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DETERMINANTS OF BANKS' BOTTOM LINE: EVIDENCE FROM BENCHMARKING MALAYSIAN AND HONG KONG BANK

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ABSTRACT

The aftermath of 1997/1998 Asian-financial meltdown, witnessed a significant restructuring of banking sector, resulting in fewer but bigger conglomeration of banks in Malaysia. Banks are now challenged to raise profit to another level in order to be more resilient against any future financial onslaught. The need to learn from some of the world best banks should be explored. This empirical study therefore attempts to benchmark the determinants of banks' bottom line in Malaysia vis-à-vis attributes affecting viability of the same industry in Hong Kong. The domain of the study involves gauging the impact of firm's size, capital structure, liquidity, managerial efficiency, loans' size on bottom line enjoyed by banking sector in Malaysia and Hong Kong. The panel data are extracted from the 11 major banks, operating from each country in Malaysia and Hong Kong for period 2002 to 2011. The fixed effect panel found that, bank size, capital structure and loans to customers have strong impact on bank bottom line in Malaysia. In contrast, managerial efficiency improves profit margin in Hong Kong banking sector.

Keywords: Banking Sector; Benchmarking; Bottom Line Determinants.

1. INTRODUCTION

1.1. Background

The impact of the Asian financial turmoil in the late 1990s did not spare Malaysian banks. Certainly the post Asian financial crisis has forced the authorities in Malaysia to initiate a far-reaching financial reform in the banking system. A ten year Financial Sector Master Plan covering 2001-2010, led by the Bank Negara Malaysia (BNM), and a corresponding Capital

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Market Master Plan (CMP1) led by Securities Commission (SC), were formulated to support the restructuring of the financial system, incorporating a strong regulatory and supervisory framework (International Monetary Fund, 2013). The local banking sector went through considerable consolidation. From a small-sized, loosed and fragmented organization of banks and finance companies, the number of domestic commercial banking group had been reduced from 22 in 1986 to 8 only in 2011. Finance companies were merged into commercial banking groups while discount houses, securities firms and merchant banks were consolidated into investment banks with a view that the consolidation would lead to cost rationalization and enhanced competiveness. There is a need to have effective regulatory and supervisory regimes for banking, insurance and securities. Banking institutions should develop and exhibit a high degree of compliance with the international standard of the financial institution system. The transformed and strengthened financial sector would be expected to cushion the impact of any future financial crisis.

Certainly, banking and financial services have been the mainstay of Malaysian service economy. This sector has been contributing significantly to the national economy growth and income, and to a great extent provision of jobs and employment. Growth in the banking, finance and business sector surged from 4.7 percent in 2003 to 14.9 percent in 2007, the highest growth rate recorded among all the services sectors in Malaysia (Department of Statistic, 2007). Contribution to Gross Domestic Product from banking and finance services shows marked increase. Banking and finance services accounted for 2.6 to 4.3 percent of the nation Gross Domestic Product (GDP) from 2003 to 2007 respectively (Public Bank, 2008). In 2011, it accounted for a total work force of 317,600 of the total work force of 12.8 million employed in the country (Department of Statistic, Malaysia, 2011). Reports from International Monetary Fund (2013), find that Malaysia's financial sector is well diversified and its banking, insurance and capital market intermediaries had gross assets worth, which accounted for 400 percent of its GDP as at end of 2011, and out of this 50.16 percent comes from banking intermediaries. The above statistics speak volume for itself, reflecting an increasing and vital role of banking industry to the Malaysian economy.

1.2. Malaysian Banking Sector

The development of banking industry in Malaysia in the 1900s emerged from a humble beginning. At the initial stage, the economic activities were mainly focusing on the rubber plantation and tin industry. Once the latter two activities thrived, there was a need for banking and financial service. Malaysia's first domestic bank was Yik Banking Corporation with its establishment in the state of Selangor in 1913. Since then, the banking industry in Malaysia continued to grow steadily and rapidly. Given an accelerated development of banking industry, a governing body was required to oversee and facilitate various banking activities and operations banks in the country. Thus, it led to the establishment of Bank Negara Malaysia (BNM) in Malaysia, as a regulatory and governing body. It is a statutory body which is wholly-owned by the Federal Government. The constitution, function and powers of Bank Negara are vested in the Central Bank of Malaysia Act 1958, with the objective of fostering fiscal stability in the financial structure of the banking industry in the country. It also acts to support banks in their effort to achieve more effective governance, managing reserves and

banks currencies and all other matters pertinent to bank financial position (BNM, 2012). Banking sector plays an important role in financial intermediary as it is not only providing continued finance accessibility, but also serves to disperse the concentration of risk in the financial system. It also serves as a primary source of financing for the domestic economy of which it accounted for about 70% of the total assets of the financial system by the end of 1999. In the post Asian financial crisis 1997/1998, there was a successful consolidation of banking sector in the country, thus witnessing a stronger and healthier balance sheet of the households and corporate sector. Mergers have led to the emergence of a strong banking and financial groups as well as capital market intermediaries, which are now able to expand into neighboring markets. Operating profit is on the rise among banking sector in Malaysia, and the trend is expected to be sustainable. The International Monetary Fund (2013) reported that the Malaysian banking sector has Return on Equity (ROE) and Return on Assets (ROA) which are above the reported average return of 15 percent enjoyed by other Asian regional banking institution, but still below the ROE and ROA earned by banking sectors operating in Hong Kong and China. Despite a good respite, there is another area of concern in Malaysia, as there is a potential dilution of the banking sector profitability and bottom line. One of those areas is the continued rise of mortgage loans given out to borrowers, representing the growth of these loans from RM150 billion in 2006 to RM230 billion in 2011. If it is not managed properly, it may have a negative impact on the banking sector bottom line.

1.3. Hong Kong banking sector

Hong Kong has been regarded as one of the highest concentrations of banking institutions in the world, with an approximately 70 out of the largest 100 banks in the world, are located and operating in Hong Kong (Hong Kong Monetary Authority, 2012). At the end of February 2012, there were about 198 authorized institutions and 60 representative offices in Hong Kong. Hong Kong is chosen as a key financial center for its high standard of market transparency and disclosure with prudently supervised financial institutions. Based on the Global Financial Centers Index (GFCI) reported in London on September 2011, Hong Kong was ranked number three. In the World Economic Forum's 2011 Financial Development Report, Hong Kong was topped on the Financial Development Index, surpassing New York and London. Hong Kong has not only risen as a premier offshore Renminbi (RMB) center, but has also led in the Asian region cities for being the top global network connectivity (Taylor et al, 2013). The International Monetary Fund (2013) report showed that banking institutions in Hong Kong and China top the regions in Asia with the highest Average Return on Assets and Return on Equity. Such is the track record displayed by banking sector in Hong Kong.

1.4. Problem statement

Banking sector bottom line is a common term to reflect bank's profitability, which is essential for banking institution to continue to operate as a going concern. A profitable bank fosters confidence among customers who perceive that a financially strong bank should have no problem in providing out cash loan or acting as commercial custodian to customers' deposits and investments. Given the responsibility, the banking sector plays an important role to accept and keep the depositors money safely. The money deposited by individuals and organizations would be re-invested or lent out with the potential to generate more returns to bank. It is

imperative that banking sector to a country is competitive, profitable and is strategically important, and there is no exception in Malaysia. Despite having a ROE and ROA above the average return in other Asian regions besides Hong Kong and China, banking sectors in Malaysia are encouraged not to sit on its laurel. It should continue to improve and strive for the best operating strategy and whenever possible should make an effort to benchmark against a country which is noted for its competiveness and profitability in their banking operation. The general determinants of bank profitability such as firm size, firm capital structure, firm liquidity, managerial skill as well as loan and advances to customers are commonly recognized. Exploring other methods or new ways of improving profitability should be encouraged. While the extant factors are considered to be common variables fueling firms' profitability, the researcher would like to find out if these factors are still applicable to banking sector in Malaysia and Hong Kong. In a global environment, banks have to take advantage of any opportunity that will give them the cutting edge in order to remain competitive and viable. Certainly, by being able to understand how the determining factors could impact bank profitability, bank managers may be able to take relevant measures and necessitate appropriate decision making, in order to drive the company towards achieving a higher level of profit, as shown by banking sector in Hong Kong. Furthermore, the bank's owner and the policy maker can reassess, regulate and reform operational and management strategy in order to maximize revenue and profit. Given the complexity of banking environment, the banks today are not only expected to confine themselves to depositing and lending activities but also to indulge and explore other related activities to improve bottom line. Certainly, some of these profit seeking activities may expose the banks to high risks of huge non-performing loans and business failure. Banking sectors from other regions whose profitability level is still low should look up at how banking operations and activities are carried out in Hong Kong. In the context of the above, benchmarking against banking operation in Hong Kong would provide evidence of the important determinants that have driven profitability to another level which is on par with the world best.

1.5. Objectives of the study

Even though, in general banks in Malaysia have been operating profitably, it is still behind in comparison to banks operation in Hong Kong. Given the status, bankers in Malaysia are motivated to bring about profitability to another level. Certainly the motivation behind this research is to benchmark and learn from Hong Kong environment about what really drive the profit in their banking operation to another level. A profitable bank provides more opportunity for banking growth and expansion. Not only would profitable bank has sufficient internal funds for growth, but they will be viewed upon as a more attractive option to potential investors. Many factors have been identified pertaining to bank characteristic and impact on its' profitability (Vong and Chan, 2009). Identifying and gauging these factors are imperative to bank managers who would associate their performance to bank profitability. Tracing back banking background in Hong Kong and Malaysia, it seems to inherit some elements of the Anglo-Saxon characteristic. While banking operation in Hong Kong has grown rapidly in size, and is intensively diversifying its operation, Malaysia is, by no means, has not been far left behind. Given this scenario, the banking activities in Malaysia should try to catch up and if possible, to identify some of the common determinants and subsequently to capitalize on some

of the primary determinants that are used in Hong Kong banking industry. By identifying the common factors, it would provide an opportunity to determine if the factors which contribute to bank profitability in one country may be applicable to another country.

In the context of the above, the main objective of the study is to benchmark the determinants of banking sector profitability in Malaysia against that of Hong Kong. This research will explore further to assess some specific objectives, which are as follows:

(a) to determine whether a firm size, capital structure, firm liquidity, managerial efficiency in managing expense as well as loan and advances to customers have any impact on bank profitability in Malaysia or in Hong Kong; and,

(b) to assess if there is a strong or weak relationship between firm size, firm capital structure, firm liquidity and management efficiency as well as loan and advances to customers with firm profitability in Malaysia or Hong Kong banking sector.

1.6. Significance of study

The outcomes of this research could be beneficial not only to the academia but also to bank managers and policy makers. Determinants of banks profitability in Malaysia and Hong Kong could be identified and monitored. Besides, the study on investigating determinant of banks profitability is useful to provide valuable information to relevant parties, such as the bank management and regulators which will guide them in the formulation of an efficient management policy. By benchmarking against some of the world best banks in Hongkong, all parties in the banking industry could learn and capitalize on the strength of how Hongkong banks are run and managed. The findings of the study could help the country's regulator to assess and evaluate the performance of banks while at the same time mapping out policies and regulation that would motivate bankers to maximize revenue and bottom line. The study would assist the bank's manager and owner in their strategic planning and decision making in order that the banking companies could continue to be viable and be able to operate as a going concern. While identifying determinants on bank profitability are developed, the management from the two banking regions may be given the opportunity to have a re-look at some variables that may or may not have negative impact on the banking profitability.

2. LITERATURE REVIEW

Certainly, it is the vision of each country Central Bank to see that banking organizations under their purview are operating profitably and would continue to operate as a going concern. As profitability is an important issue in this research, factors contributing to bank's bottom line should continue to be explored.

Determinant of bank' viability can be due to the effect of both internal and external factors. The internal factors which determine the bank performance include capital structure, bank size, liquidity, total loans, expenses management and asset quality. The other factors which are external in nature are micro-economic factors. It includes gross domestic product, inflation,

money supply and competition. All these factors are considered beyond the control of a bank's management. Rao and Lakew (2012) found that the most determinants of bank profitability in Ethiopia are the internal factors. The finding is consistent with the research outcomes from Alexiou and Sofoklis (2009), which suggested that the bank-specific factors are found to significantly affect bank profitability. Vong and Chan (2009) highlight on Macao banking industry, that capital structure (internal factor) and rate of inflation (external) seem to have impact on banks' performance. Firm capital structure indicates how the acquisition of fixed assets and the day to day running of business operations are being financed. Sayilgan and Yildirim (2009), opined that profitability seems to have been positively affected by capital adequacy (equity to asset ratio) in broad terms and negatively influenced by growing off-balance sheet assets. Macit (2012) posited that equity to total assets ratio has a positive impact on ROA but negate on ROE. In a panel of US banks from period 1995-2007 Hoffmann (2011) reported a negative link between the capital ratio and profitability.

A firm size can be measured by the value of its total assets or the net worth of its internal funds. Flamini, Mcdonald and Schumacher (2009) found that the firm size has positive and significant impact on commercial bank profitability in the Sub-Saharan African region. This result seems to suggest that larger banks are more efficient and profitable. The findings are consistent with a study conducted by Haron (2004) on bank size and profits Islamic banking showing significant relationship. Besides, Idris et al. (2011) also discovered evidence of significant relationship between the bank size the profitability of Islamic bank in Malaysia from 2007 to 2009. However, reports from Aburime (2008) on bank profitability in Nigeria, and a paper by Sufian and Chong (2008) on Philippines banks, found empirical evidence of negative relationship between profitability and bank size.

A bank which has high volume of liquid assets may have not taken advantage of its strong liquid asset position to provide loans and advances to customers. Excess liquid may be associated with idle cash or non-profit generating assets. Ayadi and Boujelbene (2012) find from Tunisian banks deposits that there is no evidence to support the bank which is financially liquid would impact significantly on bank profitability.

Another expgenous variable that has been identified to have influenced bank's bottom line is its managerial efficiency. One way of measuring managerial efficiency is to evaluate management cost effectiveness in managing expenses. A bank manager may achieve targeted sales revenue and targeted income, but at the expenses of incurring more expenditure. In this case, rising operating cost may negate rising revenue and may exert downward pressure on bank bottom line. Bodla and Verma (2006) papers on public sector banks in India for period from 1991-92 and 2003-04, find that managing operating expenses effectively has positive impact on net profit. The finding is quite consistent with Davydenko (2010) on bank profitability in Ukraine, and another study by Ramadan, Kilani and Kaddani (2011) on Jordanian Islamic banks which seem to suggest that managing expenses effectively well has significant impact on profitability.

Finally, loans and advances to customers can be both in the short or long term, and providing this facility has been the primary activity of the bank. Naceur (2003) discovers that Tunisian bank profit would tend to rise when more loans or advances are given out to borrowers.

3. METHODOLOGY AND FINDINGS

A panel analysis is conducted, involving data extraction from a span of ten years (2002 TO 2011) of banking and operating activities of 11 banks in Malaysia and Hong Kong, including foreign based banks. The period from 2002 to 2011 is chosen in order to observe the impact of the 10 years financial sector master plan (2001-2010) and the parallel Capital Market master plan (CMP1) for the same period on Malaysian banking industry. The two master plans highlight the need for a stronger regulatory and supervisory framework. The industry data are collected from the Bank Negara Malaysia, annual reports of each bank, Yahoo, Hong Kong and the International Monetary Fund Annual Reports.

3.1. Conceptual framework

Table 1: Summary of Exogenous and Exogenous variables

	Proxy
Endogenous Variable:	
Banking Profitability (Bottom Line)	Return on Assets (ROA), which is NPBT/ Total Assets
Exogenous Variables:	
Asset size	Natural logarithm of total assets
Capital structure	Equity / total assets
Liquidity	Net cash flow from operating expenses / total assets
Managerial efficiency on managing expense	Operating expenses / total assets
Loan amount	Natural logarithm of loan and advances to customers

From the above table 1, a panel model has been developed that $ROA_it = \alpha + \beta 1 LgBkSize_{it} + \beta 2 Cap_{it} + \beta 3 Liq_{it} + \beta 4\ Ex_{it} + \beta 5\ LgLoan_{it} + \varepsilon_{it}$, where ROA_it is for profitability; $\beta 1 LgBkSize_{it}$ is for large bank size; $\beta 2 Cap_{it}$ is for Capital Structure; $\beta 3 Liq_{it}$ is for Liquidity assets; $\beta 4\ Ex_{it}$ is for managerial efficiency on managing expenses; $\beta 5\ LgLoan_{it}$ is for Loan size, and finally ε_{it} is for error term.

According to Alper and Anbar (2011), Return on asset (ROA) and Return on Equity (ROE) are used as endogenous variables to measure banks profitability. However, Flaimini, Mcdonald and Schumacher (2009) argued that ROA is a better proxy than ROE to determine bank's profitability. Furthermore, ROE has discounted the potential significance of the financial leverage (Wasiuzzaman & Tarmizi, 2010). In the light of this, ROA is finally chosen over ROE to measure firm's bottom line or profitability. Five exogenous variables have been adopted as common determinants for benchmarking affecting bank profitability in Malaysia and Hongkong. The five variables are firm capital structure, firm size, firm liquidity and managerial efficiency on management of expenses as well as loans and advances to customers.

First, firm capital structure is used to determine banks' profitability. This is because it can represent how well the bank has capitalized its financial system. It can be measured using

total equity to total asset ratio. Athanasoglou, Brissimis and Delis (2008) suggested that a well-capitalized bank is predicted to be safer. Abreu and Mendes (2002) posited that a well-capitalized bank with lower risk could bring about improved income. Second, total asset of a bank will be used to measure bank size to determine banks' profitability. The economies of scale theory outlines that an aggregated bank size is expected to have a positive significant impact on banks' profitability. A larger bank can potentially earn more, as it strategizes on its cost advantage, by minimizing its average unit cost as services or productions increase (Alper & Anbar, 2011). However, Javaid et al, (2011), are more cautious as they found that total size does not necessarily bring about incremental profit. Third, the net cash flow from operating activities to total assets will be used to represent bank liquidity to determine firm's profit. Excess liquidity means a bank is holding more cash and lending less money to the public. Therefore, it reduces the bank potential to harness more profit. Certainly, minimum liquid assets must be held for precautionary obligations and contingencies. On another note, low liquidity indicates that the bank has lent out more in order to maximize returns. Third, is the managerial efficiency on managing firms operating expenses in order to achieve a certain level of profit, and the relationship will be observed between usages of operational cost and banks' profitability. An accounting equation theory regards expenses as an operating asset, which must be spent now to generate future income. However, the impact of expenses on banks' profitability can be either positive or negative (Wasiuzzaman and Tarmizi, 2010). If a bank is able to transfer its operational cost to their customer, it means that it has positive impat on banks profitability. Other researchers such as Molyneux and Thornton (1992) suggested that higher operating expenditures could bring about improved profitability as expenses have been positively transferred to customers. Finally, is the loan amount, which is either in the form of outright loans or advances given out to customers, in order to earn interest return that will contribute to firm's profit. Naceur (2003) found that increase in total loan increase banks profitability. This claim had been argued against by Fraser and Rose (1971) suggesting that the relationship between loan amounts and banks' profitability can either be significantly positive or negative.

The three advanced panel regression which were used to analyze the data are; First, the Pooled Ordinary Least Square (Pooled OLS), where *Roai*t is a function of $\alpha + \beta 1 LgBkSize$ it + $\beta 2 Cap$ it $\beta 3 Liq$ it + $\beta 4$ *Ex* it + $\beta 5$ *LgLoan* it + εit;

Second, the Random Effect (RE) Model, where *Roai*t is a function of $\alpha + \beta 1 LgBkSize$ it + $\beta 2 Cap$ it $\beta 3$Liq it + $\beta 4$ *Ex* it + $\beta 5$ *LgLoan* it + λi + *Uit,* when εit is decomposed into λi (individual or specific effect that has been excluded from the model and *Uit* (the remainder disturbance); and

Third, is the Fixed Effect (FE) Model, where Roait is a function of $(\alpha + \lambda i) + \beta 1 LgBkSize$ it + $\beta 2 Cap$ it $\beta 3 Liq$ it + $\beta 4$ *Ex* it + $\beta 5$ *LgLoan* it + *Uit.*

The choice of appropriate model from the three approaches of Pooled OLS, RE and FE was carried out by first, the Breusch and Pagan Lagrangian Multiplier

(LM) Test, $\frac{NT}{2(T-1)}\left[\frac{\sum_{i=1}^{N}\left(\sum_{t=1}^{T}\hat{\Sigma}_{it}\right)^2}{\sum_{i=1}^{N}\sum_{t=1}^{T}\hat{\Sigma}^2_{it}}-1\right]^2$ which has helped to discriminate between a random effects regression and a Pooled OLS regression. The null hypothesis in the LM test is that variance across entities is zero, H_0: $\sigma^2_\lambda = 0$ where the alternative hypothesis is H1: $\sigma^2_\lambda \neq 0$.

Second, by means of Hausman test, $\left(\hat{\beta}_{fe}-\hat{\beta}_{re}\right)^1\left(\hat{\beta}_{fe}-\hat{\beta}_{re}\right)^{-1}\left(\hat{\beta}_{fe}-\hat{\beta}_{re}\right)$, is to decide between RE or FE model. The test is to determine if the country specific effects are correlated or uncorrelated with the regressors. The random effect estimator will deliver a consistent estimator that is efficient, otherwise it will be biased. Thus, there is a need to test for inefficiency as a result of the fixed effect estimator that has used only the within variation. In this case the hypothesis is developed;

The null hypothesis is H_0: $Cov\ (\lambda_i, x_{it}) = 0$, where the alternative H_1: $Cov\ (\lambda_i, x_{it}) \neq 0$.

Table 2: Summary of Panel Data Analysis for Malaysia Banks

Dependent Variable: ROA	Pooled OLS Model	Random Effect Model	Fixed Effect Model
Constant	-0.0834	-0.127753	-0.171428
	(-3.945674)***	(-4.310834)***	(-3.903261)***
LgBkSize	0.014649	0.029444	0.03489
	(2.200474)**	(4.153616)***	(4.492123)***
Cap	0.253022	0.304497	0.327256
	(5.564451)***	(7.203771)***	(7.335471)***
Liq	0.000373	0.000544	0.000466
	(0.083069)	(0.143116)	(0.121907)
Ex	0.08017	0.107392	0.115487
	(1.179212)	(1.829958)	(1.934311)
LgLoan	-0.010917	-0.023855	-0.027063
	(-1.727320)	(-3.439425)***	(-3.362948)***
Breusch Pagan LM Test		27.29 (0.0000)***	
Hausman Test		11.37 (0.0445)**	
Observation	110	110	110

Notes: Figures in the parentheses are t-statistics, except for Breusch-Pagan LM test and Hausman test. ** and *** indicate the respective 5% and 1% significance levels.

Table 3: Summary of Panel Data Analysis for Hong Kong Banks

Dependent Variable: ROA	Pooled OLS Model	Random Effect Model	Fixed Effect Model
Constant	0.001298	0.019665	0.079402
	(0.135828)	(1.438393)	(3.505174)***
LgBkSize	0.002916	0.000919	-0.002237
	(1.881608)	(0.595036)	(-1.236324)
Cap	0.033113	0.037825	0.034727
	(1.543687)	(1.871295)	(1.666598)
Liq	0.001813	0.005545	0.003243
	(0.207915)	(0.755808)	(0.435533)
Ex	0.599886	0.507609	0.402055
	(4.639468)***	(3.606494)***	(2.634767)***
LgLoan	-0.002303	-0.001298	-0.001304
	(-1.430793)	(-0.866174)	(-0.844279)
Breusch Pagan LM Test		23.85 (0.0000)***	
Hausman Test		11.28 (0.0462)**	
Observation	110	110	110

Notes: Figures in the parentheses are t-statistics, except for Breusch-Pagan LM test and Hausman test. ** and *** indicate the respective 5% and 1% significance levels.

When the process of discriminating among the three different models, Pooled OLS model, the RE model and the FE model was carried out, it was observed that both Breusch and Pagan LM test in table 2 and table 3 (chi ² value of 27.29 or p=0.0000<0.01 and chi² value of 23.85 or p = 0.0000<0.01 respectively,) has failed to accept the null hypothesis that H_0: $\sigma^2_{\lambda} = 0$, suggesting that there is variance across entities, and Hausman tests in table 2 and table 3 (chi² of 11.37 or p=0.0445 < 0.05 and chi² of 11.28 or p = 0.0462 <0.05 respectively,) has failed to accept the null hypothesis that, H_0: $Cov\ (\lambda_i, x_{it}) = 0$, suggesting that there is a covariance between firm specific effect and regressor term . The OLS pooled and RE models are both found to be inefficient, implying that the FE Model in this context seems to be the best fit.

The FE panel for Malaysian banks seems to suggest that banking institution profitability is influenced by the bank size (t value significant at 4.49), that for every one unit increase in firm size improves income by 3 percent; capital structure denoted by internal funds (t value significant at 7.34), that for every one unit increase in internal fund would improve income by 32 percent; loan size (t value = - 3.36), that for every one unit decrease in loan would improve income by 2.7 percent, reflecting that increase loans may potentially exposing banks to more provision for non-performing loans to be written off against bank profit and loss. The FE panel for Hongkong banks finds that managerial efficiency in managing company expenses is the most likely important component with t value significant at 2.63 or significant at 99 percent confidence level. For every one dollar spent on expenses, trigger revenue generation, which is consistent with accounting theory of incurring expenses as operating assets today, in order to reap potential economic benefits in the future. This is quite consistent with accounting

theory that is well supported by Molyneux and Thornton (1992) and Wasiuzzaman and Tarmini (2010), that there is a positive transfer of valued added cost to customers to generate incremental profit.

Table 4: Correlation matrix result for Malaysian Banks

Correlation Probability	ROA	LgBkSize	Cap	Liq	Ex	LgLoan
ROA	1					
LgBkSize	0.2890***	1				
	0.0022					
Cap	0.4753***	0.105	1			
	0.0000	0.275				
Liq	0.0478	0.1347	-0.0114	1		
	0.6202	0.1606	0.9062			
Ex	0.0627	-0.1389	0.0212	0.0234	1	
	0.5152	0.1478	0.8257	0.8083		
LgLoan	0.2685***	0.9868***	0.1151	0.1218	-0.1266	1
	0.0046	0.0000	0.231	0.2048	0.1876	

Note: Significance levels: *10%, **5%, ***1%

Table 4 provides correlation matrix for the sample of 110 observations in Malaysia banks. In this result, bank size (0.2890), capital structure (0.4753) as well as loan and advances to customers (0.2685) lie on the value between +2 and +5. The data indicates that there has strong and positive relationship on profitability (ROA). On the other hand, the firm liquidity (0.0478) and managerial efficiency on managing expense (0.0627) lies on the value +0 and +1. It means that the relationship exogenous and endogenous variable is positively weak. An evaluation of significant level will be conducted by formulating a hypothesis which is shown as below:

Ho : The exogenous variables have no significant correlation with the endogenous variable.
H*a* : The exogenous variables have significant correlation with the endogenous variable.

A p-value of more than 0.01, 0.05 or 0.10 would not fail to reject Ho. Subsequently, the next step is to accept the alternative hypothesis, which indicates that the exogenous variables have significant correlation with the endogenous variables. With large bank size ($p = 0.0022<0.01$), capital structure ($p = 0.0000<0.01$) as well as loan and advances to customers ($p = 0.0046<0.01$) are statistical significant at 1% level, it is found that bank size, capital structure and loans or advances given out to customers have significant correlation with profitability (ROA).

Table 5 provides correlation matrix for the sample of 110 observations in Hong Kong banks. The results show that the firm liquidity (0.2060) and managerial efficiency on managing expense (0.4831) lies on the value between +2 and +5, indicating, a relatively and positively strong relationship with the bank profitability (ROA). Other variables, like bank size (0.0249), capital structure (0.0481) as well as loan and advances to customers (0.0089) lie on the value +0 and +1 have weak relationship with level of bank profitability.

Table 5: Correlation matrix result for Hong Kong Banks

Correlation Probability	ROA	LgBkSize	Cap	Liq	Ex	LgLoan
ROA	1					
LgBkSize	0.0249	1				
	0.7963					
Cap	0.0481	-0.6828 ***	1			
	0.6176	0.0000				
Liq	0.2060 **	-0.0261	0.0445	1		
	0.0308	0.7864	0.6439			
Ex	0.4831***	-0.1266	0.1443	0.1673*	1	
	0.0000	0.1876	0.1325	0.0806		
LgLoan	0.0089	0.9793***	-0.7046***	-0.0108	-0.1328	1
	0.9269	0.0000	0.0000	0.9112	0.1667	

Note: * Significance levels: *10%, **5%, ***1%

Since firm liquidity ($p = 0.0308 < 0.05$) and effective management of expense ($p = 0.0000 < 0.01$) are statistically significant at 5% and 1% level respectively, there is evidence that liquidity and managerial efficiency on managing expenses have significant correlation with bank's income or bottom line.

4. CONCLUSION

The research has been conducted with an objective of trying to identify what are the determinants of banking bottom line, a common term for profitability in order for both companies in Malaysia and Hong Kong to continue to operate viably and as going concern. With the BNM and Security Commission of Malaysia initiatives in reforming the banking sector under the 10 year master plan (2001-2010), identifying factors contributing to bank profitability is worth researching. It is also timely for bank in Malaysia not only to look at how the banks operate in the local environment, but should continue to move forward seeking new methods of moving profitability to another level. Benchmarking Malaysian banks against banks in Hong Kong serves to provide other ways of driving profit level to a new height. The study has discovered interesting findings. While banks in Malaysia have depended on firm and loan size and increasing components of internal funding (equity), banks in Hong Kong are looking at improving the managerial efficiency especially in the area of managing expenses by passing over, perhaps increasing value added costs to customers. Managing cost in Hong Kong has been consistent with the accounting theory of treating expenses as operating assets in order to reap future economic benefits.

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REFERENCE

Abreu, M., & Mendes, V. (2002). *Commercial bank interest margins and profitability: Evidence from EU countries.* University of Porto Working Paper Series No.245.

Aburime, U. T. (2008). Determinants of bank profitability: Industry level evidence from Nigeria. *International Journal of Nigerian Studies and Development, 14,* 21-34.

Alexiou, C., & Sofoklis, V. (2009). Determinants of bank profitability: Evidence from the Greek banking sector. *Economic Annals, 182,* 93-118.

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

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

Ayadi, N., & Boujelbene, Y. (2012). The determinants of the profitability of the Tunisian deposit banks. *IBIMA Business Review,* 1-21.

Bank Negara Malaysia. (2012). *Annual Report 2012.* Kuala Lumpur: Strategic Communication Department, Bank Negara Malaysia.

Bodla, B. S., & Verma, R. (2006). Determinants of profitability of banks in India: A multivariate analysis. *Journal of Service Research, 6*(2), 75-90.

Davydenko, A. (2010). Determinants of bank profitability in Ukraine. *Undergraduate Economic Review, 7*(1), 1-31.

Department of Statistic, Malaysia (2007). *Malaysian National Accounts*. Department of Statistic, Malaysia.

Department of Statistic. (2011). Labor Force Survey Report, Department of Statistic, Malaysia.

Flamini, V., Mcdonald, C., & Schumacher, L. (2009). *The determinants of commercial bank profitability in Sub-Saharan Africa.* IMF Working Paper WP/09/15

Fraser, D. R., & Rose, P. S. (1971). More on banking structure and performance: The evidence from Texas. *Journal of Financial and Quantitative Analysis, 6,* 601-611.

Haron, S. (2004). Determinants of Islamic bank profitability. *Global Journal of Finance and Economics, 1*(1), 1-22.

Hoffmann, P. S. (2011). Determinants of the profitability of the US banking industry. *International Journal of Business and Social Science, 2*(22), 255-269

Hong Kong Monetary Authority. (2012). Annual Reports 2012, Presence of world's largest 500 banks in Hong Kong. HK: Hong Kong Monetary Authority

Idris, A. R., Asari, F. F. A. H., Taufik, N. A. A., Salim, N. J., Mustaffa, R., & Jusoff, K. (2011). Determinants of Islamic banking institutions' profitability in Malaysia. *World Applied Sciences Journal 12 (Special Issue on Bolstering Economic Sustainability),* 1-7.

International Monetary Fund. (2013). *Malaysia: Financial Sector Stability Assessment.* IMF Country Report No. 13/52. Washington DC: International Monetary Fund.

Javaid, S., Anwar, J., Zaman, K., & Gafoor, A. (2011). Internal factor analysis of bank profitability. *Mediterranean Journal of Social Science, 2*(1), 59-78.

Macit, F. (2012). Bank specific and macroeconomic determinants of profitability: Evidence from participation banks in Turkey. *Economics Bulletin, 32*(1), 586-595

Molyneux, P., & Thornton, J. (1992). Determinants of European bank profitability: A note. *Journal of Banking and Finance, 16*(6), 1173-1178.

Naceur, S. B. (2003). *The determinants of the Tunisian banking industry profitability: panel evidence.* Paper presented at the Economic Research Forum (ERF) 10th Annual Conference, Marrakesh-Morocco.

Public Bank Berhad. (2008). Malaysia: Services sector to lead economic growth. *Public Bank Economic Review,* 4-6.

Ramadan, I. Z., Kilani, Q.A., & Kaddumi, T. A. (2011). Determinants of bank profitability: Evidence from Jordan. *International Journal of Academic Research, 3*(4), 180-191

Rao, K. R. M., & Lakew, T. B. (2012). Determinants of profitability of commercial banks in a developing country: Evidence from Ethiopia. *International Journal of Accounting and Financial, 2*(3), 1-20.

Sayilgan, G., & Yildirim, O. (2009). Determinants of profitability in Turkish banking sector: 2002-2007. *International Research Journal of Finance and Economics, 28,* 207-214

Sufian, F., & Chong, R. R. (2008). Determinants of bank profitability in a developing economy: Empirical evidence from the Philippines. *Asian Academy of Management Journal of Accounting and Finance, 4*(2), 91-112.

Taylor, P., Derudder, B., Hoyler, M. Ni, P., & Witlox, F.(2013). City-dyad analyses of China's integration into the world city network. *Urban Studies,* 1-15.

Vong, A. P. I., & Chan, H. S. (2009). Determinants of bank profitability in Macao. *Macau Monetary Research Bulletin, 12*(6), 93-113

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