The Impact of Banks Characteristics Variables on Indonesian Islamic Banks Profitability

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Abstract: Recently, Islamic Banks in Indonesia are going to become more challenging. Due to this situation, it is important for these banks to strengthen their business performance in order to face with the strong competition among banks. The performance of these banks can be measured through profitability which is influenced by various factors. The internal determinants that resulted from bank management decision and policy may definitely affect the bank's operating activities as well as its profitability. Therefore, this research is conducted to study the factors which determine profitability of Islamic banking institutions where special focus is given on bank-specific characteristics. The Least Square Dummy Variable (LSDV) panel data analysis. Five of eight independent variables, are significant in determining the profitability of Indonesian Islamic banks. The third party funds affect negatively profitability indicator. Overhead cost also influence banks' profitability negatively that demonstrates this variable contribute in reducing profitability. Meanwhile, total asset has positive relationship with profitability indicator indicates that banks of large size enjoy scale economy and achieve higher revenue. The interest-free earning assets affects profitability positively indicates that Islamic banks are keen to rely on this factor to enhance their profitability. Moreover, the positive impact of increased income from services activities on profitability reveals that Islamic banks so far has an important role in as sources of revenue. Interest free earning assets is the most important of bank characteristics that determines Indonesian Islamic banking's performance.

1 INTRODUCTION

The existence of Islamic banking in Indonesia is initiated by the Indonesian Ulama' Council (MUI) in 1990 withheld its first symposium on "Issues in Interest and Banking." The participants did realize that some Muslim communities in Indonesia would simply not use conventional banking services. As a result, they formed a task force, and recommended that the government create the conditions for establishing Islamic banks.

Recently, the international and domestic environments in which Islamic Banks operate are going to become even more challenging. Due to this situation, it is important for Islamic banking institutions to strengthen their business performance in order to face with the strong competition among banks operating in Indonesia (Islamic or conventional banking). Healthy and sustainable profitability is vital in maintaining the stability of the banking system. The performance of these banks can be measured through profitability which is influenced by various

factors. The internal determinants that resulted from bank management decision and policy may definitely affect the bank's operating activities as well as its profitability. In addition, a sound and profitable banking sector is able to face negative shocks and contribute to the stability of the financial system itself (Atanasoglu, et al, 2008). Thus, it is vital for Islamic banking institutions to know the factors which may influence the profitability of the firms in order to perform better and be competitive in the global environment.

Therefore, this research is conducted to study the factors which determine profitability of Islamic banking institutions in Indonesia, where special focus is given on bank-specific characteristics. Accordingly bank specific-characteristics are the internal determinants or internal factors that are mainly influenced by bank's management decisions and policy objectives. Such profitability determinants include third party funds, Income from financing activities, Income from services activities, overhead cost capital adequacy, credit risk, liquidity, bank size

and expenses management (Izhar and Asutay, 2007). Bank-specific characteristics have been a focus to study bank's profitability where previous studies have shown that the firm-level effects are the most important class of effect in explaining the variation in performance (Goddard et al, 2009). The study will assist Islamic Banks in Indonesia to improve their profitability and in turn, the competitiveness and efficiency of the Islamic banking system to enable it to be developed in line or even better compared to conventional banks.

2 LITERATURE REVIEW

In general, bank profitability is usually measured by ROA, ROE, NIM and Tobin's Q and expressed as a function of internal (bank-specific) and external (macroeconomic, industry-specific and bank governance) factors. Among the studies of the effects of determinants on bank profitability in different countries are: Bourke (1989), Molyneux and Thornton (1992), Stienherr and Hiveneers (1994), Demirguc-Kunt and Huizinga (1999), Mamatzakis and Remoundos (2003), Micco et al. (2007), Pasiouras and Kosmidou (2007), Athanasoglou et al. (2008), Garcia-Herrero et al. (2009), Fadzlan (2010), Alper and Anbar (2011), Dietrich and Wanzenried (2011), Kanas et al. (2012), Bolt et al. (2012), Rachdi (2013). In addition, there have also been studies on the profibality of the Islamic banks were conducted by Haron (1996), Hassan and Bashir (2003). Variables such as capital ratios, leverage, operational efficiency, loan (financing), liquidity and bank size have a large or less impact on bank profitability.

With regard to the effect of funding activities on profitability, Smirlock (1985) argued that demand deposits were a cheaper source of funds and had a positive impact on bank profits. However, Kwast and Rose (1982) concluded that operating efficiency had nothing to do with profitability. They also found that there was no compelling evidence that high-profit banks were characterized by a greater level of efficiency than low-profit banks. In the analysis of internal determinants, source of fund is represented by consumer and short-term funding to total assets. Other previous studies conducted by Demirguc-Kunt and Huizinga (1997), Bashir (2000) found that third-party funds adversely affect profitability of banking. Izhar and Asutay (2007) investigated the determinants of profitability in case of an Islamic bank in Indonesia. They found that three sources of funds for Islamic banks are negatively related with profitability indicator. Most previous studies had found that third party fund was in inverse relationship to profitability.

Among other previous studies, Haron (1996) found that the percentage of incomes from financing activities had a positive relationship to profitability. His findings indicated the incremental increase of Islamic banks' income from financing activities. Therefore, based on his results, he suggested that the profit-sharing ratio between Islamic banks and the users of funds favours the bank. Incomes from service activities are also expected to have positive relationship with profitability indicators.

Dietrich and Wanzenried (2011) found no correlation between the equity over total assets (EQ), as a proxy of capital adequacy. In his findings the coefficient is always negative but never statistically significant when using return on average equity (ROAE). When using Net Interest Margin (NIM), the coefficient is always positive but never statistically significant. Other studies conducted by Demirguc-Kunt and Huizinga (1997), Garcia-Herrero et al. (2009), Fadzlan (2010), Liu et al. (2010) and Suminto and Yasushi (2011), concluded that the best performing banks are those who maintain a high level of equity relative to their assets because they can face lower costs of funding due to lower prospective bankruptcy costs. Another previous studies of the determinants of bank profitability conducted by Bourke (1989) for the United States case. He found a strong and statistically significant positive relationship between Equity and profitability. This supports the view that profitable banks remain well capitalized; or the view that well-capitalized banks enjoy access to cheaper (less risky) sources of funds with subsequent improvement in profit rates. Concerning Islamic banking, Izhar and Asutay (2007) suggested that EQ did not have a significant impact on profitability ratios but it is found to have negative relationship with *ROA*.

Furthermore, there is also empirical evidence that liquidity, measured by total loans to total assets, affects bank profitability and negatively affects bank profitability measured ROA, ROE and NIM (Liu et al. 2010). Bashir (2000), Athanasoglou et al. (2006), Sufian and Habibbullah (2009) and Wasiuzzaman and Tarmizi (2010) supported this positive relationship. On the other hand, a positive relationship between the ratio of bank loans to total assets and profitability was also found using an international database (Demirguc Kunt and Huizinga, 1999). Loans are the largest component of interest bearing assets of a bank and are expected to have a positive effect on bank's profitability (Vong and Hoi, 2009). For the study on Islamic banks, Alkassim

(2005) revealed that liquidity plays an essential role in determining the profitability of banks. By taking the net loans to total asset as a liquidity proxy, this ratio provides a measure of income source. He confirmed this for both conventional and Islamic banks, which tend to have similar liquidity ratios. Bank loans are expected to be the main source of revenue, and are expected to impact profit positively. However, since most Islamic banks' loans (financing) are in the form of profit and loss sharing (*PLS*) financing with equity features, the loan–performance relationship depends significantly on the expected performance of the economy. During a strong economy, only a small percentage of the *PLS* financing will default, and the bank's profit will rise. On the other hand, the bank could be severely damaged during a weak economy, because several borrowers are likely to default on their loans. Ideally, banks should capitalize on favorable economic conditions and insulate themselves during adverse conditions (Izhar and Asutay, 2007).

Another determinant of profitability is the level of operational efficiency. Athanasoglou et al. (2008) and Goddard et al. (2009) indicated a positive correlation between the cost income ratio and bank profitability. In contrast, Dietrich and Wanzenried (2011) found a negative and highly significant relationship between operational efficiency and profitability, measured by ROAE and NIM, in the Swiss banks over the period 1999-2006. To show efficiency in Islamic banks, Izhar and Asutay (2007) used the ratio of overhead to total assets (*OC*). It reflects employment, total amount of wages and salaries as well as the cost of running branch office facilities. Their research finding was a positive impact of *OC* on Islamic banks profitability.

The size of the bank is one the important bank-specific variable. Studies by Dietrich and Wanzenried (2011), Pasiouras and Kosmidou (2007) and Alper and Anbar (2011) found a positive and statistically significant relationship between bank size and bank profitability because large banks have degree of loans and product diversification than small and medium banks. Trujillo-Ponce (2013) pointed out that large bank can imply economies of scope for the bank resulting from the joint provision of related services. Micco et al. (2007) found, also, positive and but no significant correlation. In contrast, Kasman (2010) found a significant negative coefficient between bank size and Net Interest Margin in a panel of 431 banks from 39 countries. In terms of Islamic banks, Idris et al. (2013) suggested that the Bank Size is the most important factor in explaining the variation of profitability for Islamic banking institutions in

Malaysia. He also stated that a bank with larger size will fundamentally have better access to capital markets, lower cost of borrowing and be able to generate higher income.

3 METHODS

The aim of this paper is to investigate the relationship between the profitability of Islamic banks against a set of internal banks characteristics. Internal profitability is evaluated by analyzing financial ratios. While the operating efficiency and profitability measures used as criteria for performance are specified below. Capital ratios, leverage, overheads, loan and liquidity ratios were used as proxies for banks' internal measures.

The study covers nine selected domestic and foreign Islamic banking institutions that operate in Indonesia such as Bank Muamalat Indonesia, Bank Victoria Syariah, Bank Rakyat Indonesia Syariah, Bank Jabar Banten Syariah, Bank Syariah Mandiri, Bank Mega Syariah, Bank Panin Syariah, Bank Bukopin Syariah, Bank Central Asia Syariah. The data for this purpose is technically collected from annual reports and financial statements of the selected bank. The data collected is on a quarterly basis which covers the 2010-2013 periods, consisting of one dependent variable and eight independent variables. The data is then converted into natural logarithm values, with the intention that the estimated coefficients can be interpreted as elasticities. The log-log equation is as follows:

$$ln(ROA) = \ + \ 1 \ln(TPF) + \ 2 \ln(IFIN) + \ 3 \ln(ISA) + \ 4 \ln(OHC) + \ 5 \ln(EA) + \ 6 \ln(FR) + \ 7 \ln(TA) + \ 8 \ln(ER) + \ 1$$

Where *ROA* is the measure of performance for Islamic banks in Indonesia; *TPF, IFIN, ISA, OHC, EA, FR, TA,* and *ER* are the financial structure variables for Islamic banks.

Dependent variable used in this study is Return on Assets (*ROA*). This measure is closely tied to the key item in the income statement – net income. *ROA* has been used in most structure-performance studies and is included here to reflect the bank's ability to generate income from non-traditional services. *ROA* shows the profit earned per rupiah (Indonesian currency) of assets and most importantly, reflects management's ability to utilize the bank's financial and real investment resources to generate profit. For any bank, *ROA* depends on the bank's policy

decisions as well as uncontrollable factors relating to the economy and government regulations. Many regulators believe that *ROA* is the best measure to assess bank efficiency.

Return on Assets (*ROA*) is formulated as follows:

$$R = \frac{B \quad T \quad P}{T \quad A}$$

Where, before tax profit is calculated for each month from the corresponding quarterly data. In addition, internal determinants are derived from balance sheets and income statements. The following is the definition which some of the internal determinants or variables are utilized in this study:

Table l: Definition and Description of Variables.

Variables	Descrpiptions
Return on Asset (ROA)	The ratio of before-tax profit to total assets. It captures all sources of income.
Third party funds (TPF)	comprising current accounts, savings accounts and investment accounts as a percentage of total assets, and generated from *wadiah* (safe custody or deposit) demand deposits, *mudarabah* savings deposits and *mudarabah* investment deposits
Income from financing activities (*IFIN*)	a percentage of total financing, and generated from margin income and profit-sharing for the bank
Income from service activities (*ISA*)	a percentage of total revenue. It is generated from service fees
Overhead cost (OHC)	a percentage of total assets, consisting of employee expenses, general and administrative expenses
Interest-free earning assets (EA)	a percentage of total assets, comprising current accounts and placement with other banks, securities and other receivables, financing facilities, investment in shares of stock, and commitment and contingencies liabilities that carry credit risk
Financing ratio (FR)	Ratio of net loans to total assets. Net loan is calculated as gross financing minus provision for non-performing financing (NPF). The

	variable is used to capture risk preference.
Total assets *(TA)*	It is the sum of the value of equity and liability. The variable is used to capture possible scale economy
Equity ratio *(ER)*	Ratio of equity to total assets. It captures the impact of leverage.

Due to using panel data, this study have to follow some stages conducted to get the reseach findings. Among other stages are Pooled Ordinary Least Square Model (POLS), Random Effect Model (REM) and Hausman test.

POLS is employed in this research to examine the simultaneous effects of several independent variables on a dependent variable charted on an interval scale. It is the basic approach employed in estimating the panel data.

Random Effect Model (REM) known as variance components model is also employed in this study. In REM, it is assumed that the dataset being analyzed consists of a hierarchy of different populations whose differences related to that hierarchy.

Contradicting to the REM, Fixed Effect Model (FEM) represents the observed quantities in terms of explanatory variables that are all treated as non-random. FEM will be employed as an alternative if the REM method is not suitable for the analysis. In this stage, Hausman test is used to determine whether to choose Random Effects or Fixed Effects for the analysis.

4 RESULTS AND DISCUSSION

This section provides empirical evidence on the determinants of profitability in the Indonesian Islamic Banking industry. A broad description of the characteristics of the variables used in the study is given in table 1 which reports their mean, maximum, minimum and standard deviation. Next, the results of regression of the return on asset variables are reported respectively. The table include several specifications, with the basic specification including a set of bank characteristic variables. The estimation technique is the balanced panel data regressions.

Table 2: Summary statistics of the variables used in the empirical analysis

Variables	Mean	Maximum	Minimum	Std. Dev.
ROA	1.256032	6.930000	-7.900.000	1.530952
TPF	10166722	55767955	113722.0	14624335
IFIN	688507.6	5583342.	4819.000	1034954.
ISA	119438.7	1192864.	620.0000	231643.8

OHC	75194.71	533459.0	589.0000	122267.0
EA	11246648	59474376	223588.0	15708092
FR	0.178153	0.415667	0.000000	0.128987
TA	11792916	61810295	0.000000	16018682
ER	0.157448	0.651311	0.000000	0.129654

The analysis starts with the test conducted to examine either the POLS or Fixed Effect Model can be used for further analysis. Based on redundant test, the p-value of chi square is less than 0.05. It means that the model is significant at 5% and thus, supports the rejection of the null hypothesis. Consequently, the panel data (fixed effect) estimation will be used in this study.

The next step of the study is conducting a Hausman Test. This test is theoretically performed to examine either Random Effect Model (REM) or Fixed Effect Model (FEM) using panel data analysis. Table 3 shows the p-value of chi square is 0.000 less than 0.05. It means that the model is significant and, thus rejected the null hypotesis. The results of thistest are given by the table 3.

Table 3: Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	78.599347	8	0.0000

Being given that the model tested comprises 8 explanatory variables (K = 8), these statistics follow Chi two to (8) degrees of freedom. The tests of specification of Hausman show that our regression is fixed effect.

As a result, FEM will be used in this study. In addition, the Least Square Dummy variables (LSDV)

estimation has been performed by taking the quarter (collectively) as one of the independent variables. The quarter has become the sixth independent variable and has been taken into the model. The regression results in Table 4 are based on the fixed effects model.

Table 4: Result of Regression Fixed Effect Model.

Varibles	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.891563	2.553825		-3.873235
ln(TPF)	-1.272348	0.566626	-2.245480	0.0269*
ln(IFIN)	0.040079	0.178213	0.224894	0.8225
ln(ISA)	0.228545	0.090472	2.526142	0.0131*
ln(OHC)	-0.266615	0.139917	-1.905520	0.0595**
ln(EA)	1.390011	0.606149	2.293185	0.0239*
ln(FR)	0.038334	0.077761	0.492969	0.6231
ln(TA)	0.524602	0.229336	2.287484	0.0242*
Ln(ER)	0.100769	0.164731	0.611716	0.5421
Number of obs		120	DW stat	1.591691
R-squared		0.642355		
F-statistic		11.56218		
Prob>F		0.000000		
*sig at 5%, **sig at 10%				

From the results in Table 4, the fixed effects coeffcients of the regressors indicate how much profitability changes when there is a change in the capital of each bank, bank size, expenses management, leverage, overheads, financing and liquidity in Islamic banking system. From Table 4, the overall regression is statistically significant, F = 11.56, p = .001, thus supporting the fact that Third Party Funds (TPF), Income from Financing Activities (IFIN), Income from Service Activities (ISA), Overhead Cost (OHC), Interest-Free Earning Assets (EA), Financing Ratio (FR) Total Asset (TA) and Equity Ratio (ER) are important factors in determining the profitability of the Islamic banks in

Indonesia. The coefficient of multiple determinations (R^2), which indicates goodness of fit of the model, shows that about 64.24% of the changes in profitability of the Islamic banks in Indonesia are caused by the combined influence of the independent variables of internal bank characteristics. With a value of 64.24%, the strong positive relationship between profitability and its determinants is further confirmed. The results of the Durbin Watson Statistics of 1.59 indicates that there is no autocorrelation among the variables included in the model, making the model more reliable.

Out of eight independent variables, five are significant. The results show that Third Party Funds (TPF), Income from Service Activities (ISA), Interest-Free Earning Assets (EA) and Total Asset (TA) are significant at the 5 % significance level. While Overhead Cost (OHC) is significant at 10%. Income from Service Activities (ISA), Interest-Free Earning Assets (EA) and Total Asset (TA) have a positive relationship with the dependent variable, return on asset. On the other hand, Third Party Funds (TPF) and overhead cost (OHC) determines the Return on Assets (ROA) negatively.

The negative relationship between the ROA and Third Party Funds (TPF) means that 1% increase in thirds farty funds will cause the level of profit to decrease about 1.27 %. This negative effect conforms to the theory that the increased third party funds is normally associated with decreased firm profitability.

The positive relationship between the ROA and Service Activities (ISA) means that 1% increase in Income from service activities will cause the level of profit to increase about 0.229 %. This postive effect conforms to the theory that the increased income from services activities is normally associated with increased firm profitability. Incomes from service activities are positive and significant for the profitability indicator. It shows us that *ISA* contributes in a big portion on the profit of the bank.

There is a negative relationship between between the ROA and (Overhead Cost) OHC. It means that 1% increase in the overhead cost will cause the level of profit to decrease to about 0.2667 %. OHC variable is found to have a significant and negative relationship with profitability indicators. This negative relationship between the ROA and OHC indicates that the contribution of Over Head cost to their average cost has reducing profitability. We can interpret the relationship of OHC and profitability indicators in two ways: first, it indicates quite good expenses management since this promotes good performance; second, it could also be interpreted that

the more profitable the bank the higher salary expenses will be.

The significant and positive relationship between the ROA and Interest-Free Earning Assets (EA) means that 1% increase in earning assets will cause the level of profit to increasee about 1.390. This finding is in line with the findings of Demirguc-Kunt and Huizinga (1997) and Bashir (2000). This particular result indicates Islamic banks could utilize their productive assets to enhance their performace.

Financing over total assets (*FR*) is insignificant on profitability (ROA). But it consistent with the findings of previous literature, which found a positive relationship with profitability measures. The positive relationship between FR and profitability indicator as found in this study indicates that the Islamic bank portfolio slightly affect short-term trade-based financing. As such, these financing are low risk and only contribute modestly to bank profits.

The coefficient of total assets (TA) is positively related to profitability (ROA). This may indicate that Islamic banks with high equity capital can boost the confidence of their customers, thereby leading to higher revenue. The positive coefficient on total assets indicates the presence of economies of scale. Banks of large size enjoy scale economy and achieve higher revenue.

Despite Equity Ratio (*ER)* not having significant impact on profitability ratios, it is found to have positive relationship with *ROA*. This fit with earlier researches, which had found a positive relationship between capital ratio and profitability. Previous studies of the determinants of bank profitability in the United States found a strong and statistically significant positive relationship between (*ER*) and profitability. This supports the view that profitable banks remain well capitalized; or the view that well-capitalized banks enjoy access to cheaper (less risky) sources of funds with subsequent improvement in profit rates (see Bourke, 1989). The insignificant impact of *ER* on profitability measures shows us that the equity is a small proportion of total assets.

Income from financing activities (IFIN) is one variables which has insignificant impact on Islamic banks profitability. However, it is found to have positive relationship with *ROA*. This confirms the findings of Haron (1996) which had found a positive relationship between Income from financing activities and profitability. The unsignificant impact of IFIN variable shows that financing activities in Islamic banking in indonesia is still less productive. Put differently, Islamic banks have not not been keen to rely on financing activities which for the most part

consist of *murabahah* (resale with mark-up) and mudharabah (PLS scheme) financing .

5 CONCLUSION

This study has attempted to empirically investigate the determinants of profitability in case of an Islamic bank. Regression analysis was applied to examine which variables are actually significant in determining the profit of Islamic banks in Indonesia over the periode 2010 and 2013 in quarterly basis.

This study suggests that five of eight banks characteristics are important factors in explaining the variation of profitability for Islamic banking institutions in Indonesia. Among other significant factors, Income from Service Activities (ISA), Interest-Free Earning Assets (EA) and Total Asset (TA) have a positive relationship with the dependent variable, return on asset. On the other hand, Third Party Funds (TPF) and overhead cost (OHC) determines the Return on Assets (ROA) negatively.

Based on above result findings, three sources of funds for Islamic banks are negatively related with profitability indicator. This result particularly may be utilized by the management of Islamic banks to review and reassess the performance of these sources of funds in order to increase their profitability level.

Furthermore, Overhead Cost (OHC) also influence banks'profitability negatively. It prove that the contribution of OHC to their average cost has reducing profitability.

Total Asset (TA), on the other hand which has positive relationship with profitability indicator. It is also the most significant variable under our consideration. This particular result is in line with other major research findings, which state that Banks of large size enjoy scale economy and achieve higher revenue.

The ratio of interest-free earning assets to total assets (*EA*) affects profitability positively. It implies that Islamic banks are keen to rely on interest free-earning asset to enhance their profitability since the bulk of the earnings of banks come from interest-free activities.

Moreover, the positive impact of increased income from services activities on profitability indicates that Islam banks so far has an important role in as sources of revenue. It is contradict with financing as the main source of income, according to result finding has insignicant impact on banks'profitability. It is told that Islamic banks tend to experience a loss situation when they are offering financing scheme particularly *mudarabah* schemes.

Based on the regression result, it can be concluded that interest free earning assets is the most important factors bank characteristic in determining of the performance of Islamic banks in Indonesia since the bulk of the earnings of Islamic banks come from interest-free activities.

REFERENCES

Alkassim, F.A., 2005. The profitability of Islamic and Conventional Banking in the GCC Countries: a Comparative Study, *Journal of Review of Islamic Economics*, 13(l), pp. 5-30.

Alper, A. and Anbar, A., 2011. Bank specific and macroeconomic determinants of commercial bank profitability: Empirical evidence from Turkey, *Business and Economics Research Journal*, 2(2), pp.139-152.

Athanasoglou, P. Delis. M. and Staikouras, C., 2006. Determinants of Bank Profitability in the Southern Eastern European Region. *Bank of Greece Working Paper,* No. 47. Greece.

Athanasoglou, P. Brissimis, S. and Delis, M., 2008. Bank-specific. industry-specific and macroeconomic determinants of bank profitability. *Journal of International Financial Markets. Institutions and Money*, 18 (2), pp. 121 -136.

Bolt, W. De Haan, L. Hoeberichts, M. Van Oordt, M. and Swank, J., 2012. Bank Profitability during Recessions. *Journal of Banking and Finance*, 36(9), pp. 2552-2564.

Bourke, P., 1989. Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia. *Journal of Banking and Financ*, 13 (1), pp. 65-79.

Demirguc, A. and Huizinga, H., 1999. Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence, *World Bank Economic Review*, 13(2), pp. 379-408.

Dietrich, A. and Wanzenried, G., 2011. Determinants of bank profitability before and during the crisis: Evidence from Switzerland. *Journal International Financial Markets Institutions and Money*, 21(3), pp. 307-327

Fadzlan, S., 2010. Financial Depression And The Profitability Of The Banking Sector Of The Republic Of Korea: Panel Evidence On Bank-Specific And Macroeconomic Determinants. *Asia-Pacific Development Journal*, 17 (2), pp. 65-92.

García-Herrero, A. Gavilá, S. and Santabárbara, D., 2009. What explains the low profitability of Chinese banks? *Journal of Banking and Finance*, 33 (11), pp. 2080-2092.

Goddard, J., Liu, H. Molyneux, P. and Wilson, J., 2009. Do bank profits converge? *Bangor Business School, Working Paper, BBSWP/10/004.*

Haron, S., 1996. *Determinants of Islamic Bank Profitability*. Unpublished PhD Thesis. Department of Accounting and Financial Management, University of New England, Australia.

Idris, A. R., Asari, F. F. A. H., Taufik, N. A. A., Salim, N. J., Mustaffa, R., Jusoff, K., 2011. Determinant of Islamic banking institutions' profitability in Malaysia. *World Applied Sciences Journal*, 12 (12), pp. 1-7.

Izhar, H and Asutay, M., 2007. Estimating the profitability of Islamic banking: Evidence from Bank Muamalat Indonesia. *Review of Islamic Economics*, 11(2), pp.17-29.

Kanas, A., Vasiliou, D. and Eriotis, N., 2012. Revisiting bank profitability: A semi-parametric approach. *Journal of International Financial Markets, Institutions and Money*, 22 (4), pp. 990-1005.

Kasman, A., 2010. Consolidation and Commercial bank net interest margins: evidence from the old and new European union members and candidate countries. *Economic Modeling*, 27, pp. 648-655.

Kwast, M.L. and Rose, J.T., 1982. Pricing, Operating Efficiency, and Profitability among Large Commercial Banks. *Journal of Banking and Finance*, 6(2), pp. 233-254.

Liu, H. and Wilson, J.O., 2010. The profitability of banks in Japan. *Applied Financial Economics*, 20(24), pp.1851 –1866.

Mamatzakis, E. and Remoundos. P., 2003. Determinants of Greek Commercial Banks Profitability. 1989–2000. Working paper, University of Piraeus, 53(1), pp. 84–94.

Micco, A., Panizza, U. and Yanez, M., 2007. Bank Ownership and Performance. Does Politics Matter?. *Journal of Banking and Finance*, 31(1), pp. 219-241.

Molyneux, P. and Thornton, J., 1992. Determinants of European Bank Profitability: A Note. *Journal of Banking and Finance*, 16(6), pp. 1173-1178.

Pasiouras, F. and Kosmidou, K., 2007. Factors Influencing the Profitability of Domestic and Foreign Commercial Banks In The European Union. *Research in International Business and Finance*, 21 (2), pp.222-237.

Rachdi, H., 2013. What Determines the Profitability of Banks During and before the International Financial Crisis? Evidence from Tunisia. *International Journal of Economics, Finance and Management*, 2(4), pp.330-337.

Steinherr, A. and Huveneers, Ch., 1994. On The Performance of Differently Regulated Financial Institutions: Some Empirical Evidence, *Journal of Banking and Finance*, 18(2), pp. 271-306.

Smirlock, M., 1985. Evidence on the (Non) Relationship between Concentration and Profitability in Banking. *Journal of Money, Credit and Banking*, 17(1), pp. 69-83.

Sufian, F. and Habibbullah, M.S., 2009. Bank Specific and Macroeconomic Determinants of Bankprofitability: Empirical Evidence from the China Banking Sector. *Frontiers of Economics in China*, 4(2), pp. 274-291.

Trujillo-Ponce, A., 2013. What determines the Profitability of Banks? Evidence from Spain. *Accounting and Finance*, 53(2), pp. 561 -586.

Vong, P.I.A. and Hoi, S.C., 2009. *Determinants of bank profitability in Macao*, Macau *Monetary Research Bulletin*, No.12, pp. 93-113.

Wasiuzzaman, S., and Tarmizi, H., 2010. Profitability of Islamic banks in Malaysia: An empirical analysis. *Journal of Islamic Economics, Banking and Finance*, 6(4), pp. 53-68.

APPENDIX

Appendix 1: The Least Square Dummy variables (LSDV) estimation.

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-10.62443	2.790897	-3.806814	0.0002
C(2)	-1.272348	0.566626	-2.245480	0.0269
C(3)	0.040079	0.178213	0.224894	0.8225
C(4)	0.228545	0.090472	2.526142	0.0131
C(5)	-0.266615	0.139917	-1.905520	0.0595
C(6)	1.390011	0.606149	2.293185	0.0239
C(7)	0.038334	0.077761	0.492969	0.6231
C(8)	0.524602	0.229336	2.287484	0.0242
C(9)	0.100769	0.164731	0.611716	0.5421
C(10)	1.910926	0.599499	3.187537	0.0019
C(11)	-0.205403	0.242696	-0.846340	0.3993
C(12)	-0.437626	0.504198	-0.867965	0.3874
C(13)	1.085328	0.583927	1.858670	0.0659
C(14)	1.660428	0.478820	3.467746	0.0008
C(15)	1.493818	0.425260	3.512720	0.0007
C(16)	0.568239	0.434548	1.307654	0.1939
C(17)	0.875965	0.482159	1.816755	0.0722

Appendix. 2. Wald Test:
Equation: Untitled

Test Statistic	Value	df	Probability
F-statistic	9.824918	(8, 103)	0.0000
Chi-square	78.59935	8	0.0000