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EFFICIENCY OF MONETARY POLICY TRANSMISSION MECHANISM VIA PROFIT RATE CHANNEL FOR ISLAMIC BANKS IN MALAYSIA[1]

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ABSTRACT

This paper aims to measure whether the efficiency of monetary policy transmission for Islamic banks is affected in the light of systemically more important Islamic financial system in the Malaysia. Focus will be centred on the pace and magnitude of the transmission via profit rate channel for Islamic banks against interest rates channel of conventional banks. The paper relies on the Vector Auto Regression (VAR) methodology, focusing on the period from January 2000 to December 2012. The results show that the pass-through impact via profit channel of Islamic banks is still high and sizable. However, deteriorating signs can be sensed as Islamic banks become more systematically important in the financial system. Result of this study could justify new approach and strategy for monetary policy formulation and implementation in Malaysia. There were already a number of studies being done to measure the monetary policy transmission for Islamic banks in Malaysia and these studies in general proved that Islamic banks are the important conduit for channelling the monetary policy impacts. In contrast, this study seeks to measure how more systematically important Islamic banks could post a threat to the overall efficiency of monetary policy transmission, hence justifying new monetary policy approach.

Keywords: Monetary Policy Transmission; Islamic Banks; VAR; Profit Rate Channel; Pass through Impact.

INTRODUCTION

Islamic finance offers an alternative form of financial intermediation that provides a range of high quality financial products and services. Since last decades, it has grown to be an established and a comprehensive financial system, and proves to be largely unscathed even under the challenging environment presented by the recent international financial crisis. World Bank in an article declared Islamic finance as a priority area[3]. The article further cited that it is a reflection of a remarkable growth in terms of assets, albeit from a small base initially, reaching about fifteen percent per annum during the last decade and currently estimates at $1.2 trillion with the potential to grow to $4 trillion[4] over the next few years.

In Malaysia, the growth has been more phenomenal. The country is much regarded as the leader in the international Islamic finance. Islamic banking system in Malaysia currently accounts for

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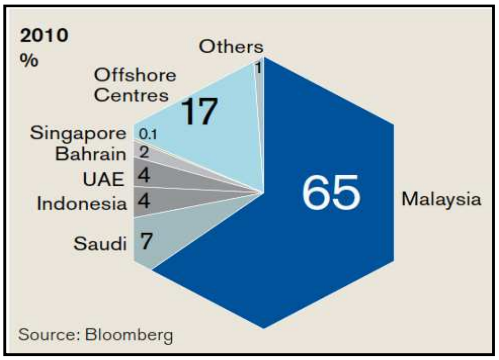
[3] Article by Mushtak Parker and featured in the online version of Arab News dated 16 May 2011
[4] Assumption quoted from KFH Research Ltd study on "Islamic Finance Industry in Malaysia" dated 29 April 2011

20 percent of the banking system with the sukuk market accounts for more than 50 percent of the bond market (Kadir, 2011). The domestic growth of Islamic finance is also complemented by further liberalisation measures opens for more foreign institutional presence and substantial foreign participation in Malaysia's Islamic financial system. In international front, Malaysia also ranks highly in various global indices relating to Islamic finance, being the largest sukuk market in the world with 65% share (at USD96 billion in 2010) and among the top investment destinations for Islamic funds (BNM, 2011).

FIGURE 1

Global Outstanding Sukuk by Country



(Source: BNM Financial Sector Blueprint 2011 – 2020)

Contributed by the fact that Malaysia is currently the more advanced country in developing Islamic finance, the country's Islamic finance system has pioneered shift from merely becoming viable alternative to conventional system to producing unique product and services that is peculiar to the Islamic finance system itself, serving the needs of customers as well as the real economy. In order to do this, the whole aspects of Islamic finance operation must reflect and carry the very true essence of Shariah principles with a particular emphasis on a close link between financial transactions and real economic activity. This has roughly been achieved in most areas, with the exception for the county's approach towards monetary policy. As it is now, the Shariah compliant monetary policy rate does not exist yet and as a matter of fact, Islamic banks in Malaysia are largely guided and influenced by Bank Negara Malaysia's Overnight Policy Rate (OPR)[5] in determining their cost of funds. Although OPR is fundamentally an interest based policy rate and theoretically, it may not sound right for Islamic banks to be influenced by the OPR, given the inexistence of Shariah compliant monetary policy and relatively smaller size of market capitalisation, it has always been the case thus far.

For now, such approach has proven to be efficient from the pass-through point of view with empirical studies suggesting that pass-through impact remaining high and sizable from the OPR to Islamic money market rates (Ooi, 2006). Studies done by Sukmana and Kassim (2010), Kassim and Majid (2009a0, and Hasin and Majida a92010) also support the idea that there is a strong link between Islamic banks and monetary policy, with Islamic banks functioning as conduit to channel the monetary policy impacts to the real economy. However it became apparent that Shariah scholars share conflicting views on the existing approach. Certain scholars approve it with the condition that other Shariah requirements of Shariah for a valid contract are properly fulfilled. Others disapproved it as it

[5] OPR is an overnight interest rate set by BNM used for monetary policy direction. It is the target rate for the day-to-day liquidity operations of the BNM. OPR is used when as a source of pricing when a depository institution lends immediately available funds (balances within the central bank) to another depository institution overnight.

resembles dependency upon conventional interest rate, which does not contribute to the sosio-economic justice in the economy.

This paper thus seeks to examine the effectiveness of monetary policy transmission mechanism process for Islamic banks in Malaysia with attention given to the profit rate channel of the transmission process. This would involve re-investigating the existing state of monetary policy transmission mechanism by applying the Vector Auto Regression (VAR) model. Due to potential arbitrage opportunity in the Malaysia's dual banking system model, the pass through impact is expected to remain high and sizable. Nonetheless, as Islamic banks in Malaysia become more systematically important than ever, the magnitude and pace of the transmission process could possibly be affected to certain extend.

This paper is divided into six parts. Following this introduction, section two presents the current state of development and monetary policy transmission mechanism via Islamic banks in Malaysia. Section three reviews briefly the previous studies on the monetary policy transmission mechanism. Section four meanwhile proceeds with the methodology and data used to carry out the transmission mechanism analysis. Section five examines the empirical findings and section six concludes the paper.

THE CURRENT STATE OF DEVELOPMENT AND MONETARY POLICY TRANSMISSION MECHANISM VIA ISLAMIC BANKS IN MALAYSIA

Development of Islamic Banks

In Malaysia, a comprehensive Islamic financial system which operates in parallel with the conventional financial system started way back in 1963 when the Pilgrims Management and Fund Board (better known as Tabung Haji) was established by the government to provide a systematic approach of funds mobilisation to assist people who wants to perform pilgrimage in Makkah. Since then, the Islamic financial system in Malaysia has developed from infancy to maturity stage in just a couple of decades. This exemplifies acceptance and appreciation towards Islamic finance industry in particular Islamic banking industry as an essential form of financial intermediation that provides a range of high quality financial products and services.

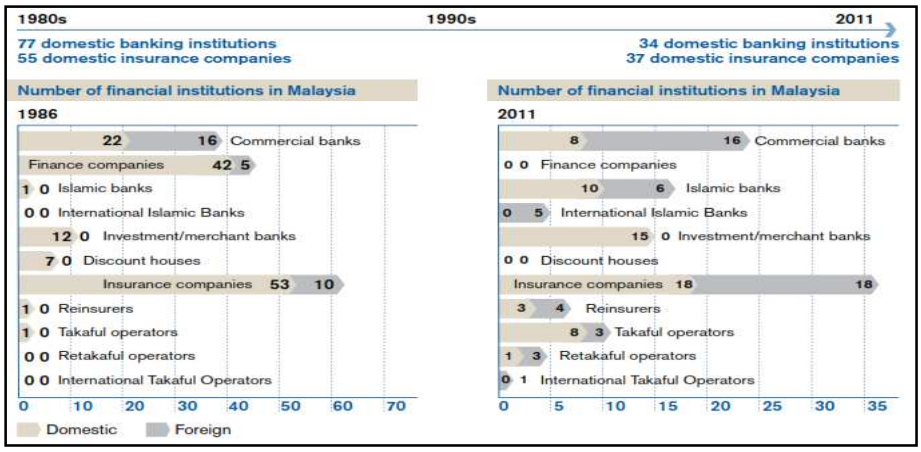
The strategy applied in developing the industry is by gradually or progressively educates and creates awareness regarding Islamic finance to mass public. One of the most imperative steps is the establishment of Bank Islam in 1983. 10 years after that in 1993, the introduction of Bank Muamalat as the second Islamic bank in the country was announced. Subsequently, conventional banks were allowed to set-up an Islamic window within their organisation. Between the periods of 1983 to 2000, the Islamic finance industry flourished with offerings of products and services that match the offerings by its conventional counterparts. In 2001, Bank Negara Malaysia (BNM) announced the granting of Islamic banking licenses to foreign Islamic banks namely Kuwait Finance House, Al Rajhi Bank and Asian Finance Bank. Since then, the landscape has changed with Islamic banks gradually offer equity based products and services. Islamic banks also started to venture directly into property market and other asset classes, undertaking the partnership role as opposed to the traditional financier role. In August 2006, the Malaysia International Islamic Financial Centre (MIFC) initiative was launched to promote Malaysia as a major hub for international Islamic finance. Under the MIFC initiative, domestic and international financial institutions are welcomed to use Malaysia as a platform for their Islamic finance activities, leveraging on the comprehensive system and conducive environment for Islamic finance business available in Malaysia. Various incentives are accessible to financial institutions participating in MIFC including new licenses for conducting foreign currency businesses, attractive tax incentives and facilitative immigration policies. In 2009, further liberalization measures were announced. These include the granting of two licenses to new mega

Islamic banks to foreign players with a minimum paid up capital of USD1billion to enhance global inter-linkages and to leverage on global developments in Islamic finance. In the same year, the importance of Islamic finance in Malaysia has been further enshrined in the Central Banking Act 2009, with recognition to the dual banking model thereby giving significance and due prominence to Islamic banking system.

Figure 2 below briefly described the evolution of Islamic finance in the country and how Islamic finance players have gradually became systemically more important in the context of Malaysian financial system.

FIGURE 2

Structure of Malaysian Financial System

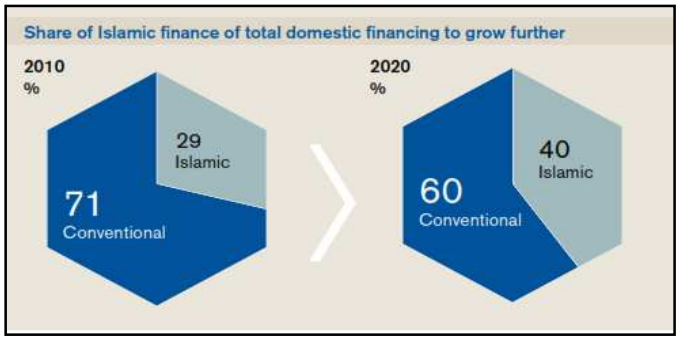


(Source: BNM Financial Sector Blueprint 2011 – 2020)

With all these developments, Islamic banking system in Malaysia is set to move to the next level of growth in the next few decades. By then, it will no longer be seen as a mere alternative to its conventional peers. Instead, there is a possibility that the system will become a system which is superior to its conventional peers especially given its resiliency as exemplified during the recent global financial turmoil. In addition, BNM itself as the regulatory authority has forecasted that the share of Islamic finance in the financial system to reach 40% of total market share by 2021 (BNM, 2011).

FIGURE 3

Forecasted Share of Islamic Finance of Total Domestic Financing



(Source: BNM Financial Sector Blueprint 2011 – 2020)

Given such influence, which effectively means that Islamic banks would become more systemically important than ever, the efficiency of monetary policy transmission mechanism of

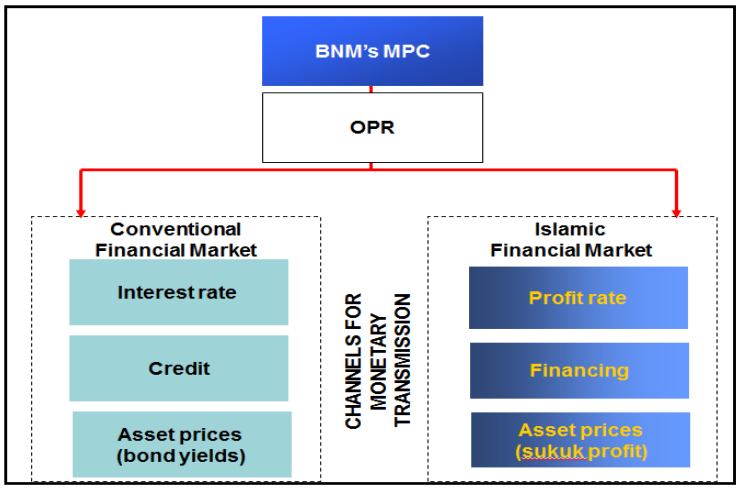
Islamic banks could be affected, particularly if Islamic banks were to introduce more unique features such as equity based transactions that is different from debt or interest based transactions practiced in the conventional financial system. This view is supported by a study made by (Ooi, 2008), which concluded that the changes in the economic structure and financial system including the emergence of an increasingly influential Islamic financial system in Malaysia, have had an important influence in shaping the increasing complexity of the relationship between monetary policy and the real economy.

The Current State of Monetary Policy Transmission via Islamic Banks

Conventionally, the monetary policy transmission mechanism is a process through which monetary policy decisions are transmitted into changes in income and inflation (Taylor, 1995). Changes in monetary policy rate thus transforms the way customers obtain financing and park their savings from and into banks. Changes in monetary policy also alter the spread of banks' financial products, which in turn may lead to different sectors of the economy being impacted, eventually affecting income and inflation. However, before the changes in income and inflation take place, the transmission process will flow within certain channels in the economy. The main two channels that are often mentioned in the literature are the "money channel" (also known as interest/ profit rate channel) and "credit channel" (Kassim and Majid, 2009). In the Malaysian financial market, the relevant channels[6] for monetary policy transmission are briefly describes below:

FIGURE 4

Monetary Policy Transmission Mechanism in Malaysia



(Source: Researcher own illustration)

In the above figure, one important observation to note is the two conduits for monetary policy transmission in Malaysia are Islamic and conventional banking systems, operating side by side. It is clearly illustrated in the above graph that under the practice of dual banking system, Islamic banks in Malaysia are largely guided and influenced by BNM's OPR for their pricing benchmark. OPR being an interest rate instrument theoretically may not be appropriate to be used for Islamic banks. However this is allowable from Shariah point of view given that it is merely used as pricing indicator or benchmark. This is also make sense from practical point of view as currently the underlying structure for Islamic banking transactions especially on the asset side are mostly based and driven by debt. Hence, in most cases, Islamic financial instruments are identical to the conventional instruments particularly with respect to profit or return offered to the investors and depositors. In this respect,

[6] The author purposely excluded expectation and exchange rate channels as these channels are commonly shared by conventional and Islamic financial markets.

(Cevik and Charap, 2011) proves that the relationship between returns on one-year term deposits in conventional and retail Islamic banks in Malaysia exhibits a long-run equilibrium. The empirical analysis shows that returns generated from profit sharing investment account (PSIA) and conventional bank fixed-deposit rates exhibit co-integration over the long run: conventional bank interest rates and the returns from PSIA move together. The results of the study also indicate that the time-varying volatility of PSIA returns and conventional bank fixed-deposit rates is correlated and is statistically significant. Moreover, the pairwise and multivariate causality tests show that changes in PSIA returns are determined by changes in conventional bank deposit rates.

Notwithstanding that, the implication is, though Islamic banks are supposed to operate on interest free principles, the economic environment in a dual banking system exposes them to the problems of conventional banks; particularly the interest rate risk (Bacha, 2004). Study by (Kadir and Leong, 2009) also share similar conclusion that the uses of interest based system as benchmark expose Islamic bank financing in the dual system to interest rate risks despite operating on interest free principles. In another paper (Bacha, 2008) also commented that given such relationship of the two markets, the central bank's actions in the Islamic market must reflect its actions in the conventional market. Failing which, profitable arbitrage against the central bank or a carry trade between the markets would both be feasible. Hence, no matter how supportive a central bank is of the Islamic financial sector, it cannot possibly maintain dual rates or cause changes in one market and not in the other.

For the purpose of this study, focus will be given to the specific interest/ profit rate channel. This is largely due to the fact that these channels are arguably more sensitive towards policy rate movement. Hence, it is logical to examine whether these channels can explain the facts about monetary policy transmission before looking at alternatives.

LITERATURE REVIEW

The Evolution on the Thinking of Monetary Policy

Bindseil (2004) gave a broad overview of the evolution of academic thinking on monetary policy where he revealed that the overall strategy of monetary policy changed fundamentally in the course of the twentieth century. This implies that given relevant factors, the changes of overall strategy for monetary policy is inevitable. Boivin, Kiley, and Mishkin (2010) also seconded such view. In their paper they argued that there have been large changes in the regulatory structure in the United States and other countries post financial crisis, and these changes have had important implications for the transmission of monetary policy actions to residential investment. In Malaysia, Ooi (2008) claimed that given the growing importance of the Islamic financial system, the implications for monetary policy deserved careful study.

The Transmission Mechanism of Monetary Policy

There were some detailed descriptive studies on the monetary policy transmission mechanism. These studies in general identified various channels of monetary transmission and measured how effectively changes in policy rate were transmitted to the real economy. Mishkin (1996) provided an overview of the transmission mechanisms of monetary policy, starting with interest rate channels, and going on to channels operating through other asset prices. Bernanke and Gertler (1995) meanwhile described in great details a broader credit channel, the balance sheet channel, where financial market imperfections also play a key role. Using VAR, the result of their study supports the existence of credit channel as one of the important channels for monetary policy transmission. More recently, studies by Bank of Indonesia (2008) and Bank of England (undated) discussed beyond the conventional channels for monetary transmission mechanism when both central

banks included discussion about the existence of expectation channel. As acknowledged by these studies, the expectation channel influences the formation of expected inflation, which in turn affecting the behaviour of economic agents. Overall, all channels mentioned by these empirical studies are relevant and important from monetary policy transmission's perspective. Changes from policy rate also were proven to be transmitted into various sectors in the economy via these channels.

On the other hand in Malaysia, several studies relating to monetary policy transmission were conducted. These studies basically tried to establish the importance of a particular channel relative to the others. Ghazali and Rahman (2005) for example argued that credit channel is more important than money. Thus understanding the credit market and the behavior of banking firms in achieving their decisions is critical in the analysis of the transmission mechanism of monetary policy. Of interest Kassim and Majid (2009) work attempted to determine the importance of the banking sector (irrespective of conventional or Islamic institutions) in the monetary transmission process in a developing economy. Applying the auto-regressive distributed lag model for the long-run relationship among the variables and the impulse response functions and variance decomposition analysis for the short-run relationship among the variables, the finding shows that both bank deposits and loans play crucial roles in the monetary transmission process in the economy, suggesting evidence for the money endogeneity theory of post-Keynesian economists.

The Efficiency of Monetary Policy Transmission for Islamic Banks

There were limited literatures that discussed about the efficiency of monetary policy transmission mechanism for Islamic banks. This is duly expected as market share of Islamic finance in most part of the world is relatively small and it does not have the capacity to distress the overall transmission process yet. Jasser and Banafe (2008) for example acknowledged that there has been a noticeable increase in the number of Islamic financing in Saudi Arabia. However, to the extent that they are priced against conventional loans, they are affected by the interest rate environment, and so far they have not provided any policy challenge, particularly with respect to monetary policy transmission process. Even in Malaysia, a country which is much regarded as the leader in the international Islamic finance, the efficiency of monetary policy transmission process at the moment is not affected amidst the substantial presence of Islamic banks in the financial system. Ooi (2008) in this instance argued that at the moment, the impact of different structure and returns under the Islamic financial system has not had any discernible impact on the effectiveness of the monetary transmission, with pass-through remaining high from policy rates to Islamic money market rates. Hasin and Majid (2010) meanwhile examined the importance of Islamic banks in the monetary transmission mechanism in Malaysia. The study concluded that in designing monetary policy, the central bank should consider Islamic financing as an alternative channel for monetary transmission since this channel is just as active as conventional lending channel. This conclusion however is arguably not reflecting the existing practice of monetary transmission. Under existing dual banking practice, as proven by Ooi (2008) the monetary policy shock is already distributed/ channeled via conventional and Islamic banks amidst at different pace. Even via Islamic banks, the impacts were already channeled through credit or financing link. In this case, there is no need for central bank to recognise Islamic financing as an alternative sector for monetary transmission.

The Emergence of New Challenges for Monetary Policy Transmission

As demonstrated in the previous paragraph, the overall strategy for monetary policy should change over time, given relevant factors. In Malaysia, the increasing market share of Islamic finance as well as the emergence of unique equity structure could affect the efficiency of monetary policy transmission for Islamic banks. There have also been persistent concerns from Shariah point of view on the practice of using interest rate as benchmark. Ayub (2007) for example highlighted that

although using conventional benchmark is permissible from Shariah point of view as a tool and basis for pricing of goods and their usufructs, a benchmark reflective of fictitious assets, as is the case in the conventional framework, will not be helpful in realising the socio-economic objectives of Islamic banking and finance. In response to this, recent study by Omar, Md Noor and Meera (2010) proposed Arbitrage Pricing Theory (APT) as a viable Islamic pricing benchmark rate. The APT is argued to be Shariah compliant, being based on profitability and risk profiles, and also found to be more stable than interest rates. The study however does not address how this can be effectively implemented, in particular under the dual banking context.

DATA AND EMPIRICAL FRAMEWORK

Data

To examine the effectiveness of monetary policy transmission mechanism process for Islamic banks in Malaysia via profit rate channel, 3 main variables as listed below are used:

- Overnight Policy Rate (OPR)
- Conventional Interbank Rates (CIR)
- Islamic Interbank Rates (IIR)

OPR is selected as it represents the monetary policy stance of BNM. CIR and IIR meanwhile are expected to track the OPR closely and how close these two variables track the OPR should represent the efficiency of monetary transmission process. Both CIR and IIR are daily average of interbank deposit rates at the Interbank Money Market in Kuala Lumpur for conventional and Islamic market respectively, with individual rates being weighted accordingly by the volume of transactions at those rates. In terms of data frequency, the study employs daily data series for the period from June 2004 to December 2012. The starting period of the data nearly coincides with the introduction date for OPR[7]. All data are sourced from rates and statistic section available in the BNM's official website.

Methodology

The impact of the policy rate movement towards the interbank rates in Malaysia (represented by CIR and IIR) is analysed by the Vector Autoregressive (VAR). VAR models were popularised in econometrics by Sims (1980) as a natural generalisation of univariate autoregressive models. A VAR is a systems regression model (i.e. there is more than one dependent variable) that can be considered a kind of hybrid between the univariate time series models and the simultaneous equations models developed (Brooks, 2008). VAR is a simple method where the econometrician has no concern as to which variable is endogenous and which is not. All variables in the model are endogenous. Each equation can be estimated with the OLS method separately. Forecasts obtained from VAR models are in most cases better than those obtained from the far more complex simultaneous equation models (Asteriou and Hall, 2007).

In order to investigate the relationships between the variables employed in the study using the Impulse-Response Function (IRF) and Variance Decomposition analyses (VDA) within the VAR method, the status of stationary in respect to the variables included in the model should be identified first via unit root tests. Javed (2012), Rehman (2012), Sapra (2012), and Bhunia (2012) documented that unit root test is most appropriate test to explore the unit root within the time series data.

If the variables are identified as stationary in the level, standard VAR analysis is applicable with the level data; however, if the variables are found out to be I(1), there is a need to search for a

[7] OPR was introduced on 23rd April 2004. More than 1 month lag from the date of introduction of OPR is needed to ensure data "stability".

cointegrating relationship between these variables. If the variables are I(1) and are not cointegrated, a VAR analysis is run with the first differences (Enders, 2004).

EMPIRICAL FINDINGS

Unit Root Test

As a requirement for the time series analysis, it is necessary to examine the property of time series, i.e., the stationary properties. This is very critical to avoiding the spurious regression. In this study, we employ augmented Dickey-Fuller (ADF) unit root test which was developed by Dickey and Fuller (1979). This test has also been used in various empirical studies (Naser, Nuseibeh & Al-Hadeya (2013); Mehmood, 2012a; Mehmood, 2012b; Naz, 2012). For ADF test, the lags are chosen automatically on the basis of Schwartz Information Criterion (SIC) with maximum lag 14. Table 1 represents the results of the unit root tests for each variable.

TABLE 1

Results of Unit Root Tests for each Variable

Variable	Augmented Dickey-Fuller			
	Level		1st Difference	
	Intercept	Trend & Intercept	Intercept	Trend & Intercept
OPR	-1.249279	-1.282103	-55.84921	-55.84092
CIR	-1.437078	-1.473207	-45.19317	-45.18634
IIR	-1.523348	-1.544148	-58.31609	-58.30681

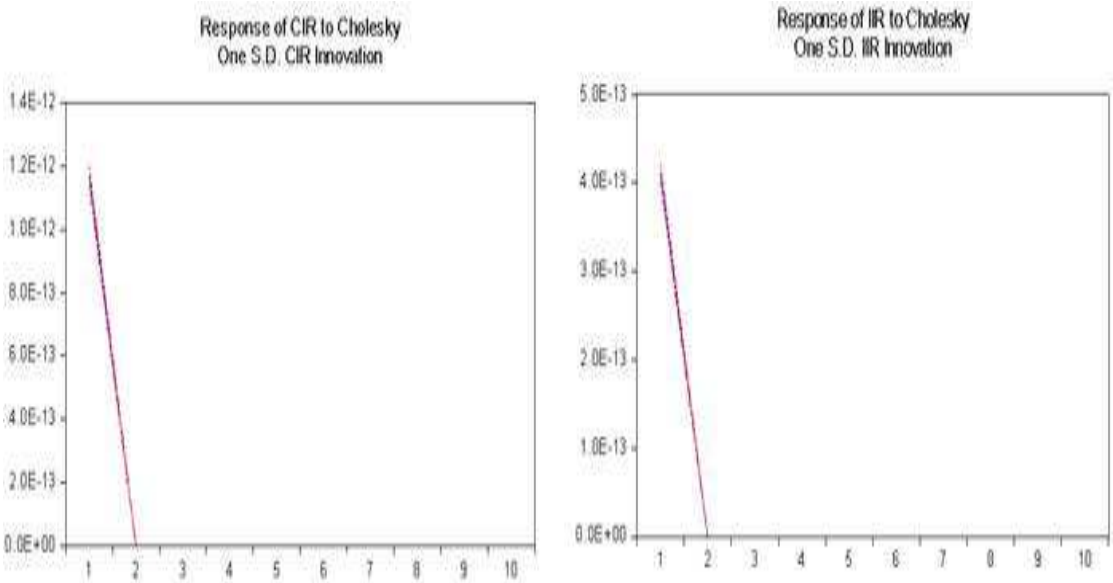
Note. Lag lengths are based on Schwarz Info Criterion (SIC) with maximum lag of 14.

Impulse Response Function (IRF)

The impulse responses are used to investigate the dynamic effects of interest rate shocks on the average overnight interbank rates of conventional and Islamic banks. According to Brooks (2008), the impulse responses trace out the responsiveness of the dependent variables in the VAR to shocks to each of the variables. Figure 5 shows impulse-response functions based on VAR analysis.

FIGURE 5

Impulse Response Function



CONCLUSION

This paper examines the effectiveness of monetary policy transmission mechanism process for Islamic banks in Malaysia with attention given to the profit rate channel of the transmission process. Due to potential arbitrage opportunity in the Malaysia's dual banking system model, the pass through impact is expected to remain high and sizable.

The findings show that any change in the OPR affects not only the average conventional interbank rates but also the average Islamic interbank rates. This is fairly consistent with previous findings by Kassim et al. (2009), Sukmana and Kassim (2010) and Ergeç and Arslan (2011).

Notwithstanding that this study also recognises the fact that other than the OPR movement, the average interbank rates are also highly influenced by other factors such as the conduct of BNM's monetary operation. A fine example would be the typical situation during the day for OPR announcement where higher reliance on overnight money market tender at BNM would push the average interbank rates for both conventional and Islamic banks to be significantly lower than usual. This situation, although normally lasted overnight, do give some impacts to the monetary transmission process.

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