“MMM in the finance-growth nexus”

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MMM in the finance-growth nexus

Abstract

Sources of economic growth have been discussed in a large number of literature as an endless subject. Finance has been identified to have important role as the driver of economic growth. The best avenues and structures describing the relation is still an attractive area of research, the various views are continuously emerged. The advent of Islamic banking system even attracts more research to investigate the impact of the Islamic banking financing, especially mudharaba-musharaka-murabaha (MMM) on the nature of the finance-growth relation. This paper tries to explore this possibility by surveying the relevant existing literature. It might be indicated that, at the very least, the bank-based view will have stronger basis in explaining the finance-growth relation due the availability of equity-based financing under the Islamic banking system.

Keywords: economic growth, finance, modes of financing, equity financing.
JEL Classification: E22, D92, G21, G31.

Introduction

The studies on economic growth are vast and have a long history. What causes economic growth is the most complex question which has remained at the center of development economics since the monumental work of Adam Smith (1776). He thoroughly appreciated the role of innovation and new ideas (or technological influence) in his explanation of economic growth in relation to labor division and the level of specialization. Although, he did not present formal growth model in the contemporary sense of the term in the Solownian fashion, he did identify the forces that exist in the society, and the preconditions for the development of a system under which those factors would generate economic growth. Smith's pioneering work appeared to be the vistas for the future generations to investigate the phenomenon of growth systematically and hence the literature started to grow, among others is David Ricardo (1817)[1].

Formal discussions and debates have continued since then and have resulted in a large volume of literature which still continues to grow due to ever increasing interest in the subject matter and its issues. The early literature focused on the factor endowments, role of policy variables, market, macroeconomic stability, institutional development, population growth, and political stability in the determination of economic growth. In the early classical and neo-classical growth literature, financial factors were seen as playing a passive role in influencing economic growth. These are the discourse of economic growth at macro level which links various macroeconomic variables with economic growth. Not least important is the discussion on the firm's growth as an impact of changing in various variables at firm or micro level.

At micro level, Modigliani and Miller (1958), quoted by Stiglitz (1969) hypothesize that the cost of capital for a firm was independent of the debt-equity ratio, known as MM-Theorem. Even though this theorem subsequently received many criticisms on their underlying assumptions, Stiglitz (1969) came forward to strengthen the theorem by demonstrating the model under more general conditions than those in the original MM-theorem. He asserted that the validity (of the MM-theorem) does not depend on the existence of risk classes, on the competitiveness, or on the agreement of individuals about the probability distribution of outcomes. He strengthens the view that debt-equity ratio does not affect the cost of capital. Whatever capital structure used at firm level, debts and equities at aggregate level are part of money circulated in the economy or money supply.

In terms of money supply, there are many literatures on the neutrality of money, which demonstrate that money does not have any significant impact on the real macroeconomic variables such as output, employment, growth, etc. Instead it only affects prices on one-to-one basis. Lucas (1995), for instance, stresses the neutrality of money, by distinguishing monetary policy effects into two, an anticipated policy which he thought to have no effect on the real variables and an unanticipated policy which can affect the real variables.

The relation of money to real economy basically can be traced through finance and growth mechanism. In this respect finances play an important role. The general perception was that they simply funnel household savings to investors. In the next development, economic growth literatures provide more emphasize on the technology advancement and hu-

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[1] See more detailed on "The Works of David Ricardo, With a Notice of the Life and Writings of the Author, by J.R. McCulloch (London: John Murray, 1888)".

man resource quality enhancement that might decisively lead to higher level of economic growth through the conduct of research and development, as well as training and education. Both factors altogether might drive productivity to accelerate and they become possible due to the availability of credit in the financial sector. This leads to analyzing the relationship between finance and economic growth.

Schumpeter (1911) was probably among those early and one of the most important contributors who recognized the importance of financial sectors particularly the banking system in stimulating economic growth. Schumpeter's proposition was the primary basis upon which the issue of finance-growth literature has widely expanded leading to analysis and investigation from various angles. On the other hand, capital markets development also plays an important role in driving the growth. In this regard, Ehrmann and Fratzscher (2004) quoting Tobin (1969) suggest that monetary policies can alter the ratio of the market value of assets of a firm relative to their replacement costs, known as Tobin's *q*. They also quote another Tobin (1978) paper arguing that a tight monetary policy driven by inflation rising might decrease the present value of future earning flows and might drive equity market to depress.

With respect to contracting researches, Kaplan and Stromberg (2004) highlight that most financial contracting theories analyze the conflicts between principals and agents by focusing on their effects on ex-ante information collection, contract design, and ex-post monitoring. However, the above studies try to link finance and growth in the existence of conventional contracts. The expansion of Islamic finance sheds light on the relevance of Islamic financial contracts. There are three major contracts, widely used in current practices, which are of this paper's interest, namely *mudharaba*, *musharaka*, and *murabaha*. The first two reflect equity-based contracts and the last resembles debt-based contract resulted from cost-plus sales.

The existence of equity financing under Islamic banking and finance might have important implication for the debates on the bank- or market-based financial system relation to the real sector or economic growth. The bank-based view opines that financing[1], which reflects debt in nature, plays an important role to stimulate economic growth. Whereas the market-based view which serves as capital market, puts equity, such as stocks and venture capital, to be a more important factor to drive economic activity. Once equity-based contract applied by Islamic banking and finance is taken into account, it might produce different implication for finance-growth relationship – to go along with the line of the bank-based view. For example, Furqani and Mulyany (2009) examined the dynamic interaction between Islamic banking and economic growth in Malaysia and found that in the short run only fixed investment that granger cause Islamic bank to develop and in the long run, there is evidence to support demand following hypothesis of GDP and Islamic bank, where increase in GDP causes Islamic bank to develop and not vice versa.

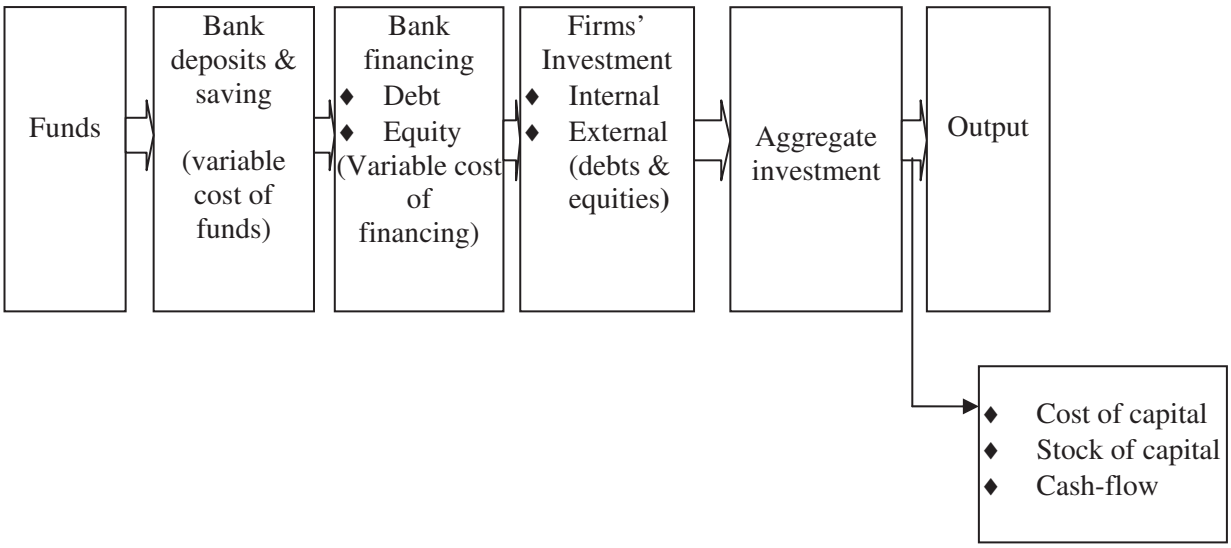

Fig.1. Finance and growth relation: bank-based views in the presence of Islamic modes of financing

Figure 1 illustrates the finance and growth relations under bank-based views in the present of Islamic modes of financing. The figure basically describes the transmission mechanism of funds into real sector, i.e., its effect on investment and output. Deposits and saving under conventional banking system are based on interest system, which reflects fixed

[1] The term financing basically is exchangeable with credit however financing is being used under Islamic banking and finance.

pricing mechanism. The same mechanism applies for funds' allocation into credit. Meanwhile under Islamic banking system, the funds are accumulated through *mudharaba* contracts based on profit-sharing system which reflects variable pricing mechanism, then allocated into financing by using various contracts, *mudharaba*, *musharaka*, *murabaha* etc., which reflect variable and fixed pricing mechanisms. The presence of Islamic financial instruments might drive policy maker to have different tools in managing the economy. Profit-loss sharing system enables balancing liability and assets of banking to prevail. It also carries cooperative and participatory natures which are very important in driving more economic activities in real sector.

This paper will review the existing literatures on the finance and growth relationship. Firstly, the literature generally discussing relationship between financial and the real sector growth by four views on the association between finance and real sector will be presented in section 2. Secondly, discussion on the concept of money as capital as written in section 3, and thirdly, discussion on the Islamic modes of financing in section 4, followed by conclusion in the last section.

1. Relationships between financial and real sector growth

Aggregate Demand (AD) and Aggregate Supply (AS) approach could be used to explain economic growth. On the AD side, as described in Branson (1972) under neoclassical model, there are commodity and money markets interaction which results in a general equilibrium of output and interest rates. In this regards AD affects growth through saving, investment and tax ratios. Whilst on the AS side there are labor market and production technology that determine equilibrium rates of wages and productivity. In this side the rate of growth of potential output is determined by the rates of growth of productivity and the labor force, i.e., wage rates. The existence of technology advancement, as a result of knowledge accumulation, also would affect economic growth by enhancing productivity in the production function.

With regards to economic growth, Choudhury (1999) also discussed the principal sources of economic growth that includes four aspects, namely; labor, capital, capital formation, and structural change. The first two are obviously crucial as combination of both factors, forming a production function, would produce output. Capital formation means the mobilization of saving into productive investment that at last would generate economic growth through its positive effect on output level. While structural change involves the structure of production by sectors and the study of inter-linkages among these sectors toward realizing higher output level. He further showed the complementarities between *mudharaba* and *zakat* to be effective and to lead to the accumulation of wealth and the generation of incomes that takes place through redistribution system. This is the important relationship between *zakat* and the principle of distributive equity in the framework of economic growth.

The money (financial) market interaction with commodity market in the AD side plays significant role in pushing production of output. At this point it is clear that finance plays important function in supporting productive economic activities. Financing activities, through banking, capital markets and other avenues available, might help inducing higher investment level and hence enhancing productivity on the real economy to generate economic growth.

The growth in literature on the issue of whether financial institutions are important in influencing economic growth has, by and large, centred about the four broadly categorized hypotheses. They are: no association, supply-leading association, demand-following association and feedback association.

1.1. No association. The most prominent view that no significant association exists between financial sectors and real sector growth could be attributed to Lucas (1988) and Modigliani-Miller (1956) (or known as MM-theorem). The former advocated, "..the importance of financial sectors is very badly overstressed". This no-association category might embark from the concept of money neutrality as Lucas (1995) quoting Humes (1752) in his *Of Money* that 'money is nothing but the representation of labor and commodities, and serves only as a method of rating or estimating them. Where coin is in greater plenty, as a greater quantity of it is required to represent the same quantity of goods, it can have no effect, either good or bad'.

In his paper Lucas (1995) stresses the neutrality of money, by distinguishing monetary policy effects into two, an anticipated policy which he thought to have no effect on the real variables and an unanticipated policy which can affect the real variables. He asserts further that in the long run, the quantity theory predicts money growth to be neutral in that it does not affect the growth rate of production but it does have effect on the inflation rate. Lucas's assertion seems to be in line with the hypothesis of zero transaction costs and perfect information of MM-theorem. If these hypotheses hold true, then financial sectors do not matter for growth.

The *law and finance view* can be categorized into this no-association. This view, as Beck et al. (2000),

quoting La Porta et al. (1997, 1998, 1999, 2000), opines that the effectiveness of the financial system to drive innovation and growth mainly is determined by the legal system through which outside investors might be effectively protected to promote investment. They reject the debate on bank based versus market based. Furthermore this view predicts the financial structure unrelatedness to new firm creation, industrial development structure and economic growth, after controlling overall financial development. Rather this view stresses the efficiency of the legal system that will lead positively to financial development, innovation and growth.

Different proposition can also be found in many development studies, for example Robinsons (1952), as quoted in Ang (2008), suggests that financial development does not lead to higher economic growth. She further elaborates that demand for financial services increases only due to the development of financial sector (more products, services and institutions in financial sector available) and not necessarily lead to higher level of economic growth.

Other striking results of growth literature can be found in La Porta et al. (1999), who relate economic growth with institutional quality and both found to have a strong correlation, in one hand. The quality includes constraints on the executive, risk of expropriation, government effectiveness, and autocracy. On the other hand they also in contrast found that economic growth and constitutional measures of institutions, like judicial independence, constitutional review, plurality, and proportional representation, have no relationship. Ang (2008) also records empirical finding that rapid domestic credit growth is one key determinant of emerging banking crises (Eichengreen & Arteta, 2000), and that sustained rapid credit growth seems to increase the probability of an episode of financial instability (Borio & Lowe, 2002).

1.2. Demand association. With respect to demand-following hypothesis, Robinson (1952) argued that "where enterprise leads finance follows" is frequently quoted. In other words, as quoted by Koetter and Wedow (2006), financial services are provided as a reaction to the demand by firms, that is finance follows entrepreneurial activity. The statement is explicit in claiming that financial development takes place endogenously in meeting the demand from expanding real economy. Support for Robinson's view could be found in the works of Friedman and Schwartz (1963) and more recently in the works of Favara (2003). Furqani and Mulyany (2009) also found support to demand following hypothesis of GDP and Islamic bank, where increase in GDP causes Islamic bank to develop and not vice versa in the long-run in the Malaysian case.

The demand association can be discussed under the market based view. The *market-based view* exposes the important role of (capital) market to promote economic growth (Beck & Levine, 2002) and shows the weaknesses of bank-based view, which says for instance, expensive cost to extract enterprise information might cause firms to face higher charge from bank and hence might reduce firms' incentive to take more profitable projects (with higher risk level). The proponent of this view also indicates the shortage attached to bank based view in that banking system might impede innovation and growth (Morck & Nakamura, 1999; Weinstein & Yafeh, 1998). The proponents of market-based view aim at reducing inefficiencies connected with bank-based view and at facilitating new firms creation and hence the industry to grow.

Various papers show the positive roles of capital market in driving economic growth. For example, Baier et al. (2004) summarize that efficient capital market can increase economic efficiency, investment, and growth, because of the followings; its ability to aggregate information about firms' prospects can direct capital to high return investment (Greenwood & Jovanovic, 1990; King & Levine, 1993a, 1993b); stock markets may also lead to increased productivity growth, lower costs of exchanging ownership right in firms (North, 1988); reduced holdings of liquid assets and increased growth rate of physical capital (Bencivenga & Smith 1991).

1.3. Supply-leading association. Supply-leading association is the majority-supported view originally credited to the works of Schumpeter (1911). As King and Levine (1993a, 1993b) point out, the services provided by the financial institutions that mobilize savings, evaluate projects, manage risks, monitor managers and facilitate transactions are essential for technological innovation and economic development. Example of this association is *bank-based view*.

The *bank-based view* following Beck et al. (2000) underlines that banks have positive roles in mobilizing resources, identifying good projects, monitoring managers, and managing risk (Levine, 1997). It also exposes the comparative shortcomings of market-based systems in that information are so quickly revealed under well-developed market that it might reduce incentives for individual investors to assess information and hence it might impede incentives for identifying innovative projects, thereby hindering efficient resources allocation (Stiglitz, 1985; Boot et al., 1993). Beck et al. (2000) also quotes Gerschenkron (1962) observing bank-based to be crucial in early stages of economic development due to unconducive/undeveloped institutional environ-

ment. Ueda (2006) summarises historical case studies characterising bank-oriented financial systems considering heterogeneity across country into two common features. First, banks promoted massive industrial development across broad sectors. Second, banks not only provided loans, but also monitored and controlled firms' operational decisions.

Schumpeter's view gives much more importance to the role of financial institutions particularly banking system in driving economic growth. However, the modern branch of supply-leading finance theory more pronouncedly starts with the works of McKinnon (1973) and Shaw (1973), which are supported by the majority of economists. This theory holds that finance significantly and positively influences real sector economy via money channel; interest channel; and balance sheet channel.

Koetter and Wedow (2006) follow the reasoning of Gurley and Shaw (1955), Goldsmith (1969), and McKinnon (1973) that negligence of financial development will limit economic growth understanding, and suggest two channels through which financial development affects growth. First, Hicksian emphasizes the enhanced accumulation of capital through higher savings (Hicks 1969). Second, Schumpeterian focuses on improving financial sector to drive technological progress through an efficient selection, funding and monitoring of projects (Schumpeter, 1934, 1939). Furthermore, both Hicksian and Schumpeterian concluded that better developed financial system drives transaction and information to be lower. In this regard Levine (2004) indicates five ways for banks to reduce those costs (1) information collection, (2) project monitoring, (3) risk management, (4) channelling savings and (5) facilitate transactions of goods and services.

1.3.1. Money channel. The empirical case for the real effects of money is based on the observation of its movements in the real economy. Friedman and Schwartz (1963) were the first to document this relationship extensively. Sims (1972) later demonstrated that money Granger-Causes nominal GNP in a bivariate system.

However, in the late 1970s, the attention was focused on whether it was "anticipated" or "unanticipated" money that leads output. Barro (1977, 1978) presented empirical evidence for unanticipated money; Gordon (1982) and Mishkin (1982) made rebuttals. The distinction between anticipated and unanticipated money was important for deciding whether systematic monetary policy could affect output. Lucas (1995) also contributes relatively similar notion in this regard. However, this debate presumed that the tendency of money to lead output implied some types of causality. The notion of causality will involve a change in one variable to affect a change in another variable, such as money supply change to affect a change in interest rates.

In this regards, Sims (1980) and Litterman and Weiss (1985) found that the interest rates tend to absorb the predictive power of money. Specifically, a nominal interest rate appears to dominate money as a forecaster of output when added to a vector auto regression containing money, output and prices. These authors interpreted this finding as evidence against the effectiveness of monetary policy, whether systematic or non-systematic. This interpretation was disputed on empirical grounds by King (1982) and Bernanke (1986) and on theoretical grounds by McCallum (1983).

Nevertheless, the apparent fact that money has far less predictive power for output than do interest rates is an important challenge to the traditional "money leads income" argument for monetary policy effectiveness. In recent development, central banks tend to employ more active interest rate targeting in their monetary policies.

Recent contributions to the explanation of the classical interest rate channel (Taylor, 1995; Cecchetti, 1995; Mishkin, 2001) infer that, at the very least the influence of interest rates on economic activity affects the components of domestic demand. These contributions suggest that monetary authorities use their leverage over short-term interest rates to influence a set of prices, primarily the prices (cost) of capital and future consumption in comparison with current consumption. This also influences the relative prices of domestic goods in comparison with foreign goods, particularly in terms of long-term interest rates and exchange rates.

Therefore, changes in short-term interest rates are transmitted to the real cost of capital, changing the optimal capital output ratio and the required return on investment projects, as well as the rate of business investment. Most past studies have used short-term interest rate, such as the federal funds rate or treasury bill rate, to measure policy actions. Some also uses a record of dates of significant monetary policy actions developed by Romer and Romer (1989). Both approaches have a number of limitations (Cecchetti, 1986, 1987).

One of the difficulties with the use of short-term market rates to measure actions is the large changes in interest rates can occur for reasons other than a change in monetary policy. Thus, the response of bank lending to interest rate changes found in some studies may not be caused by monetary policy. Similarly, the failure to find a response of lending to interest rate changes may be due to factors rather than monetary policy.

A second difficulty with the use of market interest rates is that these rates may incorporate both the effects of normal policy actions and special policy actions. For example, the Federal Reserve imposed direct credit controls on banks and raised interest rates in the second quarter of 1980. During this period, it is difficult to untangle the effect of changes in interest rates on bank lending from the effect of the credit controls.

The use of the Romer and Romer dating procedure to measure policy actions also has problems. Romer and Romer have chosen to measure only significant and anti-inflationary actions taken by the Federal Reserve. Post 1975, there are only three Romer dates and most studies cited above incorporate only two dates reported in 1978. Hence the use of these dates to measure policy actions omits considerable information about monetary policy. The Romer dates have also been criticized as reflecting factors other than monetary policy actions, such as oil price shocks, and for their accuracy in identifying significant policy actions. The limitation of the money channel had lead researchers to study the effect of the credit channel on the money demand and supply.

1.3.2. Credit channel. The influence of monetary shocks on real economic activity has two dimensions in the credit view. First, a monetary shock can influence the financial position of a borrower firm. A higher net-worth of a firm's balance sheet makes external financing from loan market possible and hence, stimulates investment decisions. As the transmission of monetary shocks to the real economy occurs through the borrower's balance sheets, this channel is called the *balance sheet channel (loan demand).*

Second, monetary shock can influence the bank's loan supply to bank dependent firms. This change in the availability of loans influences the investment decisions of the borrower firms by reducing external source of finance. The transmission through such a channel is called the *bank lending channel (loan supply).*

Repullo and Suarez (2000), for example, record recent research that places financial imperfections at the center of the credit channel for monetary transmission mechanism, called as a wedge cost between internal and external funds that might further affect investment decisions-making process by firm to undertake or not to undertake investment due to the cost of the funds. Hence this decision making will affect the level of economic activity at macro level. Two strands of literature reflect these processes, i.e., *broad credit channel* and *bank lending channel*. Furthermore Repullo and Suarez (2000) analyze that the response of the equilibrium to changes in the stance of monetary policy has identified the main implications of a broad credit channel for monetary transmission. A tightening of monetary policy: (1) reduces aggregate investment, as well as the amounts of market and (under certain conditions) bank lending; (2) widens the spreads between the interest rates charged to the borrowers and the riskless interest rate; and (3) produces a flight to quality, i.e., a shift towards higher net worth borrowers.

1.3.3. Balance sheet channel. Florio (2006) surveyed models connecting firm's balance sheet to the business cycle to include those developed by Bernanke and Gertler (1989, 1990), Greenwald and Stiglitz (1993), Kiyotaki and Moore (1997), and also Cooley and Quadrini (2001). She quoted Bernanke and Gertler who predict an accelerator effect of financial fragility on investment, for instance a negative shock to productivity today decreases the current income of the entrepreneur, thereby causing future agency costs to increase and hence future investment and production depress. Empirical evidence on balance sheet channel, applied to US manufacturing firms, indicates that investment is sensitive to financial factors. In this respect Bernanke et al. (1994) argue that the proportion of credit advanced to the borrowing firms with low agency costs increases during a downturn, known as flight to quality. Florio further describes that moral hazard and adverse selection or the presence of monitoring costs arising from asymmetric information are exacerbated when firms' net-worth decreases and makes external finance to be more expensive.

The balance sheet approach to the monetary transmission mechanism embodies the features that link a firm's investment decision with monetary shocks through changes in the firm financial position. Interest rate effects of a monetary have two direct effects on the net-worth of a borrower firm, first, by influencing interest payments on outstanding debt and second by influencing asset prices. The former influences the net cash flow and profits of the firm while the later influences the value of collateral assets of the borrower firm. The effect of the approach on firms can be divided into three sub categories, i.e., capital market imperfection, substitutability between bank loans and commercial papers, and also firm's size. They would be discussed in the following section.

1.3.4. Capital market imperfection. Market imperfection in the banking system is one of the crucial points that contribute to the presence of a credit channel. Bernanke and Gertler (1987, 1989, 1995) point to capital market frictions originated from imperfect information aspects. Heterogeneous structure of borrowers in the credit market incurs differ-

ent costs to lenders in evaluating and monitoring credit contracts. Informational asymmetry between the lender and borrower puts a wedge between the costs of internal and external funds, which is being referred to as *external finance premium* by Bernanke and Gertler (1995).

The existence of external finance premium may lead to the ineffectiveness of interest rates as a monetary policy tool. It is argued that the potency of the monetary policy is reflected not only by interest rates, but also by external finance premium. Thus, Bernanke and Gertler (1995) state that the credit channel is not a distinct, independent or a parallel channel, but rather a set of factors that amplify and propagate conventional interest rate effects.

The ineffectiveness of interest rates therefore directs the importance of credit channel. However in implementing credit channel precautious conducts need to be adopted due to the findings by several researchers such as Townsend (1979), Blinder and Stiglitz (1983), Farmer (1985) and Hubbard (2000). They have concluded the following findings: 1) uncollateralized external financing is more expensive than internal financing; 2) the spread between the cost of external and internal financing varies inversely with the borrower's net-worth – internal funds and collaterizable resources – relative to the amount of funds required; 3) an adverse shock to a borrower's net-worth increases the cost of external financing and decreases the ability of the borrower to implement investment, employment and production plans.

1.3.5. Substitutability between bank loans and commercial papers. Kashyap et al. (1993) look at how the ratio of bank loans to the sum of bank loans and commercial paper, called the mix, responds to a change in the stance of monetary policy. They use several different measures of the stance of monetary policy and one of them is the federal funds rate. They conclude that a change in monetary policy alters the mix of loans and commercial paper. To exclude the possibility that bonds only work as a buffer to bank loans, it is that borrowers do not find loans and bonds as imperfect substitutes, they further examine the relation between the mix and various measures of investment. If the mix has no real effects, this indicates that monetary policy does not affect the total amount of credits. Kashyap et al. (1993) however find that the mix affects investment, even after controlling for other factors such as interest rates and output. They also indicate that the impact of monetary tightening is particularly strong on the highly bank dependent firms due to banks reduction on all credit supplies (Ehrmann & Fratzscher, 2004).

Ehrmann and Fratzscher (2004) records Tobin's papers (1969) highlighting the important role of "financial policies" to affect the market value of a firm's asset relative to their replacement costs, known as Tobin's q, and hence monetary policies might change this ratio as well. They also refer to Tobin's 1978 paper as having contributed to the understanding of the stock market channel of monetary policy transmission by illustrating that a tight monetary policy to curb inflation might cause the present value of future earning flows to decrease and equity markets to depress. However, on the part of relationship between monetary policy and equity prices is still left uncleared.

1.3.6. Firm's size. Oliner and Rudebusch (1993) extend Kashyap et al. (1993) research by incorporating all types of short-term debt and by allowing for differential responses of small and large firms. They use data for manufacturing companies. The results of broader measures of the mix vary.

If other short-term credits than bonds are included in the denominator and if the Romers dates are used as a measure of the stance of monetary policy, the results are consistent with the earlier results; that is, the mix is altered by a change in monetary policy. When the sample is divided into large and small firms, most of the relations found in the total sample turn out to be insignificant. Monetary policy only had a significant impact on small firms mix variable, including only commercial paper. But it turned out that the mix rose when monetary policy was tightened.

This suggests that small firms shift towards bank lending at a monetary contraction. Their conclusion is that the overall evidence from debt mix provides little or no support for bank credit channel. Gertler and Gilchrist (1994) follow the second strategy, achieving identification through disaggregated data on various size classes of manufacturing firms. They estimate the response of small and large firms to monetary policy shocks and find that sales and inventories fall at small firms by more than large firms after monetary contraction, which they interpret as evidence of a credit channel of monetary policy. They appeal to both the lending and the broad credit channel to motivate empirical work.

Obviously, there are many ways in which small and large firms differ apart from financial factors, which cloud the interpretation of the Gertler and Gilchrist (1994) results. While size is certainly correlated with access to non-bank sources of credit, the correlation is far from perfect. Worse, size is likely to be correlated with other factors that would affect a firm's response to a monetary tightening.

To address this criticism, Gilchrist and Zakrajsek (1995) assumed high leverage firms are more likely to be credit constrained and split firms into four quartiles based on leverage. They found that the effect of cash-flow on inventory investment was monotonically increasing with leverage across the four quintiles. Still, leverage also has problems as a proxy for the likelihood a firm is credit constrained. The corporate finance literature has identified many reasons why leverage varies that could be correlated with other real factors affecting firm's response to monetary policy shocks (for example, profitability or degree of tangibility of assets). Worthington (1995) shows, that tangibility of assets affects the responsiveness of cash-flow to investment, which complicates the interpretation of Gilchrist and Zakrajseks (1995) empirical work.

Gertler and Gilchrist (1994) separate out firms that are small. It seems plausible to argue that a bank would earn lower profit on a loan to a large firm with access to public capital markets than on loan to a small firm that may have some monopoly power as an insider with more information than other potential lenders. A profit maximizing bank may have an incentive to reduce lending to large firms, not small firms, after a monetary contraction. Some direct evidence on which firms are truly rationed by banks following a monetary contraction is absent, this logic suggests that firm size may be better proxy for broad credit channel effects than for bank lending channel effects.

Those studies analyze the monetary transmission in term of loan demand, however the studies will be complete with analyzing the supply side of loan which is evidence from the following second channel, bank lending channel.

1.3.7. Bank lending channel (loan supply). The approach to the monetary transmission mechanism appears to be another important channel of credit view as there are bank dependent borrowers who have few or no alternative sources of finance other than bank loans. Any frictions in the asset-liability management of banks due to monetary shocks would be transmitted to real economic activity through bank dependent producers in the economy. A tight monetary draining reserve from the banking system would restrict the supply of loan able funds so that it increases the external finance premium of bank dependent borrower firms.

The effect of a monetary shock on the external finance premium of small size firms are assumed to be higher than the large ones under the assumptions that large firms have easier access to credit markets and have more alternative sources of finance. The presence of an active bank lending channel may serve to explain the amplified and propagated conventional effects of policy shocks. It has been noted that since bank lending channel focuses only on the lending behavior of banks affected by monetary policy shocks, this transmission channel view is assumed to be narrow-typed credit channel approach.

Black and Rosen (2007) elaborate how credit channel works by empirically differentiating bank lending channel and balance sheet channel and by identifying specific contribution for each channel. They found evidence that under tightened monetary policy, banks adjust their stock of loans by reducing the maturity of loan originations and reallocate short-term loan supply from small firms to large firms. This reallocation is known as 'flight to quality'. They show that bank lending channel works through changes in loan maturity and balance sheet channel works through reallocation of short-term loan supply.

Kashyap and Stein (1995) use micro data on bank balance sheet to identify effects of monetary policy on bank lending. They divide banks into size category and look at the response of lending to monetary policy shocks, which they identify as changes in the federal funds rate. They find that bank lending declines after a monetary policy contraction at all but the largest banks. They interpret this as evidence supporting existence of a bank lending channel since one of the links in the chain of causality behind the bank lending channel is that after a monetary contraction, bank lend less.

However, their result is consistent with a fall in credit demand of small bank borrowers relative to large bank borrowers (consistent with the Oliner and Rudebusch (1995) criticism of Kashyap et al. (1993)). Kashyap and Stein (1995) do not look at the next step in the chain of causality to see whether the differential response of small and large banks to monetary shocks has effect on the real economy. However other researchers have studied the effects of the monetary transmission on the bank size and their behavior towards lending. In addition, these studies also investigate whether monetary policy has a differential impact for banks of different asset size (Kashyap & Stein, 1995), asset size and liquidity (Kashyap & Stein, 1997a) and asset size and capital strength (Kishan & Opiela, 2000).

All these studies find that a bank lending channel exists and this is mainly transmitted through small banks. The bank lending channel also appears to be strengthened when these small banks are either relatively illiquid or undercapitalized. In short, the evidence strongly suggests that a bank lending channel is present for small balance sheet constrained banks.

The use of banks' size as a measure to generate cross-sectional differences does not correspond precisely to the underlying theoretical models, which stress the importance of net-worth. In this context, banks' capital may be a better proxy. Favero et al. (1999) and Kishan and Opiela (2000) categorize banks by size into six asset size categories and further subdivide them into three capital strength groups.

Though regulators use a variety of definitions of bank capital, the focus is on the equity capital ratio to total asset ratio (Benston, 1998, and Estrella et al., 1999). This includes bank with **equity to asset ratios**: < 5% (undercapitalized), > 5% and < 10% (adequately capitalized), > 10% (well/over-capitalized).

There is a significant inverse relationship between bank lending and changes in money market rates for undercapitalized small, medium and large banks across eleven EMU countries. In the case of small and large banks, the relationship is contemporaneous whereas for medium-sized banks there is a significant lagged relationship as they probably are better insulated from monetary policy shock. It seems that bank lending channel is more prevalent for undercapitalized banks operating in the other smaller EMU countries.

The evidence seems to show that the bank lending channels in the EMU are mainly transmitted through undercapitalized banks operating in the smaller banking systems. They indeed find that the lending behavior of small undercapitalized US banks (those with less than RM300 million in assets) is most responsive to monetary policy. Peek and Rosengren (1992) analyze the lending behavior of New England banks over the 1990-1991's recession. Their results indicate that the loans of well-capitalized banks fell by less than the loans of poorly capitalized banks.

Hence, as with Kashyap and Stein (1997a) findings, their evidence suggests there are effects on informational imperfections in financial markets on the balance sheets of intermediaries as well as borrowers. De Bondt (1998) was the first to use disaggregated bank data to test for evidence of the lending channel across various European countries. Following a similar approach by Kashyap and Stein (1995, 1997a) he tests whether there exist important differences in the way in which European banks with varying characteristics (in term of balance sheet size and liquidity) respond to the changes in the stance of monetary policy (short-term interest rates) during the 1990-1995 period. He uses changes in money market rates (as a proxy for monetary policy stance) in his interactive regression models. Overall, he finds evidence of bank lending channel in Germany, Belgium and the Netherlands, while in the rest of countries under study (France, Italy and the United Kingdom), no significant effect were found. However, when the stance of monetary policy is measured by a monetary condition index, the bank lending channel also appears to exist in Italy and France.

In 1999 he adopts a different approach by using aggregate bank data to examine the main lending channel in the same six European countries. By including security holdings in a vector error correction model as a variable used to detect loan supply effects, he finds evidence that credit constraints due to monetary policy are important in Italy, Germany and France, but not in the United Kingdom, Belgium and the Netherlands.

Finally, Favero et al. (1999) uses individual bank balance sheet data to investigate the response of banks in France, Germany, Italy and Spain to monetary tightening during 1992. He finds no evidence of bank lending channel although he does find that banks in different countries respond in different ways to protect the supply of loans from liquidity squeeze. Small banks in Germany, Italy and (to a lesser extent) Spain, as found by Altunbas et al. (2002) have used bank policy stance between 1991 and 1999 in EMU. In particular, they have classified banks according to assets size and capital strength to see if these factors have a significant effect on the lending channel. Using panel data approach they find that across the EMU systems, undercapitalized banks (of any size) tend to respond more to change in policy. All the finding states the bank lending channel is effectively transmitted through small undercapitalized banks.

1.4. Feedback association. This association refers to the inter-relationship between finance and economic growth. Finance provides means to push firm's investment which then drives economic activities to produce output. Higher output level then in turn will improve income and saving. This drives financial sector to respond by offering more products and services. It signifies higher growth in finance resulted (as a feedback) from higher output growth.

The *financial services view* according to Beck et al. (2000) emphasizes financial system to provide key financial services which are crucial to encourage firm formation, industrial expansion and economic growth. This view predicts that overall financial development, not financial structure per se, is important for economic development. Their empirical findings is consistent with this view, in that the results do not lend support to either the market or the bank-based view, meaning that the variation in cross-country growth rates cannot be explained by the difference between market- and bank-based finan-

cial system. This fact supports the prediction of the financial services view above and at the same time shows its inconsistency with either the market- or the bank based view.

The result that shows irrelevance of financial structure (bank-based or market-based) link to economic growth at macro level seems to be parallel with the MM theorem, at micro level.

2. Money as capital

In the sixth century A.D. on the advent of the Holy Prophet (pbuh), money was already known to the people and coins of various denominations were being minted and circulated in the civilized world. The Arab traders who were in frequent touch with the rest of the world were aware of these coins and used them in their day to day transactions. At the same time, barter was still in vogue and a large number of transactions, especially in agricultural sector, were conducted through barter.

The Holy Prophet (pbuh) encouraged the use of money as a medium of exchange. He discouraged barter agreements because there were some practices which could lead to injustice and exploitation. Barter was accepted only in a limited number of cases. For example, barter could take place in products of different kinds provided the possession was passed on simultaneously by both the parties. Exchange of two commodities of the same kind could not take place except that the quantity was equal and the possession was transferred simultaneously[1]. Barter transactions in these cases were only tolerated due to their prevalence but were not considered desirable.

In a number of cases, the Holy Prophet (pbuh) issued explicit instructions not to enter into barter agreements. He advised to sell a product for money and to buy the other with its price. Thus, money was accepted as medium of exchange by the Holy Prophet (pbuh). At the same time, the role of money as a store of value was also recognized by the Holy Prophet (pbuh) when he levied *zakat* on monetary assets as well. Money, likes other assets, is subject to *zakat* at the end of the year. The general theory of *zakat* lays down that the *zakat* is leviable on wealth having potential to grow. The fact that *zakat* is charged on monetary assets suggests that money has been treated as factor of production as well. It has the potential to grow and create more value.

This takes us to the discussion of money as a productive agent and its reward for participating in production. Therefore, in the Islamic economics, money has been assigned a role amongst other factors of production. Irrespective of the results of productive activity, which takes place by the combination of land, labor, capital and enterprise, it has been accepted that the return of money (as capital) should come later after the utilization of capital. The utilization could be channelled directly (via the capital market) or indirectly (via the banking system). However, in the conventional system, the banking system would reward the owner of capital via be predetermined and insured mechanism. This reward is technically known as interest. The institution of interest has come to be internationalized with the concept of money. Then, it appears the interest-based banking system.

However, current economists such as Choudhury (1997) argue the *shuratic* approach, or knowledge endowment by highlighting that 'the movements in monetary aggregate as currency when induced by the knowledge values as they influence and then regenerate from extensive socio-economic interrelationships, convey the endogenous currency money in Islam as the medium for encouraging spending' (p. 41). He further asserts that 'in the *shuratic* process of Islamic political economy, allocations (of goods and services in an input-output model) are not mechanically made. Nor are they based on the invisible-hand principle of ethically benign market. Rather they are activated by human interventions carrying ethical preferences into market exchange' (p. 17). This is, though, a fundamental notion of the concept of endogenous money in the Islamic political economy.

3. Islamic debt-based and equity-based modes of financing

The term Islamic debt-based mode of financing throughout this dissertation, and especially in this chapter, does not represent a real debt in the sense of money-to-money (M-M) nature as characterized under conventional interest-based credit system, which is clearly reflecting a debt for the borrower. Rather it reflects a debt-like character, due to a claim from which the financier can recoup the installed payments resulted from the transaction. In this regard the financing shows commodity-to-money (C-M) nature. In addition under Islamic contract, the only financing that reflect debt is *qard hasan* (benevolence loan), which also reflects M-M nature. Khan (1989, p. 151) states that *qard hasan*, a sister institution of *infaq* under the Islamic economy, is an element of the overall scheme of social insurance founded at different tiers of household, family, locality, and nationality. Debt is not encouraged in Islam as it might drive living beyond means and excessive lifestyle. Even Siddiqi (1983) describes debt finance is both inefficient and injustice.

[1] A barter transaction in which two commodities of the same kind are exchanged in unequal quantities or the possession of the one is not transferred immediately is known as *riba-ul-fadl*.

Moreover, Siddiqi (2006) mentions in his survey, that 'Islamic economists do not favor increasing role of debt-finance in the system due to the reasons, lessens the ability of the system to absorb real shocks, limits the ability of monetary authorities to take corrective actions because of fear of instigating widespread defaults, creates more room for speculation. This argument works against the inclusion of *murabaha* receivables in issuing hybrid *sukuk*, and the sell and buy back model of securitization.' With respect to *murabaha* Siddiqi (2006) states that '*murabaha* receivables are also debts. But they differ in their origin from debts incurred by borrowing cash. They originated as deferred prices of specific goods and services. There are goods and services corresponding to these debts unlike a debt resulting from lending cash to which no real asset corresponds.'

The prevalence practice of *murabaha* financing in current practice of Islamic banking, and the increasing issuance of *sukuk* in current practice of Islamic finance as criticized by Siddiqi (2006) "would result in the same debt-ridden environment from which Islamic finance was supposed to rescue by introducing sharing and asset-based instruments". The paradigm of *maqasid*-based should be prioritized over the paradigm of Shari'ah compliant, to be able to carry out the Islamic spirit into economic transactions, i.e., the sharing nature and cooperative-competitive characteristics that would enable achieving efficiency and equity simultaneously.

The most important techniques of financing available within the framework of the s*hari'ah* are *mudharaba, musharaka* and the acquisition of shares for establishment of joint stock companies. These represent equity-based contracts and the nature of Profit and Loss Sharing (PLS) system, which most advocates of Islamic economist propagate, as they reflect more just and fair principles. In addition *murabaha* reflects debt-based contract which is widely used under current development of Islamic banking and finance.

Table 1. Comparative features of major Islamic financing techniques

Techniques	Mudharaba	Musharaka	Murabaha
Features			
Nature of financing	Investmen-based	Investmen-based	Combination of trading and debt
Role of the capital provider in the manage-ment of funds	Nil	Full control	Full control on the use of finance
Risk-bearing by capital provider	To the full extent of the capital as well as of the opportunity cost of capital. For the entire period of the contract	The same as in Mudharaba The same as in Mudharaba	To the full extent of the capital Only for a short period until the goods are purchased and taken over by the finance-user
Uncertainty of rate of return	Complete uncertainty	Complete uncertainty	Uncertainty only for a short period of the contract
Cost of capital	Uncertain exante	Uncertain exante	Fixed and predetermined
Relationship of cost of capital and rate of return on capital	Perfect correlation	Perfect correlation	Strong correla-tion but not perfect

Source: Khan (1995)

Mudharaba as a contract between two parties, one as capital provider (*shahibul maal*) and the other as entrepreneur (*mudharib*) to conduct business venture, also is known as a silent partnership contract (Al-Zuhayli, 2003). Under this type of contract capitalist deserves share of profits to compensate the provided capital, whereas entrepreneur deserves share of profits to compensate his effort to materialize the profit through business ventures. If profits go only to one party (the capitalist) it is called a *mubada*. On the contrary, if all profits go to entrepreneur only it is called a *qard*. This contract is also known as *qirad* and *muqarada* (Al-Zuhayli, 2003). *Musharaka* as a contract between two or more parties to conduct business ventures requires each contracting party contribute capital in the form of financial or non financial capital. On the other hand, *murabaha* categorized into trust sales is a contract that resembles a cost-plus sale. This contract requires conditions (Al-Zuhaily, 2003) that the initial price and the profit margin should be knowledgeable, and the original price should be fungible. *Murabaha* financing applied in the Islamic banking is the mode which reflects buyer-seller relationship parallel to debtor-creditor relationship due to its deferred/instalment payments.

Profits produced in *musharaka* (also in *mudharaba*) is not guaranteed, as a result, the entrepreneur does not assure, secure or guarantee profits. Fundamentally, no collateral is needed. Therefore, it is possible to conclude that *musharaka* does not require strict collateral guarantees and does not leave the partner (entrepreneur) with a heavy burden of debts, post-dated cheques or any other kind of obligations compared with debt finance in the conventional system (Ahmed, 2006).

Mudharaba and *musharaka* contracts have differences in terms of the form of capital to contribute. *Mudharaba* requires that capital should be in financial/monetary term. Hassan (1985) quoted that jurists generally agree that in *mudharaba* the profit and loss sharing ratios of the financier are to be different and capital can be contributed in the form of money or money's worth. Furthermore, the financier has no right to participate in the business decision making (Ghazali (1058-1111AD), pp. 84-85). On the contrary, *musharaka* allows capital to have non-financial

forms, such as labor and skills to enter into contract and all parties participating in the contract has the right to participate in making business decision.

Financing based on *mudharaba* and *musharaka* will be indicated by *ex-ante* profit share to distribute the realized profit. Once the profit realized, the profit share then will be able to indicate the ex-post return of financing for the financier. Profit rates yield from *mudharaba* and *musharaka* financing would depend upon the profit-sharing ratios, the volume of profit generated by the projects/ventures, and the size of financing. The profit rate indicator is crucial factor in valuation of project financed by *mudharaba* scheme, and important for the purpose of macroeconomic analysis of *mudharaba*. It is different from profit-sharing ratio attached to the *mudharaba* contract, as the latter defines how profit generated from the project is distributed among the participating parties. Therefore for valuation purposes and macroeconomic analysis of *mudharaba*, profit rates would be sufficient, not the profit sharing ratio (see Choudhury & Abdul Malik, 1992, p. 158). This indicator would be utilized in the absence of interest rates variable in analyzing the effect of macroeconomic policies such as fiscal and monetary policies.

Interest-based system as some experts perceived, e.g., Khan (1986), has its systemic weaknesses, especially if it is observed through conventional banking system, due to the existence of what is called one-sided liability. They argued that one-sided liability is a source of fundamental instability in conventional banking and financial system. Khan (1986) has noted that the abolition of interest-based transactions is not a subject alien to Western economic thought. Fisher (1945), Simons (1948), and Friedman (1969) have argued that the current one-sided liability, interest-based financial system can be fundamentally unstable. There are many such examples, the German hyperinflation of the 1920s, post war hyperinflation's in South America, oil shock inflations in Europe of the 1970s, and banking crises in Japan, East Asia, California, the BCCI debacle in the 1980s, and so on. The occurrence of crises is the result of a complex of factors emanating from over-exuberance, greed, underestimation of risk, overexposure, currency failures, asset depreciation, faulty regulation, illiquidity, and macroeconomic shocks. Zarqa (1983), Khan (1987), Chapra (2000), El-Gamel (2000) and Abdul Gafoor (1996) and a number of papers that followed have illustrated the macroeconomic stability that can be sustained from a PLS system in the Islamic finance to replace interest-based transactions that characterize Western transactions.

In the case of *mudharaba*, the financial institutions, instead of participating in the management of the business finance, need to exercise adequate supervision to ensure that the funds are used properly. A part of the total financing agreed between the financial institutions and the shareholders may be allayed while the remaining part may be made available for short periods to offset the shareholders funds in transit or to take care of liquidity shortages.

The inability to secure a lien on the assets of the business financed, possible in the case of interest-based lending, would make the financiers more careful in evaluating the prospects of the business and cautious in providing finance. Moreover, it would be difficult to find medium- or long-term financing in an Islamic economy without sharing the ownership and control of the business. Expansion of the business would hence be closely related to the distribution of ownership and control. Similarly it would not be possible for anyone to earn an income on savings without being willing to share in the risks of business. Thus ownership, fruits and risks of business would become more widely distributed in an Islamic economy than those would possibly distributed under capitalism.

Financial instruments such as *mudharaba*, *musharaka*, and *murabaha* are among those, as Choudhury (1999) asserts, to be invoked to bring about the full impact of spending on socio-economic development. *Mudharaba* and *musharaka* financing currently practiced under Islamic banking system might push capital formation at firm level to increase. Hence they might further enhance investment level as well to lead ultimate goal of rising productivity and growth in the economy. This last goal might be realized once new employment opportunities could be created. Creation of new employment would enhance socio-economic aspects in terms of improving income and its distribution, alleviating poverty and unemployment. All these implications might be materialized and the appropriate concept of *mudharaba* and *musharaka* financing should be fitted. For instance, the nature of co-operative and participatory should be carried through in these modes of financing. This is exactly what Choudhury (2001) criticized for the present practice of these financing schemes. He argued that there is no methodology that has been developed to manifest the true nature of co-operative and participatory in the schemes, and consequently the objective of socio-economic development to promote entitlement, ownership and decision making by participation on the one hand and bring about risk diversification through renegotiated contracts on the other could not be attained. He pointed out technical problem arise in

implementing *mudharaba* and *musharaka* contracts; restrictive terminological usage among Islamic economist, and financial definition that fail to realize co-operative partnership among capital owners and non-capital owners including labor.

Under *mudharaba* contract, one of the problems has to do with information. It is difficult to assume today that investors, i.e., the *rab al-mal* have the same information about a firm's prospect as its managers (*mudharib*). The latter often have better information than the investors. This is called asymmetric information. Hence, one reason why Islamic banking has failed to invest in *mudharaba* ventures may have to do with its lack of expertise to monitor a firm's operation, such that more information is made available to them. Two types of problem related to asymmetric information arise, namely: (a) adverse selection, and (b) moral hazards.

Adverse selection is the finding of the true risk of the fund user (*mudharib*) before the *mudharaba* fund is made. When adverse selection looks into the problem of displacing the good *mudharibs*, moral hazards is about problem of monitoring the *mudharib* who unknowingly may be wrongly selected. Hence the *rab al-mal* may have to deal with *mudharibs* who may not be using the *mudharaba* funds to the interest of the project but only themselves. Again the monitoring cost will be substantial which traditional banks may not be capable to do. In conventional equity finance, the moral hazard is often seen in the principle-agent problem. In *mudharaba* financing, the *rab al-mal* or shareholders own the firm's net worth while the *mudharib* or the managers control the firm's asset. The moral hazard problem arises when *mudharibs* do not have the same incentive to maximize the firm's value as the owners do. Hence to determine whether the *mudharib* is using the project's fund efficiently, detailed and costly monitoring system is important.

In view of the above problems, a support system is necessary to ensure that the *mudharaba* mechanism is effectively and successfully implemented. It is rather meaningless to arrive at complex formulas or techniques to generate a scheme of realistic profit-sharing ratios if there is no transparent system to help overcome the problems caused by moral hazards and adverse selection.

From the Islamic point of view, the dichotomy between owners and managers is clearly recognized. In the case of *mudharaba*, *rabb-al-mal* is the owner of the company while the *mudharib* has the decision making powers. However, the basis of Islamic separation is the concept of *amanah* (trustworthiness). The *mudharib* is an agent working on behalf of the owner in a trustworthy fashion. He will try to serve the interest of the company rather than his own selfish motives. Therefore, 'the principle of economic trusteeship in an Islamic economy is dramatically opposed to the self-interest principle which is the cornerstone of the free market economies of non-Islamic societies. This clearly suggests that the object of an Islamic firm will not be profit maximization. Rather, the firm may be satisfied to realize a 'reasonable' or 'fair' level of profit if that enables it to achieve the more important goal 'doing good to please God'. Should the term maximization be used then it is maximization of *maslahah.*

Equitable distribution of risk and return attached to *mudharaba* and *musharaka* contracts might lead to important consequences. Financing based on these two contracts might enhance the level of investment (Presley & Sessions, 1994) due to prioritizing sound investment projects, rather than ability to repay the loans, when granting the financing, and hence improve the efficiency of resource allocation.

Equity-based financing modes applying *mudharaba* and *musharaka* contracts also would have different implications from that of debt-based financing mode applying *murabaha.* The nature of equity-based financing is participatory capital mixed with entrepreneurship skill to undertake business venture. In this regard the return of financing and even the principal capital is not guaranteed and depends upon the profitability of the project. In case profit can be generated it will be shared according to the pre-agreed ratio between financiers and entrepreneur and the principal capital can be paid back once the venture ends. On the other hand in case of loss incurred, it will also be shared under *musharaka* contract. Under *mudharaba* contract the financial loss will be born only by financier, meaning that the principal capital will decrease.

The advantage of implementing equity-based financing is highlighted by some authors. For example, Presley and Session (1994) show that prevalent use of *mudharaba* might lead to enhance capital investment due to its ability to play a role as an efficient revelation device. In terms of cost of funds, equity-based financing might end up with a relatively cheaper cost due to the elimination of the fixed component. Khan (1987) shows through his model that Variable Return Scheme (VRS) which reflects equity-based financing is superior to Fixed Return Scheme (FRS) which reflects debt-based financing mainly used under conventional banking system. He further provides proof that a risk-averse investor strictly prefers VRS over FRS (p. 84).

The risk sharing nature of equity-based financing might also have different implication on the non-performing financing (NPF), which in turn will affect the quality of balance sheet. The NPF for equity-based financing is treated differently as a consequence of participatory nature. A true loss incurred by entrepreneur will be transmitted to the financier/Islamic bank in the form of reduced principal capital. The bank might have provision of financing loss to anticipate such loss meanwhile the entrepreneur incurring loss will not be burdened by the loss except his/her work and efforts dispensed unrewarded. In this sense, Islamic bank's financial report seems to be more transparent and reflects a higher quality because there will be no write-off practices of NPF for equity-based financing. In addition, for non-PLS financing, e.g., *murabaha* financing, even though it seems to be similar with interest-based credit in conventional banking system, it has different characteristic as it will never have compounding effect on the principal like the one in the interest-based credit (Al-Suwailem, 2008).

Murabaha contract that is widely used in the current practice of Islamic banks represents non-profit-loss sharing. As Iqbal and Mirakhor (2007) described *murabaha* also is included into financing contracts, offering ways to create and facilitate financing of transactional contracts, i.e., trading activities. This financing contract also provides channels for capital formation and resource mobilization between investors and entrepreneurs. They further explained that the distinguishing feature of this financing contract is the absence of a debt contract. These financing contracts, including MMM, are meant either to facilitate trade finance, asset backed-securities, or to provide capital through *mudharaba* and *musharaka* contracts.

For a *murabaha* contract to be valid, as further detailed in Iqbal and Mirakhor (2007), it requires an original sale, not to be used as a means of financing any existing inventory, and more importantly the financier must take the ownership of the item on sale. *Murabaha* financing is often perceived as indifferent from conventional debt, which is characterized by a predetermined pay-off; however, the difference exists in that Islamic instruments, financing are closely linked to a real asset. In *murabaha*, no money is being loaned; instead a specific asset is purchased for the client to ensure that the financing is linked to an asset. Under this financing the financier is exposed not only financing risk, i.e., credit risk, but also price risk, and the client retains the option to decline the item transacted. Murabaha plays important role as highlighted by Ahmad et al. (2010) that the primary function of the Islamic bank is to promote trade activities as an active interaction with Surplus Units and Deficit Units of the economy. The secondary function aims at provision of agency services and other market compatible products to facilitate its customers.

In practice, the mechanics of *murabaha* financing, as being detailed by Iqbal and Mirakhor (2007) might not fully be followed. As long as three parties, financier, i.e., bank, client, and vendor, involved in *murabaha* contract play their true roles, the implementation would be correct, however the practice more often than not shows only two parties, bank and client, sufficient to conclude the *murabaha* contract. It results in a strong impression that *murabaha* financing is no different from that interest-based debt applied in conventional banking system.

The discussion on MMM then leads to the important quest on how combination of these three Islamic financing schemes be utilized to create a sound and efficient financing portfolio for Islamic bank and financial institutions. Through this financing portfolio, risk diversification and productive investment opportunity could be implemented. It is expected from this financing portfolio, socio-economic goals could be accomplished, i.e., generation of income, output, and employment could be extended through new productive investment. In the end the economic growth could be enhanced effectively.

Conclusions

Discussion on the finance and growth relation coupled with the main modes of financing concept from Islamic point of view lead to elaborating the equity-based financing applied in Islamic banking to be crucial. The debate on bank-based or market-based financial system effectiveness appears to have different notion if the presence of Islamic modes of financing, i.e., *mudharaba, musharaka,* and *murabaha*, be taken into account.

The bank-based finance is viewed as debt-based system due to the fact that banks under conventional system advance all their financing in the form of credit, i.e., debt. While under Islamic banking system, a bank can advance financing using two types of schemes, equity-based and debt-based financing. Most proponents of Islamic banking and finance suggest that Islamic banks should have implemented more equity-based than debt-based financing to show the comparative advantage of Islamic banks as discussed by Presley and Session (1994) and Khan (1987).

The fact that Islamic modes of financing may take the form of equity-based financing and debt-based financing, there is a potential that the bank-based

view to have stronger grip in explaining finance and growth relationship will be justified on two grounds. *First*, equity mode of financing through *mudharaba* and *musharaka* contracts reflect profit and loss sharing nature will provide a better channel for transmitting finance to real economic activities with productive nature that at the end will reflect economic growth. *Second*, debt-based mode of financing through *murabaha* contract reflects non-profit sharing nature will also provide strong channel in the transmission mechanism into real economic activities with consumptive or end use nature that also end up with driving economic growth.

Assuming that the presence of Islamic banking is capable of providing more significant numbers of equity-based financing via *mudharaba* and *musharaka* financing, the bank-based view might have stronger basis to prove its significant role in driving more economic activities in the real sector and hence pushing economic growth to a higher level. Meanwhile capital market which provides more equity-based instruments might be expected to have more positive impact in supporting the growth in real sector. In this way equity-based modes of finance might show and prove its reliability in explaining the dynamic relationship of finance and growth.

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