the country economic sectors and how to make the banking industry financially stable. The finding from this study stimulate discussion and debate to academicians for further researches to unfold what is going on financial crisis in banking industry. Hence the study could help the policy makers to come out with substantive possible alternative policy interventions which might help them to address problems and challenges of financial crisis to banking industry and their impacts on country economic sectors.*

Keywords: Banking financial crisis, Commercial banks, Country gross domestic products (GDP) growth

1. INTRODUCTION

The banking financial crisis arises when the country corporate and financial sector experience a large number of defaults as well as the financial institutions and corporations face great difficulties in repaying contracts on time. The Cooperative and Rural Development Bank (CRDB) which is one of the largest banks in Tanzania posted a loss of 1.9 billion of Tanzania shilling in the third quarter of 2015 due to large number of unpaid loans as well as tax bills from the past. In the past two years since 2016, Central Bank of Tanzania (BoT) which is the governing body of Tanzania country banking industry, has taken over administration of commercial banks and government owned bank such as Twiga Bancorp and Tanzania Women Bank (TWB) which is indication of serious financial crisis in banking industry that should have impact to performance of the country economic sectors such as agricultural, tourism, mining and industrial sectors.

The trend of closure of small commercial banks as well as government owned banks such as Tanzania Women Bank (TWB) and Twiga Bancorp being taken under administration of Central Bank of Tanzania because of their financial crisis in two years since 2016 before taken by Tanzania Postal Bank (TPB) in 2018. In January of 2018, the Central bank of Tanzania also known as Bank of Tanzania (BoT) has moved to shut five non-performing lenders down in a bid to protect the stability of the neighbouring country's banking system. A statement released by Bank of Tanzania (BoT) revealed the affected banks were Covenant Bank For Women Limited, Efatha Bank Limited, Njombe Community Bank Limited, Kagera Farmers' Cooperative Bank Limited and Meru

Community Bank Limited. The decision was made after Bank of Tanzania (BoT) learnt that the banks had inadequate capital, which is contrary to the Banks and Financial institutions Act of 2006 and its regulations.

According to the financial statements of commercial banks by September 2018, the top eight largest banks in Tanzania banking sector based on assets are CRDB (USD 2.526 billion), NMB (USD 2.369 billion), NBC (USD 0.908 billion), Standard Chartered (USD 0.663 billion), Stanbic (USD 0.581 billion), Exim (USD 0.533 billion), Diamond Trust Bank (USD 0.514 billion), and Barclays (USD 0.386 billion). The country's commercial banks have total assets of TZS 32.569 trillion/- (USD 13.913 billion / 2300 TZS = 1 USD) in which the five biggest banks together own just over 50% of the 32.569 trillion/- in assets held by Tanzanian banks despite the presence of 41 commercial banks operating in the country.

According to the financial statements of commercial banks by September 2018, the top eight shares of customer deposits in the banking industry are CRDB (USD 1.78 billion), NMB (USD 1.73 billion), NBC (USD 0.62 billion), Standard Chartered (USD 0.43 billion), Diamond Trust Bank (USD 0.40 billion), Stanbic (USD 0.37 billion), Exim (USD 0.29 billion) and Citibank (USD 0.28 billion). The banking sector is dominated by two former state banks; CRDB and NMB holding 35% of total banking assets and a combined 40% of the deposits.

2. LITERATURE REVIEW

The literature regarding the analysis of banking financial crisis on country economic sectors performance can be grouped into three main sections. The first group includes

credit risk, capital structure and their efficiency; the second group contains competition and ownership structure; and the third group includes macroeconomic variables such as inflation, growth and budget deficit which are mostly investigated by different scholars as discussed below:

Chen et al. 2018 studied the effect of asset diversification on bank performance in three Asian countries with a dual banking system from 2006 to 2012. They find that diversification generally has a negative effect on the performance of conventional banks, but a minimal effect on that of Islamic banks. Considering bank size, diversification positively affects the profitability of large Islamic and conventional banks, and such a positive effect is more pronounced among Islamic banks.

Abdul-Rahman et al. (2018) investigated whether financial structure affects bank liquidity risk. Using the Malaysian banking data sets, they compared the financial structure-liquidity risk relationships between the Islamic and conventional banking institutions. Financial structures are measured by real estate financing, financing concentration, short-term financial structure stability, and finally medium-term financial structure stability. Meanwhile, for liquidity risk measures, they adopt the BASEL III approach such as liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR) in quantifying short- and long-term liquidity risk, respectively.

Muhammad et al. (2017) examined the relationship between funding liquidity and bank risk taking. Using quarterly data for U.S. bank holding companies from 1986 to 2014, they find evidence that banks having lower funding liquidity risk as proxies by higher deposit ratios, take more risk. However, the results show that bank size and capital buffers usually limit banks from taking more risk when they have lower funding liquidity risk. Moreover, during the Global Financial Crisis banks with lower funding liquidity risk took less risk. The findings of this study have implications for bank regulators advocating greater liquidity and capital requirements for banks under Basel III.

Kim & Sohn (2017) examined whether the effect of bank capital on lending differs depending upon the level of bank liquidity. They find that the effect of an increase in bank capital on credit growth, defined as growth rate of net loans and unused commitments, is positively associated with the level of bank liquidity only for large banks and that this positive relationship has been more substantial during the recent financial crisis period. This result suggests that bank capital exerts a significantly positive effect on lending only after large banks retain sufficient liquid assets.

Machogu & Okiko (2017) research brought to light that with e-banking complexities on bank performance. Results show that there are factors which leads to bank performance include e-banking, which one of the very important and fast growing ways of doing is banking. Factors are accessibility, convenience, security, privacy, content, design, speed, fees

and charges have influence on customer satisfaction where the other factors notified have no significant influence.

Ameme & Wireko (2017) claimed in his research that in today's competitive world where technology plays a very important role and if we talk about banking sector or industry there is a positive relationship between technology and bank performance. They also found that if the bank wants to become the market leader in the competitive environment it must use the innovation approach in all the aspects like products and services. Also there is a significant relationship between technological innovation and bank performance

Kamarudin et al. (2016) analyzed the financial performance of banks before and after the crises and pointed out the performance of the ownership structure of commercial banks. The study found that bank profitability performance and efficiency depend on different dynamics. Following the crises, both groups had a fall in their efficiencies, but private banks suffered a worse performance when compared to private commercial banks.

Kundu & Datta (2016) study regarding e-service quality, and banking performance, they found that there is a significant relationship among e-service quality, trust and customer satisfaction. Internet banking service quality has huge impact on trust. They also researched that in case of internet banking privacy and fulfillment are the main factors of service quality which have influence on trust. Also banks should be more concerned about the privacy of individual transaction of the customers. According to Ernest and young 2012 survey showed that price factor was the main concern for 50 percent customers.

Zeinalizadeh et al. (2015) opined that out of the nine customer satisfaction factors fees and loan, prompt service and appearance are the major factors which have more significant impact on customer satisfaction followed by interest rate and accessibility of bank and availability of service which have less impact on the satisfaction on the banking customers.

Rashid & Jabeen (2016) study found that good brand image builds relationship between banks and customer and enhance the customer loyalty toward bank. The role of brand image is positive in making a positive relationship between customers and internet banking. They also suggested that brand image plays a significant role between loyalty of the customers and internet banking. Hence those banks that are giving the internet banking services to their customers, loyalty of those customers are more towards the banks

Albulescu's (2018) study on developed and emerging economies proved the negative effect of crises on bank financial performance, pointing out that nonperforming loans were the primary reason for this. According to them, the negative effect of the crises could be seen on the nonperforming loans. Albulescu (2018) also pointed out that in emerging countries bank profit declined due to easy ways of reaching credits, which, in turn, caused nonperforming

loans to rise. By aiming to strengthen bank capital, profit declined in the short term.

Bhimjee et al. (2016) investigated the banking systems of 41 developed and emerging economies before and after crises. The banking systems of emerging economies investigated and probable regime differences are tried to be determined. The results indicated that banking performances have two different clusters and each has unique regime dynamics. In the period before crises, the securities in developed countries had a high performance. In the second group, the banks of emerging economies had a low performance. During the crises, banks in different groups showed similar patterns and regarding this regime synchronization went up and regime dynamics differences disappeared. Such results, like global crises with systemic dimensions and different dynamics, made the synchronization go up and such crises with an international spread and contingency potential can be seen. After the global crises, conventional banks faced huge debts and generated risks, causing a collapse in the system. As Islamic banks showed a better performance after the crises, there has been an increase in the comparative studies that include Islamic banks and conventional.

Most of the related literature was written after the global crises and in their studies, Albulescu (2018), Bhimjee et al. (2016), Capraru and Ihnatov (2014) and Olson and Zoubi (2016) studied many banks within specific countries. Though their data may differ, they all used linear and dynamic panel data methodology. Their studies conclude that crises have negative effects on bank performance. Alternatively, Taşkın (2011), Tunay (2014), Bennett et al. (2015) and Kamarudin et al. (2016) proved crises can also have positive effects on bank performance. Capraru and Ihnatov (2014), Albulescu (2015) and Bhimjee et al. (2016) found that crises have a negative impact on profitability.

3. METHODOLOGY

The top five banking companies operating in Tanzania over past ten years used in this study are Cooperative and Rural Development Bank (CRDB), National Microfinance Bank (NMB), National Bank of Commerce (NBC), Standard Chartered and Stanbic which are analyzed using the model dynamic panel model.

The estimation of the impact of banking financial crises on the performance of economic sectors such as agricultural, mining and industrial sectors was based on dynamic panel method of Blundell and Bond (1998) in which the variables used are: growth of GDP (GROW) which is the dependent variable representing the growth of real GDP per capita, with independent variables such as the financial crisis (CRIS), economic sectors investment (INV), Trade openness (OPEN), public consumption (CONS), inflation (INF) and interest rates (INT).

The dynamic panel model used to examine the impacts of banks financial crisis and control variables on growth of country economy is expressed as:

$$GROW_{i,n} = \alpha_0 + \alpha_1 GROW_{i,n-1} + \alpha_2 INV_{i,n} + \alpha_3 OPEN_{i,n} + \alpha_4 INF_{i,n} + \alpha_5 CON_{i,n} + \alpha_6 CRIS_{i,n} + \varepsilon_{i,n}$$

i=1, 2, 3, 4 economic sectors

n=1, 2, 3, 4 years

The dynamic panel model used to examine the impacts of banks financial crisis on investment in economic sectors is expressed as:

$$INV_{i,n} = \alpha_0 + \alpha_1 INV_{i,n-1} + \alpha_2 OPEN_{i,n} + \alpha_3 INT_{i,n} + \alpha_4 CON_{i,n} + \alpha_5 CRIS_{i,n} + \varepsilon_{i,n}$$

i=1, 2, 3, 4 economic sectors

n=1, 2, 3, 4 years

4. DATA

To examine the impacts of banks financial crisis to economic sectors performance by using the dynamic panel, the following data obtained from the Bank of Tanzania which is the Central Bank of Tanzania was used for analysis purposes. The data used in the model to analyze the growth of GDP (GROW) representing the growth of real GDP per capital and change of consumer price index or inflation (INF) are summarized in table 1 and 2 below:

Table 1: Selected Economic Indicators

National accounts and prices	2014	2015	2016	2017
Change in GDP at current prices (% age)	12.4	14.0	13.5	12.5
GDP per capita-current prices (USD)	1,038.9	955.1	958.2	1,021.0
Change in consumer price index (Inflation)	6.1	5.6	5.2	5.3

Source: Bank of Tanzania

Table 2: Gross Domestic Product (GDP) by Kind of Economic Activity, Percentage Share in Total GDP at Current Prices, Tanzania Mainland

Economic activity	2014	2015	2016	2017
Agriculture	18.5	18.9	19.3	20.1
Manufacturing	5.6	5.2	5.1	5.5
Trade	10.5	10.3	10.7	11.0
Mining and quarrying	3.7	4.0	4.8	4.8

Source: National Bureau of Statistics

The data representing the banks investment (INV) in economic sectors such as agriculture, manufacturing, trade and mining used in data analysis are summarized in table 3 below:

Table 3: Commercial Banks Domestic Lending (percent of total) by Economic Activities

Economic activity	2014	2015	2016	2017
Agriculture, hunting and forestry	9.0	8.0	7.1	7.1
Manufacturing	11.4	11.2	10.2	11.0
Trade	21.9	20.4	20.9	20.4
Mining and quarrying	1.4	1.8	2.1	1.8

Source: Bank of Tanzania

The data from Bank of Tanzania showing the financial crisis (CRIS) in commercial banks used as ratio of Government net position with banks of Tanzania (Millions of TZS) to Change in commercial banks liquidity asset (Millions of TZS) were used in analysis

The data for banking interest rates (INT) from bank of Tanzania were as summarized in table 4 below:

Table 4: Interest Rates Structure

Interest rates	2014	2015	2016	2017
Bank rate	12	11	13	12
Discount rate	9	8	10	9
Savings deposit rate	2.8	2.75	3	2.85

Source: Bank of Tanzania

4. RESULTS

In this study, the impact of banking financial crises on economic sectors performance of country were analyzed by the linear and dynamic panel data models by Blundell and Bond (1998) using the two-step GMM system on a dynamic panel data model. Data is gathered from central bank of Tanzania known as Bank of Tanzania as in Economic bulletin of 2018. The results of the study were as described below:

Descriptive Statistics					
		Count	Mean	Standard Deviation	Coefficient of Variation
Total	GDP	16	9.875	6.099	61.8%
	INV	16	10.331	7.121	68.9%
	INT	16	.1200	.007	6.1%
	CRI	16	-1.5475	1.623	-70.9%
	INF	16	5.550	.3615	6.5%

The banking financial crises have a strong negative effect on the country economic sectors performance in which the crises have negative impact on the GDP. The relation between bank loans to economic sectors and their performance has a similar structure with banking crises.

Generally, competition structure influences performance and the concentration performance is affected positively. The volatilities in asset prices and performance relation are used to analyze stock market volatility and foreign exchange volatility where found as significant. When negative

coefficient values are taken, the rise in asset price volatility has a negative effect on bank performance.

5. CONCLUSION

The credit interest rate, inflation, public consumption, nonperforming loans, z-test scores and investment capital are the variables that influence bank performance. The performance of the banking industry affects the production sectors such as industries, tourism and agricultural sector that affect the country GDP. Under both competitive conditions and asset pricing volatility, bank performance is influenced negatively. The competitive structure of the banking system ensures that system stability has an important effect. Consequently, independent variables affect stability performance. The asset price performance effect is the inevitable result. For this reason, it is important to take this into consideration for further studies.

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