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Financing in Islamic Banking Scheme: Performance and Effect on Malaysian Output

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Abstract

The Islamic banking system is gaining momentum. Many conventional banks have started to open branches which operate in accordance with the Islamic Sharia'h principles under Islamic banking scheme (IBS) worldwide, including Malaysia. The Islamic banking system is expected to face strong competition not only from the Islamic banks but also from well-established conventional banks offering Islamic products and services. It directly influences output growth for those countries offering products and Islamic banking service. The general objective of this study is to analyze the financing supply in Islamic banking scheme: performance and effect on output in Malaysia during the period of 2003-2009. This study will use an empirical model and panel of state-level data to test whether changes in bank financing supply affect output. In this study, a general production function is used and for panel data, we have chosen the Im and Pesaran and Shin (1997; IPS hereafter), which are based on the well-known Dickey-Fuller procedure. For long-run relationship among real per capita GDP growth rates and the independent variables we used panel cointegration test with Fully Modified Ordinary Least Squares (FMOLS) Estimation. The tests suggested by Pedroni (1999, 2004). We can conclude that the result, financing in Islamic banking scheme in selected sectors in Malaysia has correlation and high significant level to output or GDP in Malaysia.

Keywords: Bank Financing, Islamic Banking Scheme (IBS), GDP.

1. Introduction

This study focuses on the Islamic banking scheme in Malaysia in the process of financings by sector. The study period covers 2003-2009 of the performance of Islamic Banking Scheme (IBS) instituted on March 4, 1993 and effect on output in Malaysia. The study embraces on conventional banks participating in the Islamic Banking Scheme (IBS) to the extent of data availability. The introduction of the interest-free or Islamic Banking Scheme (*Skim Perbankan Tanpa Faedah*) in Malaysia on March 4 , 1993 was premised on a dual banking system; a full-fledged Islamic banking system operating on a parallel basis with a sophisticated conventional banking system. So far, Malaysia is the only country to succeed in operating the two systems work on a parallel basis as these both types of financial systems utilize essentially the same set of banking infrastructure. This has significant implications in terms of the cost and speed of implementing the Islamic banking system.

Information concerning the operations of Islamic banks and conventional banks participating in the Islamic Banking Scheme (IBS) of Malaysia is mainly based on official documents presented in various issues of the concerned bank's annual reports and other publications. Data for this study are gathered from the Bank Negara Malaysia's official web-site (http://www.bnm.gov.my) and from the annual financial reports of the concerned banks (from their web-sites, respectively) under investigation for the years 2003 through 2009. Other data sources include International Monetary Fund's International Financial Statistics (IFS), Malaysian International Islamic Financial Centre (http://www.mifc.com) and Department of Statistics Malaysia (http://www.statistics.gov.my).

Maintaining positive high rates of growth has been a major challenge to all countries. History has repeatedly shown that long-run economic growth tends to be interrupted by periods of economic instability or crises. Hence, this line of reasoning argues that phases of negative growth are often followed by phases of very rapid growth and vice versa. Thus, this is the natural result or phenomena of the fast economic growth that would likely be experienced all over the countries (Okposin and Cheng, 2000).

Financial sector also not exempted from interrupted by periods of economic instability. For example subprime mortgage crisis in US in 2008. But at the same time Islamic financial system is able to see a positive impact on the economy growth to replace the conventional financial system seem to have problems.

Berger and Udell (1998) discusses the growth cycle of the conventional financial system by different companies. They show that financial resources depend on the size, age and current information. Normally new companies and small companies have trouble raising funds from institutional sources. Firms with high growth potentials can

finance their expansion either by venture capital or by development credit offered by governmental organizations. Medium and large-sized firms that have a long track record and can provide acceptable physical collateral can get intermediate and long-term credit from institutional sources for setting up new plants. They can also obtain short-term operational credit from the same sources. In addition, larger established firms can borrow funds from the public by selling bonds.

In the case of profit-and loss-sharing (PLS) contract, Ahmed (2000) shows that the profits are divided between the company and the bank at an agreed ratio, there may be fraud to report lower profits so that companies can keep a larger share in the interest of the company itself.[4] He also explained that the problem can be solved through rewards / punishment mechanisms.

As argued by Abalkhail and Presley (1999), this implies that 'investors may be unable to predict future events in order to write complete contracts that specify each party's obligations in all contingencies'. The central problem is how one party can ensure that the counterparty delivers on promises or intentions. This may involve sanctions or creating incentive structures that align the interests of the counterparties.

Advocates of Islamic banking argue that many Islamic banks operate according the profit and loss sharing principle and that the profit-sharing contracts (equity) are the superior financial security to debt for many reasons including the risk-sharing properties of equity (Ebrahim and Safadi 1995). They also argue that by providing long-term financing to growth oriented-sectors of the economy, Islamic banks will promote growth in the Islamic countries (Chapra 1992, and Siddiqi 1983).

Islamic finance is a financial system, the fundamental aim of which is to fulfill the teaching of the Holly Quran, as opposed to reaping maximum returns on financial assets. The basic principle in the Islamic law is that exploitative contracts based on *Riba* (interest) that involve risk or speculation (*Gharar*) is unenforceable. However the Holly Quran contains no condemnation of morally acceptable investments that yield fair/ legitimate profits / social "added-value" (Siddiqi 1999)

Two more principles are fundamental to understanding Islamic finance. First, the Islamic law reflects the totality of Allah' (God's) commands that regulate all aspects of the life of a Muslim. Second, Islamic finance is directly involved with spiritual values and social justice. Under Islam, there is no separation of mosque and state or of business and religion (Nicolas 1994)

Despite the considerable development of Islamic banking sector, there are still limited studies focusing on the efficiency and performance of Islamic banks. Several studies that have been devoted to assess the performance of Islamic banks generally examine the relationship between profitability and banking characteristics. Bashir (1999) and Bashir (2001) perform regression analyses to determine the underlying determinants of Islamic performance by employing bank level data in the Middle East. His results indicate that the performance of banks, in terms of profits, is mostly generated from overhead, customer short term funding, and non-interest earning assets. Furthermore, Bashir (2001) claims that since deposits in Islamic banks are treated as shares, reserves held by banks propagate negative impacts such as reducing the amount of funds available for investment.

Only a few previous studies touching on Islamic banking financing schemes related to the impact on the output. This is because it is still considered a new thing in the world of Islamic finance. But there are previous studies that were only touched on a conventional financing for the financial sector and its effect on the output of a State by Christian Melzer (2007).

In Bernanke and Blinder's (1988) model of the bank lending channel, for example, a restrictive monetary policy leads to a decline in output through the interest rate channel. Apart from the interest rate channel, the bank lending channel takes effect; due to a reduction in bank reserves caused by the restrictive monetary policy, banks not only sell securities but also cut the financing supply as banks view financings and securities as imperfect substitutes, where upon bank-dependent borrowers reduce their expenditure.

Bernanke and Blinder (1992) also show that output, aggregate bank lending and bank security holdings decrease after a restrictive monetary policy shock in the US. This is interpreted by them as an indication of a bank lending channel's existence. Since the bank lending channel requires that banks do not regard financings and securities as perfect substitutes, both assets will therefore be reduced in the wake of a monetary tightening.

Kashyap and Stein (1995) turn their attention to bank size. Peek and Rosengren (1995) and Kishan and Opiela (2000) concentrate on the degree of capitalization. Stein (1995) and Kashyap and Stein (2000) turn to a bank's liquidity position. The financing supply functions are then estimated with panel econometric methods. All find evidence for a significant impact of monetary policy on financing supply for the US and distributional effects across banks according to the bank lending channel.

[4] In a survey of 23 banks, Khalil et al. (2000) found that fear of misreporting the outcome by the agent is the prime reason that prevents banks from adopting *mudaraba* financing contracts.

John (1998) in his past study find that shocks to money demand have large and statistically significant effects on the supply of bank financings, but financings have small, often negative and statistically insignificant effects on output. He uses a panel of state-level data to test whether changes in bank financing supply affect output. By using a panel of annual data on the U.S. states, he find that shocks to money demand have a large and statistically significant effect on financings. Upon instrumentation, however, shocks to the supply of financings have a generally small, often negative, and statistically insignificant effect on state personal income. Both results are robust to the choice of time period and cross-sectional unit.

Peek and Rosengren (1995a) have shown that bank lending declines after formal regulatory actions are imposed on banks. Kashyap et al. (1993) have found that the commercial-paper/financings 'mix' changes after innovations in monetary policy for a sample of small manufacturing firms. Kashyap and Stein (2000), using a very large panel data set, find that small, less liquid banks have a larger lending reaction than larger, better capitalized ones. Morgan (1993) finds that bank financings not under commitment decline with monetary policy innovations. Bernanke and Lown (1991) find, using a shorter but higher-frequency panel of state-level data than this paper, that the level of equity capital has some effect on the quantity of bank financings, although there is small relationship between banks' capital to asset ratios and state employment growth; this second finding is consistent with what is found here. However, Bernanke and Lown also find little evidence that the contraction in credit in 1990-91 is due to a shortage of funds, contrary to the results of this paper. This aspect of the lending channel has been particularly controversial, as Romer and Romer (1990) and others have claimed that banks can readily substitute other forms of finance for financings.

The results of previous literature review, we found that there is no study that specifically affect associated with Islamic banking scheme in connection with financings for the sector and its relationship to output or GDP. Therefore, there are some fundamental questions that arise after reviewing a brief literature on Islamic banking along with country-specific performance-related cases. How does Islamic Banking Scheme in financing by sector effect to output and perform? Although Islamic banking and finance has developed significantly in recent years, only very few studies have tackled these central questions. This study contributes to the literature by providing evidence on the performance of Islamic Banking Scheme (IBS) under conventional banks and effect to output in Malaysia over the period of 2003-2009 by using the panel data.

2. Methodology and Data

The study will utilize data from five conventional banks namely Alliance Bank, OCBC bank, Public Bank Berhad, HSBC Bank, and Ambank Berhad selected by using Islamic banking schemes and the analysis will use panel data techniques to investigate the relationship between performance of Islamic banking financing scheme for selected sectors and its impact on economic growth.

In this section, a simple model is set out that provides an organizing framework for thinking about the ways in which the elements and components of Islamic banking schemes (IBS): Financing by selected sectors (Agriculture, Manufacturing, Construction and Real Estate) affect growth. Therefore, we adopt the framework introduced by Hussin *et al.* (2009), Demetriades and Law (2006), and Hoeffler (2002). This study provides the production function below takes the standard neoclassical form with a minor modification.

The proposed empirical Model by equation (1) is as follows for the effect of components of financing by selected sectors on economic growth:

$$\ln Y_{it} = \beta_0 + \beta_1 \ln ag_{it} + \beta_2 \ln mf_{it} + \beta_3 \ln cs_{it} + \beta_4 \ln re_{it} + \varepsilon_t \qquad (1)$$

where Y is real GDP, ag is an aggregate financing of agriculture variables as a share of GDP, mf is an aggregate financing of manufacturing variables as a share of GDP, cs is an aggregate financing of construction variables as a share of GDP, re is an aggregate financing of real estate variables as a share of GDP, i is a cross-section data for banks referred to, and t is a time series data, ε is an error term. The constant is denoted β_0 while $\beta_1 - \beta_4$ are the coefficient show how much a one unit increase in each financing variable will affect the growth rate in output.

3. Results and Discussion

In this sub-section, there are two main issues will be determined, namely the existence of unit root problem and the inclusion of constant and constant plus time trend in the empirical equation for time series and panel data. For panel data method, results based on Im, Pesaran and Shin (IPS) test is presented.

As with standard cointegration tests it is important to know the stationarity properties of the data to ensure that incorrect inferences are not made. Testing for stationarity in panel data differs somewhat from conducting unit root tests in standard individual time series; these differences will be discussed as follows.

Conventional unit root tests like the ADF test have been found to have low testing powers (Coakley *et al*., 1996; Coakley and Kulasi, 1997; Oh *et al*., 1999). The failure to reject the null of a unit root in the data by the conventional ADF unit root test may be due to low testing power of the test. Panel unit root test have been found to have higher power than the individual unit root ADF tests. The panel unit root tests take into account both the cross-section and time series variations in the data and these increase the power of the tests due to the increased number of observations that are available in the panel setting.

In order to determine the presence of a unit root in a panel data setting and to confirm the results from the individual unit root ADF tests, we have used the panel unit test based on Im *et al*. (1997) procedure (IPS, respectively) on the panel data. The IPS and tests are constructed such that the null hypothesis tested is that all the series in the panel contain a unit root against the alternative that none of the series contain a unit root. Therefore although the test allows for heterogeneity in the panel, for example in lag order or the exact value for the autoregressive parameter, all the series must share the same stationarity properties.

During IPS test, one has to be particularly careful in selecting the lag length for the ADF tests, since underestimating the true number of lags may lead to lack of power. We also employed the Akaike's Information Criterion (AIC) in choosing the appropriate number of lagged differences term for the five tests statistics to compute our results. AIC is known for selecting the maximum relevant lag length (Shrestha and Chowdhury, 2005). McKinnon's tables provide the cumulative distribution of the IPS test statistics.

Table 1a and Table 1b report the results of the IPS panel unit root tests for the data on output (ln*Y*), agriculture (ln*ag*), manufacturing (ln*mf*), construction (ln*cs*) and real estate (ln*re*), for both the scenarios of constant and constant plus time trend term. The tests are run for the full sample of five conventional banks and over the period 2003 to 2009.

Table 1a, presents the results of the IPS panel unit root tests at level indicating that all variables are *I*(0) in constant and constant plus time trend of the panel unit root regression. These results clearly show that the null hypothesis of a panel unit root in the level of the series cannot be rejected at various lag lengths. Finally, we can said that Islamic banking scheme financing by selected sectors above are no correlation to output or GDP in Malaysia and therefore are fail to reject the null hypothesis of a unit root. The results of the panel unit root tests confirm that the variables are non-stationary at level.

Table 1 also presents the results of the tests at first difference for IPS tests in constant and constant plus time trend. We can see that for ln*gdp*, the null hypothesis of unit root test are rejected at 99 per cent critical value for constant and rejected at 90 per cent critical value for constant plus time trend. For ln*ag*, the null hypothesis of unit root test are rejected at 95 per cent critical value for constant and rejected at 90 per cent critical value for constant plus time trend. For ln*mf* and ln*cs*, the null hypothesis of unit root test is rejected at 99 per cent critical value for constant and constant plus time trend. For ln*re*, the null hypothesis of unit root test is rejected at 95 per cent critical value for constant and constant plus time trend. Hence, based on IPS and test, there strong evidence that all the series are in fact integrated of order one [I(1)].

We can conclude that the results of panel unit root tests (IPS) reported in Table 1b support the hypothesis of a unit root in all variables across banks, as well as the hypothesis of zero order integration in first differences. At most of the 1 per cent significance level, we found that all tests statistics in both with and without trends significantly confirm that all series strongly reject the unit root null. The presence of unit root in the variables also indicates that all the independent variables ln*ag*, ln*mf*, ln*cs*, ln*re*, and dependent variables (ln*gdp*) are in fact integrated of order one or are *I*(1) processed when the individual bank data were pooled together. The findings of a unit root on the variables in this study are consistent with the results of a number of previous studies such as Campbell and Perron (1991), McCoskey and Selden (1998), Macdonald and Nagayasu (2000), Lee and Chang (2006), and Al-Awad and Harb (2005). Given the results of IPS tests, it is possible to apply panel cointegration methodology in order to test for the existence of the stable long-run relation among the variables.

The next step is to test whether the variables are cointegrated using Pedroni's (1999, 2001, and 2004) methodology as described previously for the Model in equation (3.2). This is to investigate whether long-run steady state or cointegration exist among the variables and to confirm what Oh *et al*. (1999) and Coiteux and Olivier (2000) state that the panel cointegration tests have much higher testing power than conventional cointegration test. Since the variables are found to be integrated in the same order *I*(1), we continue with the panel cointegration tests proposed by Pedroni (1999, 2001, and 2004). Cointegrations are carried out for constant and constant plus time trend and the summary of the results of cointegrations analyses are presented in Table 2.

Table 2 shows that in constant level, we found that the Model indicates that 4 out of 7 statistics reject null by hypothesis of no cointegration at the 5 per cent level of significance.

Overall, results on the panel cointegration tests in the Model with constant level, however, show that independent variables do hold cointegration in the long run for a group of five banks selected with respect to real

per capita GDP. As indicated by the panel non-parametric (*t*-statistic = -6.98703) and parametric (*adf*-statistic = -26.48071) statistics as well as group statistics that are analogous to the IPS-test statistics, the null hypothesis of non cointegration is rejected at 5 per cent level of significance.

In the panel cointegration test for the Model with constant plus trend level, the results indicate that 3 out of 7 statistics reject the null hypothesis of non cointegration at the 5 per cent level of significance. It is shown that independent variables do hold cointegration in the long run for a group of five conventional banks with respect to real per capita GDP. However, since all the statistics conclude in favour of cointegration, and this, combined with the fact that the according to Pedroni (1999) the panel non-parametric (*t*-statistic) and parametric (*adf*-statistic) statistics are more reliable in constant plus time trend, we conclude that there is a long run cointegration among our variables in five conventional banks that used IBS: Financing by selected sectors.

Overall in Table 2, we found that most of the panel statistics are more reliable in constant compared to the panel statistic in constant plus time trend. As indicated by the panel non-parametric (*t*-statistic) and parametric (*adf*-statistic) statistics as well as group statistics that are analogous to the IPS-test statistics, the null hypothesis of non cointegration is rejected at the 5 per cent level of significance.

The previous section already confirmed that all variables in Model equations (1) are cointegrated. In other words, there long run equilibrium exists among the variables. This section discusses the estimated long-run equation. Following Pedroni (2000 and 2001), cointegrating explanatory variables for the data is estimated using the Fully Modified OLS (FMOLS) technique.

Dreger and Reimers (2005) pointed out that it is important to take note that the panel cointegration tests do not provide an estimate of the long run relationship. More or less, the cointegration vector should be common for the panel members, as fundamental economic principles are involved. Also, hypothesis testing is a critical issue. In fact, the asymptotic distribution of the OLS estimator depends on nuisance parameters. In a panel environment, this problem seems to be more serious, as the bias can accumulate with the size of the cross section. As Pedroni (2000) showed, the problem is amplified in a panel setting by the potential dynamic heterogeneity over the cross-sectional dimension. Specifically, as this dimension increases, second order biases could be expected to occur by the poor performance of the estimators designed for large samples as they are averaged over the panel's members. For this reason, the modified FMOLS methodology to make inferences in cointegrated panels with heterogeneous dynamics as the cross-sectional dimension becomes large even with relatively short time series (Al-Aswad and Harb, 2005).

In Table 3a for individual FMOLS results, all variables in the Model reported tests reject the null hypotheses at the 1 per cent and 5 per cent level of significance. While In Table 3b (panel group FMOLS) shows that all variables in the Model reported tests reject the null hypotheses at the 1 per cent and 5 per cent level of significance. The results for individual FMOLS to Public Bank show that the aggregate financing on agriculture and an aggregate financing on construction have positively affect growth meaning that there is a long run cointegration between the aggregate financing on agriculture and an aggregate financing on construction to economic growth. But increase in an aggregate financing on manufacturing and an aggregate financing on real estate will decrease in economic growth, which means that there is still a long run cointegration between an aggregate financing on manufacturing and an aggregate financing on real estate and economic growth.

For OCBC Bank an aggregate financing on real estate (ln*re*), it also rejects the null hypotheses of non cointegration and the coefficient is positive (refer Table 3a) and statistically significant at 1 per cent level. But an aggregate financing on agriculture (ln*ag*), an aggregate financing on manufacturing (ln*mf*), an aggregate financing on construction (ln*cs*) and the coefficient are negative and statistically significant at 1 per cent level. We conclude that results in Table 3a show that increase in an aggregate financing on real estate will increase in economic growth, which means that there is still a long run cointegration between an aggregate financing on real estate and economic growth. Increase in an aggregate financing on agriculture, an aggregate financing on manufacturing, an aggregate financing on construction will decrease in economic growth.

The estimates of the coefficient for the aggregate financing on agriculture (ln*ag*), an aggregate financing on manufacturing (ln*mf*), an aggregate financing on real estate (ln*re*) for Alliance Bank are positive (refer Table 3a) and statistically significant at the 1 per cent level. But an aggregate financing on construction (ln*cs*) is negative and statistically significant at the 1 per cent level. The results above show that the aggregate financing on agriculture, an aggregate financing on manufacturing and an aggregate financing on real estate positively affect growth meaning that there is a long run cointegration between the aggregate financing on agriculture, an aggregate financing on manufacturing and an aggregate financing on real estate and economic growth. Increase in an aggregate financing on construction will decrease in economic growth.

The estimate of AmBank, the coefficient for the aggregate financing on manufacturing (ln*mf*), an aggregate financing on real estate (ln*re*) are positive and statistically significant at the 1 per cent level. An aggregate

financing on agriculture (ln*ag*) and an aggregate financing on construction (ln*cs*) are negative and statistically significant at the 1 per cent level. We conclude that the aggregate financing on manufacturing (ln*mf*) and an aggregate financing on real estate (ln*re*) have strongest correlates of economic growth; which means there is a long run cointegration. But increase in the aggregate financing on agriculture (ln*ag*) and an aggregate financing on construction (ln*cs*) will decrease economic growth, meaning that there is still a long run cointegration between aggregate financing on agriculture (ln*ag*) and an aggregate financing on construction (ln*cs*) and economic growth.

For individual FMOLS in HSBC Bank, we found that there is a positive coefficient in the aggregate financing on manufacturing (ln*mf*), an aggregate financing on construction (ln*cs*) and statistically significant at the 1 per cent level. An aggregate financing on agriculture ($\ln ag$) and an aggregate financing on real estate (ln*re*) are negative and statistically significant at the 1 per cent level. The results in aggregate financing on manufacturing (ln*mf*), an aggregate financing on construction (ln*cs*) positively affect growth which means that there is a long run cointegration between the aggregate financing on manufacturing, an aggregate financing on construction and economic growth. Increase in the aggregate financing on agriculture (ln*ag*) and an aggregate financing on real estate (ln*re*) will decrease in economic growth.

Table 3b (panel group FMOLS) shows that the estimate of coefficient for five selected banks in an aggregate financing on real estate (ln*re*) and the estimate of the coefficient is positive and statistically significant at the 1 percent level. An aggregate financing on agriculture (ln*ag*), an aggregate financing on manufacturing (ln*mf*) and an aggregate financing on construction (ln*cs*) are negative and statistically significant at the 1 per cent level. We conclude that the aggregate financing on real estate and has strongest correlates of economic growth; which means there is a long run cointegration. But increase in the aggregate financing on agriculture, an aggregate financing on manufacturing (ln*mf*) and an aggregate financing on construction (ln*cs*) will decrease economic growth, meaning that there is still a long run cointegration between aggregate financing on agriculture (ln*ag*), an aggregate financing on manufacturing (ln*mf*), an aggregate financing on construction (ln*cs*) and economic growth.

4. Conclusions

Several important conclusions can be drawn from the study. Firstly, our general objective of this study is to analyze the financing supply in Islamic banking scheme: effect on output in Malaysia during the period from 2003-2009. From the results tests at first difference for IPS in constant and constant plus time trend, there are strong evidence that all the series are in fact integrated of order one. It is means all the independent variables ln*ag*, ln*mf* , ln*cs*, ln*re*, and dependent variables (ln*gdp*) are in fact integrated of order one. The findings of a unit root on the variables in this study also are consistent with the results of a number of previous studies such as Campbell and Perron (1991), McCoskey and Selden (1998), Macdonald and Nagayasu (2000), Lee and Chang (2006), and Al-Awad and Harb (2005). We can said that Islamic banking scheme financing by selected sectors (agriculture, manufacturing, construction and real estate) are correlation to output or GDP in Malaysia and therefore are success to reject the null hypothesis of a unit root.

Secondly, this study provides the impact of Islamic banking scheme: financings supply by sectors to the economic growth in Malaysia. The result that we can conclude is that there is a long run cointegration among our variables in five conventional banks that used IBS: Financing by selected sectors. In other words, there long run equilibrium exists among the variables. That means the Islamic banking scheme: Financing supply by sectors have a positive impact to the economic growth in Malaysia.

Thirdly, this study also provides performance in Islamic Banking Scheme (IBS): Financing ratio in sectors under selected conventional banks. When we refer to individual and group FMOLS results, we can conclude that performance in Islamic Banking Scheme (IBS) have correlation to output or GDP in Malaysia and therefore reject the null hypothesis of a unit root.

Overall, the regulator in Malaysia can provide more attractive financing product in Islamic banking scheme with increasing in marketing and full information about the financing product that provide by sectors in Malaysia. Central Bank Malaysia, as regulator also can provide a more comprehensive plan to ensure the supply of financings by various sectors, in line with the needs of government planning and the needs of world market today that are consistent with the increase output or GDP in Malaysia. Supply of Islamic banking scheme: Financing in various sectors also can be negative effect to output in Malaysia when customers do not get a clearly information about the free interest rate in Islamic financing and the use of branding is not clear to the consumer means.

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Table 1a: Panel Unit Root Tests: Level

Variable	Level		1st Difference	
	Constant	Constant + Trend	Constant	Constant + Trend
ln*gdp*	-0.71461 (0.2374)	2.69538 (0.9965)	3.74482*** (0.0001)	4.71298** (0.0566)
ln*ag*	0.09254 (0.5369)	-0.32062 (0.3742)	-1.80902** (0.0352)	4.12787* (0.0609)
ln*mf*	0.08536 (0.5340)	-0.92711 (0.1769)	-3.55749*** (0.0002)	-2.18594** (0.0144)
ln*cs*	-0.81846 (0.8025)	-1.84522 (0.2950)	-4.88986*** (0.0000)	-2.36179** (0.0091)
ln*re*	0.93112 (0.8241)	1.08799 (0.8617)	2.83410** (0.0474)	-4.93159** (0.0484)

Notes: ( ) Is Probability value. The lag length is chosen on the basis of the Akaike's Information Criteria (AIC) where we specify maximum lag order (k) in autoregression and then we select appropriate lag order according to the AIC. For IPS *t*-stat all reported values are distributed N(0,1) under null of unit root or no cointegration.

Table 2: Panel cointegration tests for heterogeneous panel (Dependent variable: real per capita GDP)

Statistic	Constant	Constant + Trend
Panel-*v*	-1.10499	-1.50280
Panel-*ρ*	1.82716	2.60163
Panel-*t*	-4.42301*	-4.03905*
Panel-*adf*	-3.90374*	-0.20472
Group-*ρ*	2.92591	3.57716
Group-*t*	-6.98703*	-5.75191*
Group-*adf*	-26.48071*	-11.05855*

Notes. All statistics are from Pedroni's procedure (1999) which is the adjusted values can be compared to the N(0,1) distribution. Panel v is a nonparametric variance ratio statistic. Panel-*p* and panel-*t* are analogous to the nonparametric. Phillips-Perron *p* and *t* statistics respectively. Panel-*adf* is a parametric statistic based on the augmented Dickey-Fuller ADF statistic. Group-*p* is analogous to the Phillips-Perron p statistic. Group-*t* and group-*adf* are analogous to the Phillips-Perron *t* statistic and the augmented Dickey- Fuller ADF statistic respectively. The Pedroni (2004) statistics are one-sided tests with a critical value of 1.64 ($k < -1.64$ implies rejection of the null), except the u-statistic that has a critical value of 1.64 ($k > 1.64$ suggests rejection of the null). Notethat the means and variances used to calculate the Pedroni statistics are reported in Pedroni (1999).

Table 3a: Individual FMOLS Results; Dependent variable: real GDP per capita

Independent Variable	Public Bank Berhad	OCBC Bank	Alliance Bank	AmBank Berhad	HSBC Bank
ln*ag*	0.06*** (8.98)	-0.59*** (-17.61)	0.13*** (24.86)	-0.11** (-2.64)	-0.13*** (-54.25)
ln*mf*	-0.20*** (-12.67)	-0.08*** (-10.10)	0.02*** (18.68)	0.07*** (6.82)	0.17*** (63.54)
ln*cs*	0.16*** (7.24)	-0.63*** (-11.30)	-0.11*** (-11.21)	-0.06*** (-5.29)	0.00** (2.93)
ln*re*	-0.06*** (-13.42)	0.37*** (13.91)	0.04*** (8.31)	0.07*** (3.02)	-0.16*** (-39.44)

Note: The null hypothesis for the *t*-ratio is $H_0=\beta_i=1.0$; Figures in parentheses are *t*-statistics. (*) and (**) significant with 95% (90%) confidence level;

Table 3b: Panel Group FMOLS Results; Dependent variable: real GDP per capita

Independent Variable	Five Banks
ln*ag*	-0.13*** (-18.18)
ln*mf*	-0.01*** (29.64)
ln*cs*	-0.13*** (-7.88)
ln*re*	0.05*** (-12.36)

Note: The null hypothesis for the *t*-ratio is $H_0=\beta_i=1.0$; Figures in parentheses are *t*-statistics. (*) and (**) significant with 95% (90%) confidence level;

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