

DETERMINANTS OF OFF-BALANCE SHEET (OBS) ACTIVITIES: A CASE OF SELECTED RETAIL BANKS IN MALAYSIA

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ABSTRACT

The present paper examines factors influencing the Off-Balance Sheet activities of selected commercial banks in Malaysia for the period 2004-2014. OBS activities are an integral part of financial institutions in response to the needs of businesses for different types of guarantee that have conflicting implications on the stability of financial institutions. Data collected on selected banks from the Bankscope database was analyzed using the Generalized Method of Moments (GMM) regression. Specifically, the study built its analysis on three main recognized determining factors namely: (1) liquidity motives, (2) credit risk transfer motive, (3) profitability motives, and (4) capital arbitrage motive. The findings thus suggest that the selected banks mainly used OBS instruments for capital arbitrage purpose, enhancing operational efficiency and managing loan portfolio risks. The findings further suggested that its usage for capital arbitrage purposes may undermine the regulatory measures of accurately estimating and monitoring the risk of banks. The findings thus offer significant practical and policy implications that can help to enhance financial stability.

Keywords: off-balance sheet, liquidity, credit risk transfer, profitability, capital arbitrage

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INTRODUCTION

Following the outbreak of the worst financial crisis for more than 80 years, the attention of regulators, academics and other stakeholders in the financial sector is directed to new activities of commercial banks such as the Off-Balance Sheet Activities (OBS).

The OBS can be described as a contingent commitment or contract which generates income for the banks but does not directly reflect under the assets or liabilities section in the balance sheet (Nachane & Ghosh, 2002). The occurrence of the contingent liabilities that arises from such activities thus imposes equivalent risks on the balance sheet of financial institutions. The OBS activities of commercial banks includes: guarantee such as commitments, standby letters of credit, spot foreign exchange contract, interest rate contract and derivatives contracts. A majority of the OBS instruments (e.g. interest rate swap, forward and future contract, option contract and securitization) were mainly developed to address the growing risks generated from the activities of the financial institutions in a deregulated environment and fee generation purposes.

The dramatic changes in the landscape of financial institutions over the past few decades have altered the landscape of financial institutions. The emergence of innovative activities particularly the OBS offers opportunities for financial institutions to diversify from the traditional intermediation method to fee based activities. The growth in the OBS which has come in response to the need of businesses and other customers has shown to have a conflicting impact on the stability and soundness of financial institutions.

OBS activities are a double edged sword that is capable of bringing both favorable and unfavorable consequences to the financial system and the economy as a whole. Banks are induced to use the OBS for a variety of reasons. This includes enlarging debt capacity without appearing on the balance sheet, managing liquidity, improvement of credit rating, capital arbitrage and tax reduction.

Banks in Malaysia just like other emerging countries have been actively involved in OBS activities for over two decades (Karim & Gee, 2007). As indicated in Table 1 below, the commitments and contingencies

transaction by the commercial banks in Malaysia increased from about RM1.8 billion to RM2.5 billion between 2012 and 2016. Table 2 which presents the estimated OBS transaction in relation to the total assets and loans of the banks indicated that the total amount of OBS transactions exceed the total assets of the banks while trailing behind the total loans generated by the banks. All these activities show an increased usage of OBS activities in the Malaysian banking system.

Table 1: Commercial Banks: Commitments and Contingencies

	As at end				
	2012	2013	2014	2015	2016
	Million				
Assets sold with recourse and commitments with drawdown	6,053.5	5,284.8	6,762.4	8,852.4	12,066.7
Credit extension commitments	444,293.6	470,299.8	472,472.5	490,961.9	503,193.1
Direct credit substitutes	24,960.5	33,087.9	29,897.3	32,830.2	30,867.5
Foreign exchange-related contracts	518,150.2	577,388.4	760,062.7	891,122.5	924,253.8
Interest rate-related contracts	716,494.7	772,958.0	791,736.1	858,058.7	941,300.7
Trade-related contingencies	10,644.2	10,677.4	13,724.3	13,505.9	11,834.1
Transaction-related contingencies	45,928.8	50,561.5	57,964.8	60,492.9	66,338.3
Underwriting obligations	445.0	522.0	466.0	76.0	76.0
Others	72,179.0	55,541.2	63,046.9	58,523.2	58,783.8
Total	1,839,149.5	1,976,320.9	2,196,133.0	2,414,423.9	2,548,714.0

Source: BNM (2016). Financial Stability and Payment Systems Report 2016
http://www.bnm.gov.my/files/publication/fsps/en/2016/zcp07_table_A.07.pdf

Table 2: Summary of Banks' Assets and Liabilities

	2007	2008	2009	2010	2011	2012	2013	2014
	Million Ringgit							
Assets	861,784.9	973,358.3	1,077,589	1,153,482	1,300,764	2,102,618.1	2,300,647.5	2,547,970
Loans	611,895.9	718,727.3	802,078	906,731.6	1,079,978	1,585,841	3,276,611.4	4,000,138.17
OBS	469,981.9	563,175.7	491,482.7	446,642	483,377.1	1,951,036	3,444,519	3,349,855

Source: BNM (2016). Financial Stability and Payment Systems Report 2016
http://www.bnm.gov.my/files/publication/fsps/en/2016/zcp07_table_A.07.pdf

With the rapid growth of OBS activities in the 1980s and the emergence of the catastrophic global financial crisis in 2007/2008, stakeholders are keen to understand the motives for its usage and its effect on financial systems. Most of the studies in this area focus on the case of developed countries (Cooper, 2011; Kashian & Tao, 2014; Shyu & Reichert, 2015). Based on the extant literature, limited studies exist for the case of developing countries like Malaysia that equally experienced significant surge in OBS

activities. The present study is thus aimed at filling this gap by exploring the determining factors for banks engagement in OBS instruments and its implications for the case of Malaysia.

Banks and other financial institutions use OBS transactions as a vehicle to move some specific assets from their balance sheet by selling expected cash flow such as mortgage and credit cards. Repackaging and selling of these assets thus serve as important source of capital for financial institutions. Meanwhile, the OBS and selling of loans provide incentives for banks to originate more loans with less regard for risks. This was the case during the 2007/2008 financial crisis.

Most of the studies on the OBS focus on financial institutions in the USA and few Europeans countries. However, a lot of emerging countries like Malaysia similarly see a surge in these activities, yet this phenomenon is not adequately studied or understood. The present study therefore explored factors influencing the OBS activities among major banks in Malaysia. Following Bannier and Hansel (2008), the present study explored the influencing factors based on the four major motives identified namely: (1) liquidity motive, (2) credit risk transfer motives, (3) capital arbitrage motives and (4) profitability motive.

The motive behind the usage of the OBS activities play an important role in the stability of financial institutions. This is because, risks associated with various motives have different associated risks. This study could therefore be useful to shareholders and stakeholders in the banking sector. By establishing the determining factors, bank regulators and management can gain further insights into the issues. More so, the contribution of the present study to the literature of the OBS area can serve as a reference for further studies in this area.

LITERATURE REVIEW

Off-Balance-Sheet Activities (OBS)

In the last two decades, activities in the banks worldwide has shifted dramatically from traditional on balance sheet activities to non-traditional

off-balance sheet (OBS) activities (Lozano-Vivas & Pasiouras, 2010 cited in Huo, Wang & Li, 2015). OBS activities, such as loan commitments, securitization, standby letters of credit, and derivative securities, have expanded rapidly and have resulted in a substantial rise in the share of fee-based and other noninterest income to total income (Huo, Wang & Li, 2015).

The landscape of the financial sector in Malaysia has moved in line with the advance in technology. The sector plays an important role in facilitating the economic transformation and growth of the Malaysian economy through the various phases of economic development. Throughout Malaysia's development for the past 50 years, the economy has proven its ability and flexibility to continually keep abreast with the trend and competition in the management of its financial system. Following the Financial Sector Master-plan (FSMP) introduced in 2001, the domestic financial institutions in Malaysia underwent major restructuring, consolidation and rationalisation (Financial Sector Blueprint (FSB) 2011-2020, Central Bank of Malaysia, 2011). The rapid changes in the global economic and financial environment resulted in a more integrated and globalized environment, greater regionalization, more sophisticated and diverse investment and financing needs of the domestic economy. Malaysia thus requires a financial system that is more progressive and dynamic to advance the nation's vision towards the attainment of a high value-added, high-income economy (BNM, 2011). One of the key drivers of firms' competitive advantages and overall economic growth is technological innovation (King & Levine, 1993; Kogan et al., 2016 cited in Duo & Xu, 2017). In the new era of financial institutions, off-balance sheet (OBS) activities have played a greater role in the banking business following rapid technological advancement, competition and some regulatory development (Arisyi et al., 2015).

Following the adverse effect of the OBS activities otherwise called shadow banking in the global capital market, researchers, policies makers and other stakeholders are keen to unravel the motive behind its adoption and its consequences on financial institutions.

Determinants of Off-Balance Sheet (OBS)

Beginning with the liquidity motive, there are mixed arguments regarding the influence of liquidity on banks' engagement in OBS activities.

Based on the heterogeneity nature of the OBS instruments, the effect on the liquidity of the banks depends on the feature of the OBS instruments involved. In the case of securitization for instance, Cardone-Riportella et al. (2010); Calomiris and Mason (2004); Cabiles (2011) indicated that the liquidity motive is a major factor for banks engagement in securitization. Their argument hinges on the fact that vital capital is generated by selling certain assets taking-off from the balance sheet through a special purpose vehicle. In addition, Cooper (2011) indicated that the liquidity motive is one of the aims for banks' OBS activities in order to generate more loans. In contrast, findings from the literature also reveal a negative relationship between liquidity and the OBS activities. Kashian and Tao (2014) indicated that loan commitment which is an aspect of the OBS exerts pressure on banks liquidity. The need for banks to carry out its obligation under the loan commitment contract may exert unprecedented pressure on the liquidity of financial institutions. Nachane and Saibal (2007) further revealed that the OBS does not necessarily increase liquidity of the banks. Based on the various findings, it can be perceived that the nature of the OBS instruments significantly determines its effect on bank liquidity.

Risk transfer motive of the OBS activities has been highly contended by scholars. Most of the pre-crisis studies (Brewer et al., 1996; Lyngne & Lee, 1987; Hassan, 1992) reveal that banks mainly engage in the OBS activities to improve their performance in terms of earning capability rather than a risk transfer purpose. This claim has however been debunked by the majority in the post-crisis period. Affinito and Tagliaferri (2010) in their study revealed that OBS activities provide opportunities for banks to originate more loans with less incentives to monitor those loans. The opportunity availed by the OBS to transfer the inherent risk of their loans portfolio to others perhaps contributes to less incentives to monitor the originated loans. In support of this argument, Ghosh and Nachane (2009) stated that through OBS activities, banks have the opportunity to allocate the inherent risks in their portfolio to others in the financial market. Similarly, Khasawneh and Hassan (2009) found a positive relationship between net-charge-off and OBS which suggests that banks with high bad loans tend to engage more in the OBS activities for the case of commercial banks in MENA in order to hedge the resultant risk on their loans portfolio. The global financial crisis of 2007 undoubtedly exposed the risky nature of the OBS activities and the subsequent attention that follow it from the academia, regulators

and policy makers. Several empirical studies equally support this argument even with the pre-crisis data. Yong et al. (2007) for example empirically revealed the close relationship between OBS activities and banks' long term interest risk exposure. Through OBS activities, banks have the incentives to under-estimate the risk of their loan portfolio that has the potential to amplify their long term risks.

Due to the incentive of risk transfer through the OBS activities, most studies argued that the OBS activities significantly contribute to the risks of banks. In their study, Haq and Heaney (2012), found that the OBS activities are the major factor that positively contribute to the various bank risk measures. The study emphasized on the policy implications which suggests that the inclusion of OBS activities in banks' reports will help improve transparency in their activities. On a similar note, Calmès and Théoret (2009) revealed that OBS activities help to increase the volatility of bank's net operating revenue growth.

Through the OBS activities, studies have shown how banks exploit the gap in regulatory requirement to under-estimated their risks required for regulatory capital purposes (Ghosh & Nachane, 2002; Elian, 2012; Shyu & Reichert, 2015). According to the findings of those studies, banks with a high capital ratio tend to have less incentives to engage in the OBS activities. Similarly, Pereira et al. (2014) argue that the OBS activities insulate the bank loan supply which consequently weakens the effect of monetary transmission through the banks' lending channel. Banks tend to explore the opportunities available to them through the OBS activities to insulate their loan supply from monetary policy shocks. It is further revealed that the buffering effect of the OBS activity on monetary transmission is substantial, particularly for small, highly-liquid and well-capitalized banks with large OBS exposures. This thus suggests that banks engage in OBS activities to reduce the regulatory burden that emanates from regulatory capital requirement. This is in line with the argument of the regulatory capital arbitrage theory which states that banks take advantage of assets mismatch in order to reduce the required regulatory capital. Since required regulatory capital is based on the classification of assets into limited number of risk baskets which resulted in assets with different actual or economic risk to have the same capital charge (Hochberge, 2009).

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Another factor that plays an important role in the decision to engage in the OBS activities is the profitability motive. The changing landscape of the financial institutions is due to factors such as competition, deregulation and technology advancement which have undoubtedly affected banks' revenue generation. One of the ways to mitigate the effect of these changes is to diversify into innovative products of which the OBS is a major component. In an attempt to explore the determining factors for banks engagement in the OBS activities for the case of the GCC, Elian (2012) found a negative relationship between profitability and the OBS activities. In the case of Islamic banks, Khasawneh and Al-Khadash (2014) indicated that the OBS activities help to reduce risks as well as improve the profit generated by the MENA banks. The results also indicated that the effect of the OBS activities on banks profitability is higher in banks located in oil producing countries. This thus suggests that the need to enhance banks profitability is one of the motivating factors.

On a similar note, Cooper (2011) found that Board characteristics do influence the usage of the OBS activities. Due to the available incentives, some CEOs for instance, tend to increase the OBS transaction in order to meet certain profit goals to enhance their bonus. This argument is supported by Calmes and Liu (2009) who indicated that the OBS activities significantly contribute to the operating income growth of Canadian banks.

In addition to the four factors discussed above, other bank specific factors also play an important role in the decision to use the OBS activities. One such factor is the volume of loans originated by banks which are found

to be one of the significant influencing factors. Elian (2012). Khasawneh and Hassan (2010) found a positive relationship between the loans variable and the OBS activities for the case of the Middle East and North African (MENA) countries. This suggests that the larger the loan portfolio of the banks, the more they are likely to increase the usage of the OBS activities which serve as an instrument to mitigate or offset some of the inherent risks of their loans portfolio. A similar finding has been revealed by Ziadeh-Mikati (2014) for the case of commercial banks in the USA. In addition, economic conditions also affect the decision towards using the OBS activities. GDP is mostly used to account for economic factors. In the case of the effect of macroeconomic factors, Khasawneh and Hassan (2009); Elian (2012) found a positive relationship between GDP and OBS activities for the case of the GCC which means that that OBS activities usage tends to increase during the period of economic growth and seems to follow the business cycle. Financial institutions are expected to originate more loans during the boom period of the economy and they tend to use more OBS activities to manage the risks on those loans.

DATA AND METHODOLOGY

Sample and Data

The sample of the present study comprised of all commercial banks in Malaysia. The reason for choosing banks is due to the fact that banks are the most active users of the OBS. Data was derived from the Bankscope database covering the period from 2007-2014. The selected banks were carefully screened to ensure that all the variables needed were available and met the required criteria. Accordingly, those banks with incomplete information were dropped. The final sample comprised a total sample of 28 commercial banks comprising 9 local banks, 11 foreign banks and 8 Islamic banks.

Based on Bannier and Hansel (2007), the determinant variables were classified based on the following identified factors that play an important role in the decision to engage in the OBS activities: (1) Liquidity motive (2) risk transfer motive (3) capital motive and (4) profitability motive. In addition, we included some control variables that represented bank specific

and macroeconomic effects. The data for the empirical analysis was obtained from the unconsolidated income statement and balance sheet data of the respective banks which were sourced from the Bankscope database of Bureau Van Dijk. Below is the table that explains the variables and their classification. The macro-economic variables were obtained from the World Development Index (WDI) database.

Table 3: Description of Variables

Explanatory Variable	Notation	Classification	Expected signs
Natural Log of Total Assets	Ln TA	Size variable	(-/+)
Ratio of impaired loans to equity	Imp Loans / Equity	Risk transfer	(+)
Ratio of total liquid assets to total deposits & borrowing	LqdAssts/Tot Dep&Bor	Funding Variable	(-)
Cost-to-Income ratio	CIR	Performance variable	(-/+)
Total Capital Ratio	TCR	Capital Regulation	(-)
Return on Assets	ROA	Performance variable	(-/+)
Natural Log of Loans	Ln Loans	General characteristics	(+)
Gross Domestic Products	GDP	Macroeconomic variables	(-)

Methodology

In line with Ainito and Tagliaferri (2010); Cerrato et al. (2012); Bannier and Hansel (2007). Elian (2012), Ghosh and Nachane (2002), the model for the determinants of the OBS activities in the present study was developed based on four main motivating factors namely: (1) funding, (2) risk transfer (3) profit, and (4) capital arbitrage. The general model specification for the present study is therefore presented as follows:

$$Y_{it} = \alpha + \gamma Y_{it-1} + \beta X_{it} + \varepsilon_{it}$$

Where:

$$\varepsilon_{it} = V_{it} + U_{it}$$

Y_{it} : represents off-balance sheet variable of bank i at time t ,

X : represents the independent variables including the bank specific and macroeconomic variables (Natural log of assets, ratio of impaired loans to equity, cost-to-income ratio, ratio of liquid assets to total deposit, total capital ratio, ROA, natural log of loans and GDP),

γ and β : are the slopes parameters.

In line with Goddard et al, (2004), Nasserinia et al. (2014), the lagged dependent variable is included to account for some of the effects of previous OBS activities that might contribute to its usage. The above model thus serves as the baseline specification to assess the determinant of the OBS activities.

Model Estimation

Following Ibrahim and Law (2013), Cerrato et al. (2012), Affinito and Tagliaferri (2010), the Generalized Method of Moments (GMM) was chosen as the estimation model in this study. According to Drukker et al. (2013), the GMM is a general framework for deriving estimators. One of the main conditions for applying the GMM is that the number of cross-sectional units must be greater than the time period. Application of a standard panel model such as the OLS regression model, fixed effect panel model and random effect model are not suitable for data that are dynamic in nature and might lead to bias estimation (Ibrahim & Law, 2012). Those models lack the ability to handle specific issues associated with panel data such as firm specific effects and potential endogeneity of the explanatory variables (Hansen et al., 1996). One of the reasons for the popularity of the GMM is its ability to handle those problems. The GMM approach on panel data has been found to be an efficient method compared to other methods (Judson & Owen, 1996). We thus used the following estimation model to estimate the determinant of OBS:

$$\text{Ln OBS} = \alpha + \gamma \text{Ln OBS}_{it-1} + \beta_1 \text{Ln TA}_{it} + \beta_2 \text{Imp Loans}_{it} / \text{Equity}_{it} + \beta_3 \text{CIR}_{it} + \beta_4 \text{LqdAssts}_{it} / \text{TotDep\&Bor}_{it} + \beta_5 \text{TCR}_{it} + \beta_6 \text{ROA}_{it} + \beta_7 \text{Ln Loans}_{it} + \beta_8 \text{GDP}_{it} + \varepsilon_{it}$$

Where:

i denotes the individual commercial banks ($i=1,2,3,\dots,28$),

t denotes the yearly period ($t= 1, 2, 3,\dots,8$), α , β and

β denotes the coefficient to be estimated

ε is the residual terms

RESULTS

The results of the main specification in the present study are based on the four main determinants of engaging in OBS activities (i.e. liquidity motive, risk transfer motive, profitability motive and capital arbitrage motive). Four major econometric estimations are reported but the final result relies on the GMM estimation. The presence of the lagged independent variable in the GMM allows for the control of heterogeneity and autocorrelation in the estimation. This together with other qualities showed that the GMM is preferable as compared to other estimators.

The correlation coefficient was first carried out to ascertain the existence of multicollinearity. As indicated in Table 4, there is no issue of multicollinearity among the independent variables.

Table 4: Correlation Among the Variables

	Ln OBS	LN TA	ed Loans /To Income	sets / Tot Li	l Capital R	ROAA	GDP	Ln Loan	
Ln OBS	1								
LN TA	0.589235	1							
Impaired	0.146606	0.17427	1						
Cost To In	0.016822	-0.21101	0.1204	1					
Liquid Ass	-0.50371	-0.58803	-0.25807	0.227945	1				
Total Capi	-0.44917	-0.48224	-0.21891	0.112854	0.669171	1			
ROAA	0.171028	0.275931	-0.07978	-0.26088	-0.14252	-0.10458	1		
GDP	0.10239	0.113961	-0.16674	0.13833	-0.05687	-0.09215	0.014585	1	
Ln Loan	0.841437	0.701324	0.204162	-0.09392	-0.75786	-0.51069	0.171196	0.109335	1

Based on the standard classification by Bankscope, OBS activities comprise of securitization related activities and contingent related activities. Our main focus was on contingent related activities that consist of guarantee,

banker's acceptance and documentary credit reported off-balance sheet, committed credit line and other contingent liabilities. We opted for contingent related activities due to the fact that it constitutes the largest proportion of OBS activities by banks and data availability. Based on the information in Table 1, the total amount of commitment and contingencies related transaction by commercial banks increased from about RM1.8 billion to about RM2.5 billion between 2012 and 2016 which represents a 39 percent growth rate.

Regression Result

Table 5 below presents the results of the regression. The coefficient for size represented by the natural log of assets is negatively related in all the models. The negative relation is significant for both difference and system GMM. This suggests that larger banks may have less incentives to engage in OBS activities. Since large banks are sufficiently well diversified, they are more likely to have less incentive to use OBS instruments. Conversely, smaller banks are less diversified and have a high tendency to engage in OBS activities to manage their risks. This is in line with the finding of Khasawneh (2007), Khasawneh and Hassan (2010), Nachane and Ghosh (2002).

As indicated in Table 5, the ratio of impaired loan to equity representing the quality of assets of the bank is negatively related to OBS activities in almost all the models particularly in both difference and system GMM. This suggests that the usage of OBS instruments by the selected banks in Malaysia is not mainly for the risk transfer motive. This conceivably is attributed to the shift away from the self-regulatory and laissez-faire approach to a more stringent and corporate accountability system. This may prevent banks from taking undue advantage of OBS activities to be involved in highly risky transactions. Hence, the motive of taking excess risks with the aim of risk transfer is not the case in Malaysia. This result is contrary to that of Elian (2012) and Broccardo et al. (2014) who found a positive relationship for the case of the GCC and the Italian banking sector. This is not surprising as the Malaysian's banks maintain a high quality loan portfolio following the painful transition period of the 1997 Asian financial crisis (Moody, 2017). The Cost-to-income ratio variable and the ROA which represent profitability have a positive and negative relationship respectively with the OBS.

The positive relationship between the cost-to-income ratio and the OBS activities could be inferred to suggest that banks use OBS activities to enhance the efficiency of their operation income. Similarly, the negative relationship between the ROA and the OBS suggests that banks tend to diversify to OBS activities to augment their operation profit. This is in line with Elian (2012) who revealed a similar result for the case of the GCC. The positive sign for the ratio of Liquid Assets-to-total deposit & Borrowing suggests that the liquidity purpose is not a major motive for OBS activities in banks. This corroborates the Report of Moody’s global credit research (2017) which indicated that the stable capital and liquid profile of Malaysian banks serves as buffer against continued weak operating conditions of the banking sector. The total capital ratio representing the regulatory capital requirement is significantly negatively related to the OBS in all the models. This suggests that banks with a less capital ratio are more likely to engage in OBS activities. The banks with a less capital ratio might use the OBS activities for the purpose of under-estimating their balance sheet risks to reduce their regulatory capital requirements. The loan variable is significantly positively related to OBS activities. This shows that loans generation and OBS are not substitutes. Thus it can be interpreted that banks possibly engage in OBS activities to mitigate the inherent risks of maturity mismatches resulting from loan transactions. As expected, the variable representing the macroeconomic factor is negatively related to the OBS activities. This suggests that banks tend to increase their OBS activities during an economic downturn to augment their operation profit.

Table 5: Regression Estimates

	OLS	RE	FE	Difference GMM	SYSTEM GMM	Robustness System GMM
Constant	-1.800905 (0.013)	-.0585878 (0.945)	.8799672 (0.376)	2.475422 (0.001)	3.500572	3.500572 (0.524)
LnOBS				-.0308267 (0.008)	.0323947 (0.008)	.0323947 (0.931)
LnTA	.0048112 (0.943)	-.097275 (0.167)	-.1472773 (0.073)	-.1856539 (0.006)	-.3689969 (0.000)	-.3689969 (0.339)
Impaired Loans / Equity	-.000856 (0.755)	-.0006798 (0.797)	.0001759 (0.952)	-.0015719 (0.094)	-.0023677 (0.012)	-.0023677 (0.728)
Cost To Income Ratio	.0076914 (0.111)	.0056025 (0.326)	.0032108 (0.647)	.0058578 (0.028)	.004584 (0.002)	.004584 (0.754)
Liquid Assets / Tot Dep&Bor	.0303414 (0.000)	.0201595 (0.000)	.0126393 (0.023)	.0073996 (0.007)	.0115427 (0.000)	.0115427 (0.400)

Total Capital Ratio	-.0163842 (0.000)	-.0136335 (0.001)	-.0118748 (0.013)	-.013118 (0.000)	-.013815 (0.000)	-.013815 (0.017)
ROAA	.0507847 (0.220)	.0075891 (0.850)	-.0165439 (0.694)	-.009143 (0.000)	-.010373 (0.004)	-.010373 (0.898)
GDP	-.0132888 (0.588)	-.0061302 (0.769)	-.0019412 (0.926)	-.0003538 (0.939)	-.007796 (0.225)	-.007796 (0.745)
LnLoans	1.009418 (0.000)	.9788582 (0.000)	.9692353 (0.000)	.8868682 (0.000)	.9094829 (0.000)	.9094829 (0.063)
Sargan Test:						
P-Value				0.3470	0.6703	
AR (1): p-Value				0.3099	0.2772	
AR (1): p-Value				0.4193	0.3780	

CONCLUSION

This study provided empirical evidence on the motives behind the application of OBS instruments by some selected banks in Malaysia. The findings suggest that OBS instruments do not serve as incentives for the selected banks to imprudently accumulate risks on their balance sheets. As such, its usage poses no serious threat to the banking system. The findings further suggest that OBS instruments are employed to enhance efficiency, diversification purposes and to reduce regulatory capital requirements among the selected banks. The empirical evidence that we gathered equally suggests that OBS instruments help to boost loan generation for the banks. Based on the findings of the present study, the need for a sustainable stringent regulation is necessary for the long-term stability of the Malaysian financial system. This would help to ensure that banks use opportunities offered by the OBS to prudently generate loans that pose no threat to the long term stability of the banks.

The limitation of the present study is that, it mainly focused on Malaysian banks. Further insights can be obtained when extending the studies to include other countries in the region. The comparison from the findings would shed more light on its usage and implications.

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