Islamic finance revisited: conceptual and analytical issues from the perspective of conventional economics

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ISLAMIC FINANCE REVISITED: CONCEPTUAL AND ANALYTICAL ISSUES FROM THE PERSPECTIVE OF CONVENTIONAL ECONOMICS

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Abstract

After a brief recent empirical sketch of Islamic finance, the paper turns to its main theoretical and conceptual purpose. It seeks to relate the concepts of Islamic and conventional finance, and to examine certain important questions which arise from the interaction between these systems. The paper is written from the perspective of conventional modern economics, as the authors are students of the latter.The paper discusses the main tenets of Islamic finance, as well as those of modern economics, including the implications of zero interest rates and those of Modigliani and Miller theorems. The most notable finding of this paper is that John Maynard Keynes' analysis of employment, interest and money provides, inadvertently, the best rationale for some of the basic precepts of Islamic finance. The paper concludes that there is no inevitable conflict between the two systems and cooperation between them is eminently desirable and feasible.

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1. Introduction

Islamic finance has come of age. Despite apparent serious setbacks (*eg.* interruption of payments in Abu Dhabi in 2009, the Great Recession in Western countries between 2008-2010 and the recent turmoil in the Middle Eastern countries), Islamic banking and finance have been growing at a very fast rate. The size of the industry which was a mere US$150 million in the 1990's has increased to nearly US$1 trillion. Although it is still a niche market and its share in world finance is quite small, it is nevertheless poised for further rapid expansion as economic development proceeds, particularly in the Muslim world. Sheng (2011) estimates the current composition of Islamic finance to be as follows; there are roughly US$800 billion in Islamic banking funds; US$100 billion in the '*sukuk' (*Islamic bonds), and another US$100 billion in '*Takaful'* (Islamic insurance). According to the data recently released by Standard & Poor's, in the first quarter of 2011, US$32.4 billon of Islamic bonds (*`sukuk`),* were issued compared with US$51.2 billion raised in the whole of 2010. The engine of the global market up to now has been Malaysia, which accounted for 58 per cent of funds raised in the first quarter.

However the situation may be changing with the big western banks such as Goldman Sachs and HSBC deciding to enter the Islamic bond market. This is of course partly due to the current financial difficulties of the euro zone banks and conventional debt markets. HSBC's Middle East unit became the first Western bank to issue an Islamic bond (*`sukuk`*) last May worth $500 million carrying a maturity of five years. The French Bank Credit Agricole has said it is considering issuing an Islamic bond or creating a wider *`sukuk`* programme that could lead to several issues. However the big recent event in the Islamic bond market has been the controversial decision of Goldman Sachs to raise $2 billion from this market. The controversy is due to the fact that several *Shariàh* Law scholars have argued that the Goldman Sachs' *`sukuk`* does not meet requirements of the *Shariàh* Law. However the merchant bank denies the charge of non-compliance and appears to be sticking to its decision to go ahead with the '*sukuk'* . Reuters (2012).

The quick growth of Islamic finance has, however, not been a spontaneous event but one carefully prepared and helped by Islamic governments and their central banks. The Central Bank of Malaysia (Bank Negara Malaysia) has been in the forefront of these efforts and has assisted the growth of Islamic finance by the establishment of an institutional framework for a clear understanding and propagation of the laws of Islamic finance (see further Mirakhor 2010). This is no mean achievement as Islamic scholars disagree on many crucial aspects of

Shariàh laws. The Malaysian government's chief objective has been to help establish regulatory and monitoring institutions that will provide an internationally accepted and unambiguous conception of laws relating to Islamic banking and financial organisations. The International Monetary Fund (IMF) has also been helpful in these and other respects together with a number of other Islamic governments (e.g. Bahrain, Sudan, Pakistan).
Apart from the IMF, a number of non-Islamic financial centres have also recently taken steps to encourage Islamic banking and finance. Tax laws have been revised to facilitate *Shariàh* compliant financial instruments such as the long term '*sukuk'* bonds mentioned above. A notable recent entrant in this field has been the non-Islamic centre of Singapore, which has started doing business in Islamic finance. A number of non-Islamic countries in Europe including the UK have also taken legal action to facilitate Islamic banking as these countries want a slice of this fast growing market. There are, however, also examples of jurisdictions that have passed negative legislation, usually on political grounds, to prohibit the spread of Islamic finance. This category of countries includes surprisingly South Korea and perhaps not so surprisingly some individual states in the US.

The reasons for expecting fast expansion of Islamic finance lie not only in the increasing incomes of Islamic populations but also in the fact that the basic infrastructure for Islamic finance has now been laid with the establishment of the Accounting and Auditing Organization for Islamic Financial Institutions (AOFFI), and the Islamic accounting standards authority, the Islamic Financial Services Board (IFSB), the international Islamic financial regulatory standard-setting organisation. The Institute for Education in Islamic Finance (ISRA) also provides an invaluable website that is increasingly the transparent source for *Shariàh* interpretations on what is considered acceptable under Islamic law (Sheng 2011).

The Islamic Finance Global Stability Report, which was jointly produced by a number of organisations in 2010, 'presents a comprehensive overview of the global financial architecture- and the cooperation and collaboration mechanisms among IFSB members – needed to promote a competitive, resilient, and stable Islamic finance industry'. The Islamic Financial Stability Forum that has resulted from this Report, and the International Islamic Liquidity Management (IILM), provide Islamic finance with a wider range of tools and instruments, as well as a road map leading toward a vision of an integrated and sound global Islamic financial industry.' (Ahmed and Kohli, 2011. Pg. xxvii)

With the above empirical background we turn now to the main purpose of this paper which is theoretical and conceptual. It seeks to relate the concepts of Islamic finance to those of conventional finance and to examine certain important economic questions which arise from the interactions between the two kinds of theories. The paper is written self-consciously from the perspective of conventional or modern economics.[1] It identifies similarities and dissimilarities between these two systems of thought and speculates on the extent to which the differences can be resolved. The central conclusion of the paper is an optimistic one, namely, that each of the two paradigms of thought has its own strengths and weaknesses but can nevertheless coexist with the other without any serious difficulties.

The World Bank economists Beck, Demirgüç-Kunt and Merrouche (2011) have recently observed that while there is a large practitional literature on Islamic Finance in general, and specifically Islamic banking, there are few academic papers. The present study is intended to help fill that gap.

Organisation of the paper

The rest of the paper is organised as follows: The first part, sections II and III will discuss the two fundamental tenets of Islamic finance, namely, (a) absolute prohibition of interest payments on debt, and (b) the fundamental ethical basis of Islamic law. These will be examined from the perspective of modern economics to reach the conclusion that, although most strictures of conventional academic economists as well as the business press against the Islamic paradigm are inaccurate, some are still relevant. Importantly, this part of the paper suggests that the best rationale for the Islamic injunction against interest rates is provided by John Maynard Keynes (1936) in his magnum opus, The General Theory, although his analysis was not directly concerned with issues of Islamic finance. These sections also pay particular attention to the concept of cost-benefit analysis (CBA), widely used in both theoretical and applied conventional economics. We discuss the compatibility of the rates of discount normally used in such analyses with Shariàh law.

Further, an examination of other issues, in this part of the paper, highlights the moral hazards faced by Islamic depositors as well as by their banks. These moral hazard problems apply to both Islamic and non-Islamic finance and that avoidance of moral hazard would depend on the effectiveness of the disciplinarian function of bank risk management, financial regulation, the bankruptcy courts and also the ethics of the key players in each system. Since these may have differences in practice in different countries, it is not possible in

principle to argue that one system is more effective in moral hazard avoidance than the other.

From the two basic tenets of Islamic economics the second part of the paper will go on to consider in sections IV, V and VI the important relevant tenets of modern economics: (a) the so called Modigliani and Miller (MM) theorems and their implications for optimal capital structure of Islamic banks and firms, (b) the role of the concept of bankruptcy, its costs and who pays the main costs, and their consequences for moral hazard for Islamic and non-Islamic finance and, (c) a brief examination of the role of stock markets in Islamic finance. A final section will summarise the main findings of the paper and provide a brief conclusion.

At the risk of repetition, to provide additional clarity to the issues outlined above, they are elaborated further below.

1. In view of the absolute prohibition in Islamic finance to pay any kind of interest on debt, an important question is whether or not it is possible to run efficiently an economic system which does not have a key role for interest rates?

2. What role do interest rates play in conventional economics at a theoretical level and in practical terms? Can other variables substitute for interest rates in alternative economic systems?

3. In the discussion of the method of cost-benefit analysis, are the discount rates which are normally used in such exercises compatible with the tenets of Islamic finance?

4. Why and to what degree are the households, firms and banks involved in Islamic finance vulnerable to moral hazard? The concept of bankruptcy, its costs for contracting parties under the two systems and their relationship with moral hazard will be analysed.

5. What are the implications of MM theorems for Islamic banks and firms? Is there an optimal debt-equity ratio for these institutions?

6. What, if any, should be the role of the stock market in Islamic finance?

Although this commentary on Islamic concepts is based on modern economic analysis, it fully acknowledges the contributions of the great contemporary

Islamic economic scholars, including among others, Professors Abbas Mirakhor, Mohshin Khan, Ahmed Ali Saddiqui and the eminent late IMF economist Dr. V. Sundararajan. This paper builds as much on the work of these scholars as on that of conventional economists.

2. Central Tenet of Islamic Finance: Absolute Prohibition against Interest Rates

In the 1970s when the subject of Islamic finance was first raised in a serious way, its central tenet of the absolute prohibition of interest payments on debt was severely criticised by mainstream economists. It was alleged that such a prohibition was incompatible with modern economic analysis and would result in a gross misallocation of resources. It was dubbed as a zero interest system in which there was no return to capital. Professor Mirakhor (2009) reports that the BBC and the Wall Street Journal regarded the system as being totally non-viable and derived from 'voodoo' economics.

Apart from these popular criticisms of Islamic injunctions against any interest payments, there were also serious academic objections. Professor Mirakhor (2010) summarises below the main points of these criticisms: -

that zero interest meant infinite demand for loanable funds and zero supply;

such a system would be incapable of equilibrating demand for and supply of loanable funds;

with zero interest rate there would be no savings;

this meant no investment and no growth;

in this system, there could be no monetary policy since no instruments of liquidity management could exist without a fixed predetermined rate of interest; and, finally,

this all meant that in countries adopting such a system there would be one way capital flight.

It should be noted that ironically all the above criticisms would also today apply to countries that practice Zero Interest Rate Policies (ZIRP) under quantitative easing.

Cost Benefit Analysis, Time Preference and Shariàh Law

In contrast with Islamic economic analysis, conventional economists widely use the notion of interest rates in their work. In terms of their paradigm they have legitimate use of zero interest rates, negative interest rates as well as positive interest rates in examining real world economies. To illustrate with a difficult case, one commonly used concept in both theoretical and applied conventional economics is that of the cost-benefit analysis (CBA) of a project, or of a development policy, or the choice of a particular technique of production. To take a simple specific example of a project to build, say a bridge across a river, the CBA would involve estimating the time series of respective costs and benefits which will accrue during the time span of the project. The costs and benefits would normally differ not only in their magnitudes but more importantly also in their respective time profiles. In order to assess whether the proposed project is viable, one needs to systematically compare the two time series. This is done in CBA by taking the net present value of each of the series – the latter being determined by deflation by a common rate of discount. This rate of discount which is normally taken to be the market interest rate is supposed to reflect the society's preference between consumption or utility today and consumption or utility tomorrow. If the two are equally valued, this may be regarded as the case of Islamic finance with a zero discount or interest rate.

Interestingly, in conventional economics in the classic work of Pigou (1920) and Ramsey (1928) on this subject, it is also strongly argued that this time preference should be zero, the purpose in this case being the achievement of intergenerational fairness. A positive discount rate or interest rate would greatly favour the current generation against future generations. Pigou considered it as ethically wrong to discount future consumption or utility just because it takes place in the future. He argued that discounting was basically due to myopic behaviour. Pigou and Ramsey took the view that a zero rate of discount would promote equity by preventing the present generation from acting selfishly. They regarded a non-zero rate of discount necessarily implied an unfair advantage for the present generation.

Thus we find that Pigou and Ramsey's ethical judgements coincided with those of Islamic finance on this particular issue. However, there is a more significant argument in favour of a non-zero discount rate or a positive time preference which is based on the fact that the society tomorrow is likely to be richer than it is today because of economic growth. In these circumstances a social rate of

time preference has a sound ethical justification. Summarising a huge literature on optimal growth theory Marini and Scaramozzino (1999) rightly note:

> Under endogenous productivity growth, the optimal social discount rate must be equal to the marginal social product of capital……Positive social time preference, far from discriminating against future generations, is essential for an equitable inter-temporal allocation of resources.

It is a moot point whether a non-zero discount rate in CBA accords with *Shariàh* law. Nevertheless, it may be useful to observe that the non-zero discount rate arises here entirely from the fact of greater production in the following time periods. Therefore, it is different from the case of money earning interest without any effort. Here the non-zero rate is associated with economic growth.

Interest Rates, Savings and Financial Liberalisation

Another, this time a more straightforward, example of the use of positive interest rates in conventional economics is provided by the work of McKinnon (1973) and Shaw (1973) which has played a major role in financial liberalisation in developing countries since the 1970s. In this research, high interest rates are viewed extremely positively. As this work of the so-called 'Stanford School' has had a wide impact, it will be useful to examine it a little more fully. Writing in the 1970s, McKinnon (1973) and Shaw (1973) attributed the poor performance of investment and growth in developing countries to 'financial repression', as expressed in interest rate ceilings, high reserve ratios, and directed credit programmes.

The Stanford economists, therefore, argued strongly in favour of financial 'de-repression'. They suggested that the liberalisation of the financial system would lead to higher interest rates and thereby to greater savings, greater magnitude as well as quality of investments and to growth. This work is, however, controversial and its conclusions are contrary to much mainstream economics as well as those of Islamic finance.[2]

The main testable hypotheses of the Stanford economists were (1) high interest rates would yield higher savings; (2) higher savings would lead to higher investment; (3) it will also improve the productivity of investment and thereby lead to faster growth.

All these assertions are debatable both at a theoretical level as well as empirically. It is not our purpose here to provide a detailed analysis of these

propositions. Suffice to say, very briefly, that in the mainstream, the Keynesian economists in particular, contest the McKinnon and Shaw hypotheses on the ground that their underlying model assumes that savings determine investment. Savings are, however, done by one kind of economic agents (individuals and households), and investments are carried out by other groups such as firms and entrepreneurs. The different kinds of agents have different motivations and there is no reason why savings should determine investment. Critics also point out that McKinnon and Shaw assume there is always full employment of resources. Moreover, they suggest that whether or not higher interest rates in the formal sector following liberalization will increase aggregate savings depends on the savings behaviour of the losers and gainers from this process. To the extent that the personal sector finances the investments of the corporate sector, which in developing countries are often highly geared, higher interest rates may reduce corporate profits and retained earnings. The central point is that, although the rise in interest rates will increase personal incomes, if the savings propensity of the personal sector is lower than that of the corporate sector (which is likely), it will lead to a fall in total savings (Akyuz, 1991).

More importantly, whether for the above reasons or others, empirical evidence from many countries, particularly Asian countries, which liberalized their credit markets in the 1980s and 1990s and increased real interest rates did not indicate a systematic rise in aggregate savings. As Cho and Khatkhate (1989) noted in their influential analysis of the financial liberalization experience of five Asian countries (Indonesia, Malaysia, Philippines, Republic of Korea and Sri Lanka):

> It was believed that the removal of the repressive policies would boost saving. The survey in this paper of the consequences of reforms does not reveal any systematic trend or pattern in regard to saving (and also investment), though it clearly demonstrates that reform has greatly contributed to the financialization of savings. In most of these countries, savings changed in a random fashion.

Akyuz (1991) reached the same conclusion with respect to aggregate savings in relation to Turkey's liberalization experiment during the late 1970s and in the 1980s.

As for the effects of credit market liberalization on the efficiency of the investment allocation process, leaving aside the disastrous consequences of such liberalization in the Southern Cone countries in the 1970s, many successful economies have used subsidies – indeed negative interest rates – for long periods of time as an important part of their industrial policies during the course of economic development. This has certainly been true of Japan, which provided negative real interest rates to its favoured corporations for much of the

post-war period of its most rapid industrialization (1950 to 1973). Thus Sachs (1985) notes in relation to Japan:

> Domestic capital markets were highly regulated and completely shut off from world capital markets. The government was the only sector with access to international borrowing and lending. Foreign direct investment was heavily circumscribed, with majority ownership by foreign firms both legally and administratively barred. During the early to mid-1950s, about a third of external funds for industrial investment originated in loans from government financial institutions, at preferential rates that varied across firms and industries. These state financial institutions remained an important source of cheap financing until the 1960s.

As Amsden (1990) pointed out, subsidies and directed credit were also central features of the Republic of Korea's highly successful industrial policy during the previous two decades.

To sum up there is enough evidence to indicate that, contrary to the Stanford school, a high-interest rate policy based on financial de-repression was apparently not regarded as being suitable by many developing countries. The most successful economies in East Asia did not follow such policies. Policy-makers in developing countries ordinarily try to maintain low interest rates in order to encourage investment and growth. In that sense, there is unlikely to be much difference at a practical level in the performance of Islamic and non-Islamic countries in the real world. However, at a conceptual level, the difference between the two paradigms is huge. Islamic scholars do not find any justification for positive interest rates (see, however, below). Nevertheless, the fundamental flaw in the mainstream strictures against the zero interest rate policy of Islamic finance was that it failed to take into account the fact that although the policy did not reward financial investment with interest payments, profits on capital and enterprise were fully allowed, and indeed encouraged.
Finally, in addition to zero and positive interest rates, conventional economics also employs negative interest rates. These often arise from the government's industrial policy where the government wishes to encourage certain industries and is therefore willing to 'socialise' the risks involved for the individual firm; in other words the government subsidises the relevant activities of the firm.

Keynes and Zero Interest Rates

As indicated in the section above, the Stanford school expectation that high interest rates would generate high savings and investments is not only incompatible with empirical evidence but is also regarded as being theoretically erroneous by many modern economists. Most significantly, in the context of this paper, John Maynard Keynes in his magnum opus, the General Theory of

Employment, Interest and Money (Keynes, 1936), provided a powerful defence of zero interest rates and condemned usury, historic or contemporary. Usury was strongly opposed both by Islam and the Christian Church in medieval Europe and elsewhere. Although he did not set out to do so, Keynes' analysis, in our view, provides the best rationale for some of the basic principles of Islamic Finance. In the General Theory, Keynes wrote:

> There remains an allied, but distinct, matter where for centuries, indeed for several millenniums, enlightened opinion held for certain and obvious a doctrine which the classical school has repudiated as childish, but which deserves rehabilitation and honour. I mean the doctrine that the rate of interest is not self-adjusting at a level best suited to the social advantage but constantly tends to rise too high, so that a wise Government is concerned to curb it by statute and custom and even by invoking the sanctions of the moral law. (p. 351)

Keynes went on to observe:

> Provisions against usury are amongst the most ancient economic practices of which we have record. The destruction of the inducement to invest by an excessive liquidity-preference was the outstanding evil, the prime impediment to the growth of wealth, in the ancient and medieval worlds. And naturally so, since certain of the risks and hazards of economic life diminish the marginal efficiency of capital while others serve to increase the preference for liquidity. In a world, therefore, which no one reckoned to be safe, it was almost inevitable that the rate of interest, unless it was curbed by every instrument at the disposal of society, would rise too high to permit of an adequate inducement to invest. (p. 351)

Thus, Keynes made common cause with Christian scholars and the medieval church in denouncing usury and raised issues with those modern economists (the neo-classicals) who believed that free markets would automatically generate interest rates which will ensure full employment. In the context of the economic problems of his day, Keynes thought that it was evident that the market magic was not working. A non-market but low or zero interest rate was therefore the right policy stance.

Keynes believed that only a very low or zero interest rate could ensure continuous full employment in a modern economy. From a Keynesian perspective there are two essential issues concerning the determination of interest rates and employment. The first is the question of the level of interest rates and the second is the issue of marginal efficiency of capital. It is important to note in the context of this paper that Islamic Finance addresses both these concerns. By religious injunction interests rates are kept at zero and at the same time Islamic laws encourage circulation of money rather than

keeping it locked up and unused. Islamic Finance, indeed, encourages the union of capital and enterprise in order to meet the society's needs.

Keynes also opposed high interest rates on the grounds of equity. He wrote:

> The justification for a moderately high rate of interest has been found hitherto in the necessity of providing a sufficient inducement to save. But we have shown that the extent of effective saving is necessarily determined by the scale of investment and that the scale of investment is promoted by a *low* rate of interest, provided that we do not attempt to stimulate it in this way beyond the point which corresponds to full employment. (p. 375, emphasis in the original)

Keynes noted further:

> Interest today rewards no genuine sacrifice any more than does the rent of land. The owner of capital can obtain interest because capital is scarce, just as the owner of land can obtain rent because land is scarce. But whilst there may be intrinsic reasons for the scarcity of land there are no intrinsic reasons for the scarcity of capital. (p. 376)

Minsky (1975) provides a valuable analysis of Keynes' thinking on these matters concerning full employment and more equal distribution of income. Minsky argues:

> Keynes' vision that the euthanasia of the rentier, as a necessary outgrowth of the accumulation process, will radically decrease, if not eliminate, income from the ownership of scarce capital resources requires the prior achievement of a state of disciplined wants, a stable population, and a lifting of the burdens of war. None of these conditions have been fully satisfied – and of these conditions, it may well be that the disciplined–wants requirement is furthest from sight.
>
> Keynes advanced two reasons why capital income should and would decrease as a proportion of total income. There was no need for high incomes to decrease the propensity to consume. In fact, a low propensity to consume is counterproductive, for it decreases the inducement to invest. Furthermore, in a short space of time, full investment could be achieved if full employment were maintained and if wants were disciplined. Once such full investment had been achieved then a new social order could emerge, for
>
> *All kinds of social customs and economic practices, affecting the distribution of wealth and of economic rewards and penalties, which we now maintain at all costs, however distasteful and unjust they may be in themselves, because they are tremendously useful in promoting the accumulation of capital, we shall then be free, at last, to discard.(Keynes pp 155-156)*

In order to put Keynes's analysis of usury in perspective it may be interesting to see how modern economic historians view this phenomenal. Rubin (2011)

provides an alternative interpretation to the conventional ones regarding the incidence and magnitude of usury over the ages and spells out its implications for underdevelopment of the Muslim world compared to the Christian world. Rubin's basic argument is that the political authorities of the Muslim world required more help from the religious authorities in order to legitimize their regime. He puts this forward as a main explanation of why the Islamic usury laws were more stringent than those of Christianity in the Middle Ages although before 1000 AD it was the other way around. Only time and further research will tell whether Rubin's analysis is valid. We note, however, that Rubin regards any freedom to practice usury as a positive aspect without considering the negative aspects which Keynes outlined above. He does not call attention either to the question of marginal efficiency of investment or the relationship between the latter and interest rates.

Another distinguished economic historian of the Middle East is Professor Timur Kuran. In his recent book (Kuran, 2011), he suggests that the reason for the success of the Europeans and the decline of Islam since the Middle Ages has been due to the institutional deficits of the latter. These deficits have resulted in the Muslim world not being able to adopt institutions which facilitated accumulation of capital and impersonal exchange. Capital accumulation was also handicapped by the redistributive character of Islamic inheritance laws. In contrast Western Europe institutional development encouraged both impersonal exchange and capital accumulates.

Contrary to Kuran, the Harvard economic historian Chaney (2011) suggests that in the final analysis it was the Middle East's political equilibrium – not Islamic law – that held back the region. He argues that 'Islamic law as interpreted in each period by Muslim religious leaders may have been largely endogenous to the incentives and constraints this group faced. Had the Middle East's political equilibrium changed, the religious leaders' interpretation of Islamic law would have also changed. Alternatively, these leaders could have lost political power and Islamic law might have ceased to be enforced' (pp. 1469).

Economic System and Usury: A Summing-up

From the historical perspective on usury, we take up further analytical issues concerning the role of interest rates and their abolition in diverse economic systems. An economic system where the capital is rewarded according to its earning capacity could be entirely adequate for achieving sufficient savings and investments for economic growth, and for allocating them efficiently. The main proposition of Islamic finance is that the return to capital is determined ex-post

and would be based on the return to economic activity in which the capital was employed. Savings and investment would be determined by this ex-post rate of return on capital. Indeed, subsequent research showed that the Islamic system can be based entirely on equity capital, without debt, and is therefore often more stable than the conventional system based on debt. This question will be discussed further in section IV where the Modigliani and Miller theorems and their implications for optimal financial structure for firms will be analysed.
This discussion raises an important question for conventional economists, whether an economic system requires an ex-ante interest rate to function efficiently. Here, Professor Mirakhor (2011) has reminded us that the Arrow-Debreu-Hahn system of general equilibrium, together with its welfare properties does not have an ex-ante interest rate in the analysis. This system is totally viable and is indeed the crowning glory of modern economics. Adding an extra variable such as the interest rate would over-determine the system and will be difficult to interpret. See also Milgate (*forthcoming*).

It is also interesting to note that because there is competition between conventional investors and investors in Islamic banks there is not likely to be much difference in the rates of return (interest in the case of conventional banks and share of profits in the case of retail Islamic profit and loss sharing (PLS) accounts) earned by the two groups. This hypothesis is confirmed by a recent IMF study which compares the rate of return from the two kinds of banking institutions in Malaysia and Turkey over the period January 1997 to August 2010 (see Çevik and Charap 2011).

The data revealed, as expected, a high degree of correlation between conventional deposit rates and the rate of return on retail PLS accounts in Malaysia and Turkey. Between January 1997 and August 2010, a correlation of one year term conventional bank deposit rates and a rate of return for PLS accounts was 91 per cent for Malaysia and 92 per cent for Turkey. The econometric result show strong evidence of co-integration between conventional bank deposit rates and PLS returns over the long term. Granger causality is found between conventional deposit rates and the rate of return on PLS accounts both in levels and first differences. An important result based on pair wise Granger causality tests indicate that the null hypothesis that changes in PLS returns do not Granger cause changes in conventional deposit rates both in Malaysia and Turkey cannot be rejected, but the null hypothesis that changes in conventional deposit rates do not Granger cause changes in PLS returns can be rejected. The authors also use error correction methodology and find that causality tests confirm the findings based on pairwise Granger causality tests (Çevik and Cherap, 2011).

Thus, in broad terms an Islamic banking system is an essentially equity-based system in which depositors are treated as if they are shareholders of the bank. There is thus no fixed payment to the depositors for their money but they are entitled to a share of the profits of the bank. In this equity based system, corporate governance is rather different than in the conventional system. It will be argued below that this leads to problems of moral hazard for the Islamic bank. It will be suggested further that the redistributive stance of Islamic laws leads to the problems of moral hazard for the depositor. This requires either strong ethics or very strong regulation, or both for the resolution of these difficulties.

In view of their significance for the theory and empirics of Islamic Finance these points will be examined more fully in the next section.

3. Ethical foundations of Islamic finance

Although the rejection of interest payments is an essential element of Islamic finance, the foundations of the latter lie in certain ethical principles which in turn emanate from *Quran Sunnah* and legal and ethical reasoning of *Shariàh* scholars. These in their entirety constitute the basis for Islamic finance. Ethical principles guiding Islamic finance include significantly: 'the avoidance of Gharar: The concept applies to preventable ambiguity and uncertainty,' Ahmed and Kohli (2011). Principles of Islamic finance are implemented through contracts. *Shariàh* law covers conditions of contract and *inter-alia* rights and freedoms of the contracting parties.

Importantly there is a strong redistributive element in Islamic finance. As Professor Mirakhor notes in the conventional system, 'rich help the poor as a demonstration of sympathy, beneficence, benevolence and charity. In Islam, the more able are required to share the consequences of the materialization of idiosyncratic risks – illness, bankruptcy, disability, accidents and socio-economic disadvantaged – for those who are unable to provide for themselves. The economically well off are commanded to share risks of those who are economically unable to use the instruments of Islamic finance. In Islamic finance, the risks that would face the future generations are shared by the present generation through the rules of inheritance. These rules break up the accumulated wealth as it passes from one generation to another to enable sharing risks of a larger number of people,' Mirakhor (2011, p-15).

To illustrate with a simple example from an element of the Islamic banking code, consider the case of a mortgagee with an Islamic bank. In Islamic finance

the normal mortgage contract carries an implicit and explicit assurance that if the mortgagee is unable to pay his mortgage, the contract will entitle him for help from the Bank.
Some economists argue that this will create a moral hazard for the mortgagee. However, opinions differ. Other scholars suggest that if the mortgagee does not obey the Islamic ethical code outlined above he or she will be subject to severe sanctions from members of the community. Similarly Khan and Mirakhor (1993) argue that the Banks have direct and indirect control over the agent-entrepreneurs through both explicit and implicit contracts. This is the case because banks could refuse further credit or blacklist the agent-entrepreneur and put at stake his/ her credibility and respectability. This brings in a strong deterrent to irresponsible behaviour. However Sundararajan (2011) observes that this argument does not change the fact that the bank has no legal means to intervene in the management of the current enterprise while it is done by the agent entrepreneur.

To the mainstream economist, it seems very unlikely that adherents of Islamic finance will be able to live up to such high moral standards. Conventional economics invariably assumes that human beings are selfish and analyses their activities on the basis of that postulate. If the same assumption of selfishness is made in relation to the participants in Islamic finance it will lead to a huge moral hazard problem on the side of the debtor.

There is similarly possibility of moral hazard on the side of the Bank. This arises from the unrestricted *Mudaraba* contract where the bank manages the deposits at its own discretion. This increases the moral hazard for a bank as it may indulge in more risk taking, without adequate capital. As Sundararajan (2011) notes, investment depositors in Islamic Banks do not enjoy the same rights as equity investors in conventional investment companies but do share the same risks.

For these reasons, Islamic finance poses considerable pressure on the Islamic Finance management to manage their investment risks to avoid moral hazard. It also poses considerable pressure on the financial regulators to monitor investment and agency (bank intermediary) behaviour to avoid passing all risks ultimately to the depositor. A third unknown factor is the certainty of the *Shariàh* bankruptcy courts to enforce disputes over contracts that show clear signs of moral hazard (or shirking by borrower/investee to avoid his repayments).

Table 1 in the appendix outlines the main differences between Islamic and non-Islamic banks. The most recent empirical research by the World Bank economists, Beck, Demirgüç-Kunt and Merrouche (2010), referred to earlier, suggests that conventional and Islamic banking are more alike than previously thought.

Differences in business models – if they exist at all – do not show in standard indicators based on financial statements information. Other differences, such as cost efficiency, seem to be driven more by country rather than by bank type differences. Finally, the good performance of Islamic banks during the recent crisis appears to be driven by higher precaution in liquidity holdings an capitalization, but no inherent difference in asset quality between the two bank types, . . .' (p.3)

Although based on rather different data and a different definition of the analytical problem, the World Bank economists' conclusions from their empirical study support the findings of the IMF economists, Çevik and Cherap, as discussed in the previous section.

Although as noted in section 1, Islamic finance has expanded very fast, it still has a small share of world finance and is still in a niche market Tan (2009). Some respected commentators argue that the market has concentrated on the development of safe, short-term financial instruments and ignored the long-term market. It is feared by these scholars that because of path dependency which is characteristic of many economic events, the Islamic finance industry may simply continue to operate on the short end of the market. Indeed, these well-wishers of Islamic finance would like to take a major step forward and develop an Islamic stock market for meeting the needs of the Islamic investors for investments with long-term horizons. This important question will be examined in detail in section 5.

4. Modigliani and Miller Theorems

Having examined the two basic tenets of Islamic finance we shall now move on in the second part of the paper to consider a fundamental tenet of modern economics, namely the so called Modigliani and Miller (MM) Theorems concerning the optimal financial structure of firms. We shall also analyse the feasibility and desirability of establishing stock markets on Islamic rules to assist the growth of Islamic finance.

Since the late 1950s and until recently, the modern neo-classical view of finance has been dominated by the so-called 'irrelevance theorems' associated with Modigliani and Miller (1958, 1961). In seminal contributions, starting with their pioneering 1958 paper, Modigliani and Miller put forward two central

propositions about the theory of finance. They showed that in fully developed capital markets, under fully idealised neo-classical assumptions of perfect competition, no transaction costs, no taxation and no bankruptcy, even in a world of uncertainty, the stock-market valuation of the firm is independent of its financing or dividend pay-out decisions. On the basis of certain further restrictive assumptions about expectations and the nature of uncertainty (e.g. uniformity in expectations held by all investors on the stock-market), it was established that the market would value the firm's shares entirely on the basis of its earnings prospects; share prices would be invariant to the capital structure of the firm or to the extent to which it resorts to internal or external sources to finance its investment plans.

Miller (1991) provides an intuitive explanation for the MM theorems with the help of an analogy. 'Think of the firm as a gigantic tub of whole milk. The farmer can sell the whole milk as it is. Or he can separate out the cream, and sell it at a considerably higher price than the whole milk would bring. The Modigliani-Miller proposition says that if there were no costs of separation, (and, of course, no government dairy support programme), the cream plus the skim milk would bring the same price as the whole milk.' Vallimil further elaborates on this explanation in the following terms: '…the essence of the argument is that increasing the amount of debt (cream) lowers the value of outstanding equity (skim milk) – selling of safe cash flows to debt-holders leaves the firm with more lower valued equity, keeping the total value on the firm unchanged. Put differently, any gain from using more of what might seem to be cheaper debt is offset by the higher cost of now riskier equity. Hence, given a fixed amount of total capital, the allocation of capital between debt and equity is irrelevant because the weighted average of the two costs of capital to the firm is the same for all possible combinations of the two.'

At a deeper level, the Modigliani and Miller theorems suggested a dichotomy between finance and the real economy: corporate growth and investment decisions were dictated completely by 'real' variables such as productivity, demand for output, technical progress and relative factor prices of capital and labour. Finance in this paradigm is always permissive and simply facilitates the investment process.

As in the case of neoclassical economics, the normal Keynesian perspective on the role of finance in investment and economic growth also assumes well-developed capital markets. However, this perspective does not postulate perfect capital markets in the sense that the relevant information on costs, reliability and other aspects of the transaction, is not available on equal terms to all the

participants in the market. According to the Keynesian view, corporate investment is essentially determined by 'animal spirits', by businessmen's confidence, by expected demand and by the cost of capital. The latter variable in practice is regarded as being relatively insignificant compared with demand factors.

As they do not accept the assumption of perfect capital markets, Keynesian economists do not generally believe that the Modigliani and Miller propositions are operational in the real world. These neo-classical irrelevance theorems also run contrary to the traditional conception of a firm's investment and financing decisions. The traditional view was a so-called 'pecking order' theory of finance (Donaldson, 1961; Myers, 1984 and 1985; Fazzari, Hubbard and Peterson, 1988), which suggested that firms always preferred internal to external finance and, if they had to use external finance, they would prefer to employ debt and only as a last resort, equity finance. The firm's capital structure and its dividend pay-out decisions, in this analysis, were important variables which had an independent influence on its share price. More generally, the non-availability of the appropriate kind of finance could constrain a firm's growth or investment plans: this suggestion was often incorporated in the post-war microeconomic investment models in the Keynesian spirit. Mayer and Kuh (1957) and Mayer and Glaüber (1964) are classic references. These issues have been carefully examined in Stiglitz (1998 and 2005).

Paradoxically, the above traditional theory of finance has been resurrected and revalidated by a number of theoretical developments in the last two decades which attempt to relax some of the highly restrictive assumptions of the Modigliani and Miller propositions. With respect to the latter, it was noted at the simplest level that if taxation and possibility of bankruptcy and financial distress are introduced into the analysis, this would produce an optimal capital structure for the firm and thus invalidate the Modigliani-Miller irrelevance theorems. Many corporate tax systems, for example, allow interest to be deducted as costs, which provides a significant tax advantage in the use of debt finance. There is, however, a trade-off, since too high a level of debt increases the risks of bankruptcy or financial distress in an economic downturn. This simple trade-off model leads to an optimal debt-equity ratio for the firm, which maximizes its stock-market valuation.

More complex considerations and theoretical developments involving asymmetric information between insiders (managers) and outsiders (creditors or shareholders), problems of adverse selection, moral hazard, agency costs, signalling and transaction costs lead to different costs of the various forms of

finance but can be shown to be broadly compatible with the 'pecking order' type theory outlined above (The classic reference here is Myers and Majluf, 1984). In general, this far richer and more complete analysis of the issues points to the significance of the corporate capital structures and the financial decisions for the real economy. At the very least, the new models of the firm suggest that 'finance' is not simply a veil, but that there are very important interactions between corporate finance and the real economy. Thus, unlike the neo-classical investment models (see in particular the widely acknowledged and valued contributions by Jorgensen and his colleagues) which dominated the profession in the 1960s and 1970s, many economists subsequently in the light of the new interpretation of MM Theorems, particularly the post-Keynesian ones, came to regard 'cashflow' and corporate retained earnings as being a significant constraint on a firm's investment decisions.

However our main concern in this paper is not so much with corporate investment decisions, but with the question of the financial structures of Islamic and non-Islamic firms. Stiglitz (1988) has observed that under 'very general conditions if there is no chance of bankruptcy then financial policy has no effect on the value of the firm; there is no optimal debt-equity ratio.' This suggests that under the neo-classical assumptions of MM Theorems, any financial structure for Islamic firms is optimal, including that of all equity and no debt. However, if these strict assumptions are relaxed, particularly when there is a real possibility of bankruptcy, the firm valuation will depend on its debt-equity ratio. Thus, for any specific firm there will be a corresponding optimal debt-equity ratio. There is no reason to believe that Islamic firms would attempt to achieve or would have achieved their respective optimum financial structures in terms of debt-equity ratios. Does this make Islamic firms less efficient? The answer is not necessarily so because the question of optimality in the above analysis is considered only from the perspective of an individual firm and not from that of society as a whole. Suppose all Islamic firms are 100% equity financed. This may violate the results of the optimality tests of the MM Theorems, but from the point of view of the society as a whole such a capital structure may have considerable macro-economic benefits, such as more stable GDP growth.

The fundamental point is that if all Islamic Finance contracts are equity contracts, then it is vital for the banks to ensure that the investee/borrower is not too highly leveraged. The higher the leverage of the borrower, the higher the risks assumed by the IF investor. By definition, the lower the leverage of the borrower, the safer the financial system is on the whole.

5. Risk Sharing, Risk Shifting, and the Risks of Bankruptcy

From the perspective of conventional economics, there is however another way of interpreting the differences between the Islamic (IF) and non-Islamic borrowing individuals and firms as well as the lending banks. This involves the question of the relative costs and efficacy of bankruptcy in the two systems. So it is not just a matter of whether or not there is provision for bankruptcy or insolvency in a model of corporate finance but what are its costs and who is expected to bear them, in law and in practice.

In terms of conventional finance, the real issues are those of information asymmetry, principal-agent (contract) and insolvency. Conventional finance assumes that you can shift the risks between two parties based upon contract. In Islamic Finance, one starts with risk-sharing between the borrower and the bank. But in all contracts, there is an inherent information asymmetry when the borrower or investee do not know when they will enter economic insolvency (this being dependent on whether banks are willing to lend and the rate of interest). Most companies that are in trouble may be accounting-wise still solvent, but economically insolvent, depending on the mark-to-market price of assets, which also depends on the rate of discount. In other words, the company may not know (and neither does the Islamic Finance institution know), when it becomes insolvent. When the company becomes insolvent, the losses are automatically shared amongst its shareholders and holders of its obligations.

Hence, there is essentially no difference between the non-Islamic finance lender and Islamic equity contract in these respects. The conventional lender protects his own risks and shifts these by contracting with the borrower, to include collateral and guarantees. If however, the real interest rate rises, the DCF value of the borrower's assets decline and real value of liabilities increase and he may go into economic insolvency. At the same time, the collateral value of the lender's holdings of collateral also declines, (especially if they are land or equity). Thus, at higher real rates of interest, especially during a crisis, the borrower moves into economic insolvency and therefore (non-transparently) transfers the insolvency risk to the lenders and holders of his paper. This risk-reversion is identical in form for IF or non-IF firms.

There is a further cost of bankruptcy (transactions cost in time, legal fees etc.) which the borrower or investor may have to invest in so as to recoup their loan or investment. Thus, if both IF and non-IF contracts involve involuntary risk-sharing, then the only real distinguishing feature between the two systems is whether the bankruptcy laws are strong enough and efficient enough for enforcement.

In the IF contract, there is a moral or non-temporal sanction on the borrower, hoping that this 'soft power' will be more effective than 'hard power - legal or other means of enforcement' to force the borrower to repay. The reason is that there is information asymmetry between the borrower's true solvency and the lender/investor. The borrower may engage in lying or hiding his true solvency in order to pass as much losses as possible to the lender and/or investor. We cannot judge *a priori* whether IF's soft power is necessarily better than the legal power of debt enforcement. This depends on the circumstances of the case, the legal powers in a country, and the effectiveness of the courts etc.

To put it clearly, all debt or risk-sharing contracts suffer from moral hazard. If they are not enforced against cheating or free-riding, then risks will pass to the solvency holder/lender. In simple utility terms, when the marginal benefit to the borrower is higher than the cost of sanctions, then he will not pay. An important question is therefore whether sanctions are real enough for the borrowers to make the necessary adjustments so that if they cannot pay today, they shall at least pay tomorrow.

It is arguable that the costs of bankruptcy to the borrowers in terms of conventional finance are lower for the IF borrower than for the non-IF borrower. In the case of the latter there are not only the laws relating to bankruptcy but also daily court judgements implementing the law. This will tend to make the loan contract more transparent and probably more painful in case of default. It is worth noting that the basic laws on bankruptcy differ greatly between advanced countries, notably the US and the UK. In broad terms the UK law is less user friendly to the borrower than the US law which has the Chapter 13 provisions for allowing the firm to continue as a going concern for a longer period than would normally be permitted by English receivership arrangements. It may also be observed that because of the novelty of Islamic finance there may be non-uniform implementation of the bankruptcy laws for Islamic firms. It is not clear how many cases of bankruptcy in *Shariàh* law are ever settled by *Shariàh* courts. It is also not clear whether the judgements of these courts are accepted more generally by the public and by non-Islamic courts.

The conclusion of this section is that whether IF or non-IF is more effective in avoiding moral hazard would depend on the whole financial infrastructure of risk management systems, regulatory systems and the court systems. If Islamic Financial systems end up with lower debt/equity as a whole than non-Islamic

systems, then the IF system is likely to be able to cushion shocks as a whole, but this is a question of practice, not one of theory.

6. The Stock Market and Islamic Finance

Islamic economists greatly favour the establishment of a stock market based on Islamic principles in order to further the expansion of Islamic finance. Long ago Professor Metwally (1984) observed:

> In an Islamic economy where interest bearing loans are prohibited and where direct participation in business enterprise, with its attendant risks and profit sharing, is encouraged, the existence of a well-functioning Stock Exchange is very important. It would allow for the mobilization of savings for investment and provide means for liquidity to individual shareholders. However, existing Stock Exchanges in non-Islamic economies have many drawbacks. They generate practices such as speculation and fluctuations in share prices which are not related to the economic performance of enterprises. These practices are inconsistent with the teachings of Islam.

Recently, one of the foremost scholars of Islamic finance, Professor Abbas Mirakhor (2011), has argued for government intervention to develop a vibrant and active stock market in Islamic finance countries. He suggests

> .arguably, the stock market is the first-best instrument of risk-sharing. Developing an active and efficient stock market can promote international as well as domestic risk-sharing which render the economy and its financial system resilient to shocks.

The stock market would thus be a useful addition to complete the Islamic sequence of markets to enhance economic efficiency.

However the merits and demerits of stock markets have long been the subject of acute controversy in mainstream economics, with John Maynard Keynes (1936) as a leading critic of the markets. This is a large controversial subject on which both authors of the present paper have written before. Nevertheless, in the present context we simply note that Islamic stock markets would be very helpful if these could be organised to obey the Islamic precepts. The main difficulty arises from the fact that since it is virtually impossible to distinguish between speculative and non-speculative investment strategies, it would be difficult to establish a stock market in which Islamic ethics and non-speculative strategies are followed by all players. In our next paper, we intend to explore how in the real world, the conventional and Islamic stock markets could deal with the fundamental problems of primary fund raising for corporations and the price discovery/valuation of secondary market listed stocks.

7. Summary of the Main Findings and Conclusion

As this essay has ranged over several fields of conventional and Islamic economics, it will be useful to summarise the main theoretical and empirical findings. The paper has first examined the central tenets of Islamic finance from the perspective of conventional economic analysis. It started with the question of absolute prohibition of interest payments in any form under Islamic finance. The main conclusion is that it is possible to run an efficient economic system of the Islamic kind, which has no interest payments, but which allows profits on capital and enterprise. Such a system, based totally on equity finance is completely viable and may, in fact, be more stable than a part-debt financed conventional system.

The salient finding of this paper is that the best rationale for zero interest rates is provided by John Maynard Keynes in The General Theory. Keynes was not writing specifically about Islamic finance, but he did join forces with medieval Christian scholars and others who fundamentally objected to usury. Keynes sought to rehabilitate these scholars whom the conventional economics of the nineteenth and twentieth century (*eg.* the Classical School) found to be beyond the pale. He regarded high interest rates as the root cause of the problem of unemployment and favoured zero or low interest rates in order to achieve continuous full employment. He found no evidence, or any reasonable theory which could show that the market system automatically generated interest rates which lead to full employment. He sought to lower interest rates, and to raise the marginal efficiency of investment (expected profitability) to achieve this important objective. The Islamic emphasis on zero interest rates and the combination of capital and enterprise to produce social output fits in well with the basic Keynesian doctrine.

It is suggested however that conventional economics legitimately uses interest rates – zero, negative and positive rates – for its analysis of relevant economic conditions. There is, however, little evidence to support the McKinnon and Shaw hypotheses that financial liberalisation necessarily leads to high interest rates which in turn generate high savings, investments and economic growth. The highly successful East Asian countries employed low, even negative, rates rather than high interest rates during their industrialisation

.

The paper also considers the widely used technique of cost-benefit analysis in conventional economics from the perspective of Islamic finance. This involves the discussion of the time preference between generations and the rate of discount used in CBA: should it be zero or a positive number. There are reasonable arguments which suggest that both these discount rates may be

compatible with Shariàh law. It is however up to Shariàh scholars to determine the merits of this argument.

As developing country policy makers are prone to use low but positive interest rates in order to encourage investment and growth there is, in practical terms, very little difference between conventional and Islamic (zero interest rate) paradigms in their practical applications. The rates of return on deposits in conventional banks and those of profit sharing accounts in Islamic finance tend to be highly correlated and broadly of similar magnitude.

An analysis of the second major tenet of Islamic finance, namely, its ethical system indicates that if human beings strictly adhere to the requirements of the Islamic ethics there would be few moral hazard problems in Islamic banking. However, since total adherence to the Islamic ethical system is unlikely for most individuals, important moral hazard issues, both on the side of the depositors in Islamic banks as well as on the side of the Islamic banks themselves loom large. These would need to be resolved in the real world by extensive regulation. It is a moot point whether such far reaching regulation of individual ethical behaviour is at all feasible or desirable.

Turning to the relevant chief tenets of conventional economics we first find that there is no straight forward application of Modigliani and Miller theorems to Islamic firms and banks. This is because the assumptions underlying these theorems of no transactions costs, perfect markets, no taxation and no bankruptcy, depart considerably from the real world situations. If these assumptions are relaxed to conform more to the real world then one would get an optimal capital structure, i.e. some particular debt equity ratio for a specific firm. However, since this is optimality from the point of view of the firm rather than that of the society as a whole, it will be difficult to reach the judgement that Islamic firms have non-optimal capital structures on the basis of Modigliani and Miller theorems alone.

Although for MM theorems, the concept of bankruptcy is important, in the real world, it is its costs and who pays these which are significant factors in distinguishing between the two systems. The real issues are information asymmetry, the principal-agent (contract) and insolvency costs, and whether or not, the operation of these concepts leads to a hard ‘budget’ or a soft ‘budget’ constraint for the borrowing firms which do not wish to pay and to shift the burden to the lender. In the Islamic finance contract there is an additional implicit sanction against this type of moral hazard of the borrower which may be called ‘soft power’. This may be in some instances more effective than the

'hard power' of the bankruptcy laws but it is difficult to imagine that it will do so every time or in most cases.
The paper considers very briefly the desirability of establishing stock markets to further the completion of the Islamic finance programme and to help with its expansion. It concludes that a conventional stock market would not be useful for Islamic economies but a *Shariàh* compliant stock market without speculative players may be difficult to organise. Yet, the search for an ethical stock market must continue.

To sum up and to conclude briefly, the two systems, the Islamic and the conventional have existed side by side for the last two or three decades without any serious conflict. The conventional system, if anything, has helped the development of Islamic finance. As Islamic finance becomes stronger, there may be room for conflict but it is not inevitable. Co-operation between these two systems is eminently desirable and feasible. The conventional and Islamic finance may co-operate or even compete to produce the best outcome for common projects such as the provision of cheap banking for the world's poor or for investment in environmental undertakings. There are areas in widening access to finance which may be more desirable under Islamic finance because of the ethical basis of funding. It is arguable that conventional finance, because of its use of debt, is likely to have a faster, but more unstable, growth than Islamic finance. Thus each system has its strengths and weaknesses and one can easily co-exist with the other to the benefit of humankind.

Table I: A Comparison between Islamic and Conventional Banking

Features	Islamic banking	Conventional banking
Guarantee of the capital	Yes	Yes
Value of:		
Demand deposits	No	Yes
Investment deposits	Uncertain, not guaranteed	Certain and guaranteed.
Rate of return on deposits	for investment deposits. demand deposits are never remunerated.	
Mechanism to regulate Final returns on deposits	Depending on bank performance/profits from investment. Yes	Irrespective of bank performance/profits from investment. No
Profit-loss-profit (PLS) principle applies	Yes	Not applicable.
Use of Islamic modes of financing: PLS and non-PLS modes	Generally not allowed to reduce credit risk in PLS modes. By way of exception, may be allowed to lessen moral	Yes, always
Use of discretion by banks with regard to collateral	hazard in PLS modes. Allowed in non-PLS modes.	

Source: Islamic Finance: Writing of V.Sundararajan, Eds. J.Ahmed and H.S.Kohli, 2011.

Notes

[1] The words conventional and modern economics are used interchangeably throughout this paper.

[2] Sections II and IV draw on and update the material in Singh and Hamid (1992) and Singh (1995). See also Singh (1997).

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