An economic theory of Islamic finance

Mabid Ali Al-Jarhi
School of Graduate Studies,
International Centre for Education in Islamic Finance (INCEIF), Kuala Lumpur, Malaysia

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Abstract

Purpose – This paper aims to provide an economic rationale for Islamic finance.

Design/methodology/approach – Its methodology is simple. It starts with listing the contributions to economic analysis relevant to the required rationale in the theories of banking, finance, price, money and macroeconomics, to identify the main rationale for Islamic finance. A concise description of the author's model for an Islamic economic system, within which Islamic finance can be operational, is provided.

Findings – The paper finds distinct advantages of Islamic finance, when properly applied within the author's model. Islamic finance can therefore be a candidate as a reform agenda for conventional finance. It opens the door for significant monetary reform in currently prevalent economic systems.

Research limitations/implications – The first limitation of the paper is that the distinct benefits of Islamic finance are all of macroeconomic types which are external to Islamic banking and finance institutions. They are therefore not expected to motivate such institutions to apply Islamic finance to the letter, without regulators interference to ensure strict application. The second limitation is the necessity to set up enabling institutional and regulatory arrangements for Islamic finance.

Originality/value – The results are unique as they challenge the received doctrine and provide non-religious rationale for Islamic finance.

Keywords Islamic finance, Islamic economics, macroeconomics, economic reform

Paper type Research paper

Introduction

Conventional finance, based on the classical loan contract, was practiced in the ancient world for centuries. The origin of modern banking has been traced back to Italy in the twelfth century (De Roover, 1943, 1954; Orsingher, 1967; Chachi, 2005). Meanwhile, interest-free Islamic finance started with the dawn of Islam, based on a number of investment and finance contracts. Yet, despite its continued application, it did not take the form of banking until 1975 (Chachi, 2005).

Islamic jurisprudence offers little with regard to the rationale of Islamic finance beyond the concept of justice underlying the prohibition of interest. Islamic finance involves higher contractual and transactions costs. Instead of using one standardized contract like the classical loan contract, it uses products based on numerous contracts, involving the possibility of mixing and matching as well as securitization.

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The first section of the paper details what we can learn from monetary, banking and finance theories with regard to Islamic finance. The second section provides a brief description of the Islamic finance model based on Al-Jarhi (1981). The third section attempts to list the advantages of Islamic finance, based on these theories. The fourth section discusses the problems associated with a mixed banking and finance system and how they can be surmounted. The last section draws policy recommendations.

What we can learn from economic theory

This section briefly delineates lessons we can learn from monetary, banking and finance theories with regard to Islamic finance.

The rate of interest

Islamic finance is based on a simple rule, which is to avoid trading present for future money at a premium. This effectively eliminates finance through debt, although it does not exclude providing interest-free loans for charitable purposes. Finance is provided through equity participation or profit and loss sharing (PLS) in return for equity or rights to share in pre-agreed proportions of profits. It is also provided through the sale and lease of assets in return for commitment to repay their value or for their usufruct at a later date. It is further provided against a commitment to deliver or manufacture commodities.

Can we find anything in economics that justifies apprehensions about trading present against future money at a premium, which is the rate of interest?

The theoretical work on the relationship between the level of the rate of interest and the optimality of resource allocation concludes that a zero nominal interest rate is a necessary condition for the optimal allocation of resources (Samuelson, 1958; Friedman, 1969)[1]. In a world of paper money, adding an extra unit of real balances costs the economy no real resources. A positive rate of interest becomes a positive cost of using money. It leads traders to economize on the use of money in transactions, thereby frustrating their attempt to fully benefit from the means of exchange in minimizing their transaction costs. To keep the same volume of transactions, traders will have to substitute real resources for money. Such substitution withdraws real resources from the production sector to the transactions sector, leading to a suboptimal level of output[2]. In contrast, reducing the rate of interest to zero removes all incentives to substitute real resources for money. The optimal level of output can therefore be maintained.

The use of general equilibrium models shows that a zero interest rate is both necessary and sufficient for allocative efficiency (Wilson, 1979; Cole and Kocherlakota, 1998). These results are found to be robust in a variety of models (Correia and Teles, 1997).

Milton Friedman suggests, "Our final rule for the optimum quantity of money is that it will be attained by a rate of price deflation that makes the rate of interest equal to zero"[3]. Friedman's rule amounts to steadily contracting the money supply at a rate equal to the representative household time preference (Friedman, 1969, p. 34; Ireland, 2000). Friedman's rule imposes an *optimal rate of deflation* on the economy. This in itself is symptomatic of denying the benefits of price stability and ignoring the serious inefficiency and redistribution effects of both inflation and deflation (Lucas, 1994). Economists have tolerated "low inflation" in their proposal that the central bank pursues an *inflation target*. Friedman's rule obviously switches to a *deflation target*. Central bankers have generally adopted an inflation target, but would never seriously advocate a long-run policy of deflation (Wolman, 1997).

Less seriously, Friedman's rule threatens to descend the economy into a liquidity trap when the rate of interest is zero (Uhlig, 2000). However, this can be avoided when Friedman's deflationary policy can be exercised only asymptotically (Cole and Kocherlakota, 1998). Even if the asymptotic conditions are not fulfilled, short-term constraints on monetary policy can do the job (Ireland, 2000).

When the rate of interest becomes very low, monetary authorities have less leeway to adjust it downwards in the face of recession. Others propose alternative ways to overcome the zero-bound interest rates (Goodfriend, 2000). However, low interest rates have not provided relief during the international financial crisis of 2007-2012.

Many economists appear convinced that practical and conceptual problems involved with zero interest rates are all surmountable, notwithstanding the efficiency and redistribution effects of deflation. Perhaps for a good measure, monetary authorities are not expected to adopt the optimal monetary policy rule[4]. The inefficiency resulting from positive interest rates cannot be removed by a monetary policy rule. Switching to total reserves, as suggested by the Chicago school, is a serious institutional change, not just a policy rule. However, it is insufficient to remove the persistent inefficiency resulting from deflation.

Risk sharing and market structure

Risk sharing is a basic feature of the Islamic economic system. In the financial sector, households provide their funds to financial intermediaries on a PLS basis. Financial intermediaries supply funds to their users partly on PLS and partly on sale-finance basis. Islamic finance is sometimes likened to a participatory sport in which everyone plays (shares the risk) in contrast to conventional finance, which is likened to a spectator sport, where risk is borne only by a minority of players while the majority of spectators risk nothing (Al-Jarhi, 2004a, 2004b).

Kalemli-Ozcan *et al.* (1999) found a positive and significant relationship between the degree of specialization of members of a group of countries, provinces, states or prefectures, and the amount of risk that is shared within the group. This obviously confirms that risk sharing *facilitated by a favorable legal environment* and a developed financial system is a direct causal determinant of industrial specialization, thereby raising the efficiency of the economy as a whole. In an Islamic economic system, risk sharing goes beyond the mere integration of capital markets. It should be more prevalent through the financial market structure, producing more specialization and greater overall efficiency.

Conventional finance is almost void of risk sharing. On the resource mobilization side, fund owners provide their financial resources on the basis of the classical loan contract. Accordingly, banks taking deposits would guarantee both principal and interest on their customers' deposits. On the resource use side, banks take risk only on collateral and not on entrepreneurial activities. The use of collateral enables banks to limit the monitoring of their borrowers without increasing default risks.

Similarly, in bond markets, issuers guarantee the payment of principal and interest, while bondholders do not share in the business risk of, nor do they monitor, bond issuers. Trading bonds in an open market provides information that can be collected and analyzed by bondholders. Monitoring the market of a certain bond appears to be less expensive than monitoring borrowers by banks. That is probably why bondholders are willing to accept lower interest rates than banks do. Consequently, corporate bonds are good competitors to bank debt (Contessi *et al.*, 2013). However, the relative reliance on bonds will depend on legal and institutional factors, how developed financial markets are and the relative levels of information disclosure about firms (De Fiore and Uhlig, 2011). While banks and bond

markets compete over providing debt finance, stock markets and debt suppliers compete for market share in finance.

Taking the USA as an example, the debt equity ratio ranged from 117 per cent in 2004 to 126 per cent in 2013 (FRED, 2017). It peaked at 193 per cent during the international financial crisis in 2008, taking a declining trend from then on. Figure 1 depicts the debt-equity ratio in the USA between 2004 and 2013.

It can therefore be concluded that a significant proportion of financing in conventional economies is conducted through issuing government and household debt instruments as well as borrowing from banks. This is where financing economic activities involves no risk sharing. Risk sharing is found only in the stock market, where shareholders presumably share in the profit and loss of the firms whose stock they hold. However, almost all firms are leveraged, which means that risk sharing is limited in most cases.

Banking and finance theories, information asymmetry and the lemon problem

According to banking theory, finance users are far better informed about the use of funds than finance providers. Therefore, debt finance is riddled with *information asymmetry* leading to risks of *adverse selection* and *moral hazard*, and ultimately raising the risk of default. In parallel, equity finance providers can be exposed to investing in a losing venture, which would be riddled by the *lemon problem*.

In such a world, an entrepreneur who is more informed than fund suppliers would prefer to use internally available funds to invest in the firm. He would also prefer to use debt finance when more funds are required than internally available (Razin *et al.*, 1998). The reason is that using equity finance would be interpreted as a belief that the stocks of the firm are overvalued.

Information asymmetry in debt finance can be reduced through complete monitoring, including ex ante, interim and ex post monitoring (Aoki, 2013) of fund users, which would be extremely costly. Banks would have to raise the lending rates of interest to cover the extra

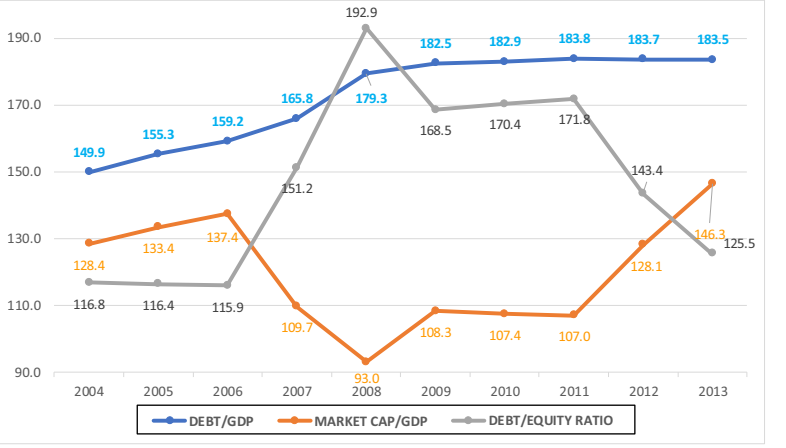

Figure 1.
Debt-equity ratio, USA (2004-2013)

Source: Using IMF data (FRED, 2017), including both debt/GDP and market capitalization/GDP to calculate the debt-equity ratio

monitoring costs. The lemon problem can be handled through the conduct and review of feasibility studies and/or financial analysis.

Governance has been used by universal banks[5] as they take equity in companies to monitor performance and ensure profitability. In this manner, they solve the lemon and information asymmetry problems at once. Universal banks would therefore be more effective monitors than commercial banks (Dewenter and Alan, 1997).

Shareholders' participation in management reduces the firm's incentives to substitute riskier for safer assets in equity finance. Meanwhile, the firm's incentives to hide profits would be reduced by debt finance. A combination of both debt and equity finance would therefore be ideal.

Empirical studies confirm the advantages of using a combination of debt and equity finance to both banks and firms. Theoretically, banks are relatively more exposed to adverse selection during economic booms and to moral hazard during recessions. Empirical studies have confirmed that universal banks face lower risk than commercial banks during both booms and busts. Wider and more significant risk differentials have been found between universal and commercial banks during downturns (Dewenter and Alan, 1997).

Price and monetary theory

The distinction between nominal, real and semi-real transactions is first examined (Al-Jarhi, 2002). Nominal transactions have two nominal (monetary) counter values. One example of a nominal transaction is when spot money is traded against future money. Another example is when the price of a gamble is paid as present money against the uncertain future payoff of the gamble, as in the case of derivatives[6]. Nominal transactions represent trading present against future money as well as risk trading. Both types of nominal transactions are not allowed in Islamic finance.

The macroeconomic effects of nominal transactions take two forms. In the first form, the growth in the volume of nominal transactions will encourage investments in the debt-trading and risk-trading industries and their associated services, like clearing mechanisms, strategic trading mechanisms and enforcement mechanisms.

The resulting redistribution of wealth would have effects on the consumption pattern in the economy and motivate reallocation of resources to the extent that consumption and investment preference differ among winners and losers.

Real transactions have only one nominal or monetary counter-value, while the other is always a commodity. Such transactions provide important indicators for the allocation of resources. When the rate of monetary expansion increases, more money is available for spending, either directly or through the increase in the availability of finance. Spending would increase on commodities as well as on debt- and risk-trading.

An increase in spending on commodities is done through real transactions, which become the chariot of the transmission mechanism from the changes in money supply to commodity markets directly. The more spending increases go through real commodities, the faster commodity markets would move to a new equilibrium. However, the more spending is directed to debt- and risk-trading, the greater the leakages as spending on commodities would await the conduct of financial market games and the resulting payoffs. Those gaining wealth would, after some delay, increase their commodity purchases by carrying out more real transactions. Such delay and leakages to nominal transactions slows the speeds of adjustments in commodity markets.

Therefore, the effect of policy actions leading to an increase in monetary expansion on commodity markets would depend on how much of the increase in the money supply goes into nominal versus real transactions[7].

Semi-real transactions can be defined as the exchange of one currency for another currency, where both counter-values are paid spot. Trading currencies against each other, where one or both of the counter-values is deferred, would be considered a nominal transaction. Spot trading of currencies would be for the purpose of paying for commodities across borders. They, therefore, have the same effects as real transactions. Meanwhile, currency trading with deferred payments would be for the purpose of debt- or risk-trading.

A concise Islamic finance model based on Al-Jarhi (1981)

The evaluation of Islamic finance in light of the above contributions to economics will depend on the institutional structure that would replace interest-based finance with interest-free finance. Al-Jarhi's(1981) model keeps the market mechanism while introducing features that replace interest-based finance with interest-free finance. The institutional structure should be sufficiently comprehensive to encompass money creation and allocation, as well as monetary and fiscal policies. The details of the model are not reviewed in this paper. Instead, this paper attempts to provide a summary picture of how Islamic finance operates in such a model[8].

Money is issued in Al-Jarhi's model in the form of central bank investment deposits or central deposits for short (CDs) with banks, placed on the basis of PLS. The return on CDs would flow back to the central bank as seigniorage for the ultimate benefit of the government budget.

Al-Jarhi's model includes a system of total reserves. The fractional reserve system leads to unjustifiable wealth redistribution in favor of bank shareholders against the public. It provides the central bank with less than full and direct control over the money supply, as banks jointly create derivative deposits in multiples of the currency issued by the central bank. The use of fractional reserves as a tool of monetary policy leads to enormous changes in the money supply. To avoid such disadvantages, total reserves are prescribed.

The central bank issues money-market instruments whose proceeds would be added to central deposits, called central deposit certificates (CDCs). They would be negotiable in the secondary market and available to banks and the public for investment. The central bank would anchor monetary policy to the rate of return on CDCs (RCDC), which in contrast to the rate of interest, would be market determined.

Like the central bank, the public places their funds in investment accounts, based on PLS. The public can also hold CDCs. In addition, they can place demand deposits with banks which are used for transaction services and earn no return. On the fund-use side, people can finance their activities based on one of many contracts used in Islamic finance.

The question is what happens to government budget deficits? First, the government finances its income-generating activities through banks. Even infrastructure projects can be made income generating to attract finance on market terms. Second, citizens could be encouraged to establish *awqāf* (public foundations) to provide public services, especially education and health[9]. To the extent, such *awqāf* are encouraged, the government will limit its activities in this regard to setting standards for education and health services.

Redistribution in favor of the poor is done outside the market mechanism through the collection of *zakāh* (alms giving), for which banks become custodians as well as being authorized to use the proceeds to finance micro projects whose titles are transferred to the poor to make them self-employed as well as self-sufficient.

There would be no integrated debt market, and no risk trading would be allowed. The central bank, having an exclusive power to control the money supply, can gauge the rate of monetary expansion to the rate of growth to target absolute price stability.

In the next section, the advantages of Islamic finance are discussed. These advantages are subject to the assumption that Islamic finance is properly practiced, with an honest and strict adherence to its paradigm. Products that fall outside the mainstream interpretations, like *tawarruq* (three-party sale), *bayʿ al-ʿīnah* (sale and buy-back), debt sale and the like are assumed away, despite their predominance. In addition, banks are assumed to strike a balance between PLS and sale finance, so that finance products would reflect a reasonable mixture of equity and debt-creating finance.

Efficiency of Islamic finance

The distinct benefits of Islamic finance are all of macroeconomic types that are external to Islamic banking and finance institutions. These are briefly discussed below.

Efficiency and economizing on cash in transitions

At the macroeconomic level, Islamic finance avoids the use of interest-based lending. The rate of interest is replaced by the RCDC. Such rate reflects the time value of money not against itself but against commodities.

The main purpose of the Friedman optimal monetary-policy rule (to deflate the economy at a rate equal to the real rate of interest)[10] is to prevent agents from substituting real resources for money in transactions, as this would reduce total output below the optimum level. Those who deposit their money in banks do so in the form of saving and investment accounts that are based on PLS. In this case, the rate of return would be uncertain. Neither the principal nor the return on such accounts or deposits is guaranteed. There would be no incentive to reduce the use of cash in transactions gain more income with certainty, as in the case of the classical loan contract.

Efficiency and financial resource allocation

Borrowers' ability to repay loans is the primary factor in allocating financial resources in conventional finance. Islamic finance, through equity and PLS modes, would focus on the profitability of the concerned investment. Financial resources would therefore be directed to the most productive investments, thereby improving the efficiency of the financing process and reinforcing efficiency in the real sector.

Islamic finance provided through the modes of commodity acquisition, with sufficient competition among fund users, ties the cost of finance at the margin to the relative value in use of each commodity in consumption or production. Financial resource allocation would therefore be optimal. No finance would be provided for debt or risk trading[11].

Stability

The liabilities of a conventional bank that include demand, time and saving deposits are guaranteed by the bank[12]. On the other hand, its assets are composed of debt instruments whose quality depends on debtors' ability to repay. Default, which can be expected at times of crises due to macroeconomic factors or to bank-specific circumstances on the asset side, threatens banks' ability to meet their obligations on the liability side.

An Islamic bank has liabilities of a different nature. Only demand deposits are guaranteed, but investment deposits are placed on a PLS basis. When a bank faces

macroeconomic or bank-specific crises, investment depositors automatically share investment and default risk on the asset side. The bank is less likely to fall and a bank run is less probable. Owing to the different nature of banks' assets and liabilities, an Islamic banking system would be more stable relative to conventional banking (Khan, 1986).

Another aspect of instability is related to the existence of an integrated debt market, which is one of the main institutional features of the conventional economic system. It has outgrown the real sector in size and reached a high degree of global integration. As manifested in the international financial crisis of 2007-2012, integrated debt markets are sources of both domestic financial instability and contagion.

In Islamic finance, debt is created through selling commodities on credit. Resulting debt instruments are negotiable only at face value. There is a credit market for each commodity in which the demand and the supply *to buy it on credit* determines its *mark-up rate*[13], resulting in fully segmented credit markets[14]. The absence of sudden and mass movements of funds as well as the absence of risk trading rule out instability and contagion.

A third source of stability is that Islamic finance, properly practiced, never provides present money in return for future money. All Islamic modes of finance involve money on the one end and commodities on the other[15]. Monetary flows and commodity flows through Islamic finance are directly tied together. The dichotomy between financial and real activities is effectively removed. Each instance of financing extended is automatically earmarked for specific uses, leaving no room for excessive credit expansion.

The fourth source of stability is the absence of debt- and risk-trading whereby changes in the supply of money by policymakers would automatically be translated into changes in excess demand and supplies of commodities. The quantities of output produced respond more quickly to market forces. Markets are therefore more likely to operate efficiently and smoothly. Though absolutely non-conventional, Islamic finance supports market forces and mechanisms more than does conventional finance.

Information asymmetry

The only contract used by conventional finance suffers from information asymmetry. Some Islamic finance contracts are also prone to information asymmetry. In particular, *muḍārabah* (restricted and unrestricted profit sharing venture), *wakālah* (restricted and unrestricted agency investment) and *salam* (contract of deferred delivery of commodities) suffer from information asymmetry. Setting those five contracts aside, the majority of Islamic finance contracts do not suffer from such malady.

Assuming no regulatory hindrances, Islamic banks, like universal banks, can carry out finance using a multiplicity of contracts. They would mix contracts that are free from information asymmetry with others suffering from it (the abovementioned five contracts). The process of contract mixing and matching, which is supposed to be central to the art of Islamic banking is called product structuring. Like universal banks, Islamic banks can therefore hold equity in the businesses they finance while supplying them with funds under *muḍārabah*, *wakālah* and *salam*, or any other contract. Such resemblance to universal banks enables them to better handle the problems of moral hazard and adverse selection than conventional (commercial) banks (Al-Jarhi, 2003).

Finance and development through operation as universal banks

As explained above, Islamic banks have to mimic some aspects of the behavior of universal banks to avoid the problem of information asymmetry.

Universal banking that combines all phases of finance has been credited in part for industrial development and economic growth in Germany and Japan. It has yielded economies of scope and greater efficiency that provided more finance at lower costs, thereby promoting industrial investment (Greenwood and Bruce, 1997; Vaona, 2005; Nyankomo and Zhanje, 2015). In particular, German banks have been perceived to maintain close, long-term relationships with industrial firms, which have influenced banks' attitudes towards multi-period optimization. This opinion is supported by Temin (1998) but opposed by Fohlin (1998) as well as Miwa and Ramseyer (2000)[16].

Participation in management would also be effective in solving the lemon problem. Such participation affords Islamic banks free and continuous monitoring with a flow of information that helps make judgement regarding investment feasibility.

Empirical findings confirm the role of universal banks in economic development. Calomiris (2000) found that universal banking was behind reducing the cost of financing industrialization in pre-First World War Germany relative to other countries with commercial banking. He also found that a higher level of allocative efficiency was enjoyed by the financial sector in the former than in the latter countries. It can therefore be concluded that Islamic banks operating as universal banks provide better support to economic development.

Fund mobilization

Many followers of religions that abhor interest (Hinduism, Buddhism, Judaism, Christianity and Islam) hold their funds outside the banking and financial sector, thereby placing some of their financial resources outside the development process. Islamic finance opens the door to mobilizing such resources, especially in many Islamic countries where they would otherwise be kept idle. Islamic financial products would be both interest-free and ethical[17]. This makes Islamic finance even more effective in resource mobilization to the groups of people interested in both avoidance of interest and exclusive involvement in ethical investment.

Adjustments to policy shocks

By going deeper into understanding the prohibition of interest, it is found that it is really the prohibition of trading present against future money at a premium. In other words, the prohibition of interest amounts exactly to the prohibition of nominal transactions (Al-Jarhi, 2016). The prohibition of *rība* (interest) can therefore be interpreted from the economic perspective as the prohibition of debt- and risk-trading.

In an economy with Islamic finance, when the supply of money increases, spending increases both directly and through the availability of more financing. In Islamic finance, both spending and finance are channeled exclusively through real transactions. Direct spending means direct cash flows to the commodity sector. Financing would also boost both supply and demand. The quantity and price speeds of adjustment get full throttle as no cash balances leak to nominal transactions. The transmission mechanism from monetary expansion to spending is direct. In such an economy, the speed of adjustment is swift and the market mechanism fully supported.

In contrast, a system with conventional finance faces substantial leakage from monetary expansion flows into nominal transactions, namely, debt- and risk-trading. The final effects on the commodity sector will not emerge until the payoff of gambling in the financial market reaches the pockets of winners. In addition, the first effect of the financing directed to the commodity sector would go to the demand side first. Price speed of adjustment would be higher while quantity speed of adjustment would lag

behind. Inflation would be the ultimate result, even when the economy is below full employment.

Ultimately, with conventional finance, there are slower speeds of adjustment, biased toward price adjustments. The market mechanism would limp slowly to the new equilibrium, if ever reached.

It can be concluded that by prohibiting nominal transactions, Islamic finance boosts speeds of adjustment, as they would also be balanced between quantity and price speeds. The market mechanism is ultimately strengthened.

Systemic integrity

Risk is an important ingredient of investment. In conventional finance, investment is financed through equity (the stock market) or through debt (borrowing from banks and issuing bonds). Banks accept only collateral risk. They always avoid bearing business risks. Corporate bondholders follow the same rule and their debt carries seniority over shareholders' rights. The result is that risk is left to be borne by a few specialists, who are either entrepreneurs or shareholders. Such a minority of risk bearers shoulder the brunt of investment failure. Although the per capita risk for the whole society may be low, risk concentration on a small group could be unbearable. The commodity sector would be far removed from the finance sector, as each goes its own way. In other words, the system would be disjointed.

Islamic banks and financial institutions share risk with those receiving finance. With proper corporate governance, depositors can influence banks' investment decisions as they share in the decision-making process by having representatives on the boards of directors of Islamic banks. This change that we have proposed would extend risk as well as decision sharing to both the asset and liability sides of Islamic banks (Al-Jarhi, 2014).

In an economy with Islamic finance, both risk and decision-making are spread over a much larger number and wider variety of concerned people. Wider involvement in economic activities eventually leads people to feel that they are partners rather than spectators.

The benefit of wider involvement goes beyond a mere feeling. It adds to the stability of banks. The finance sector would be closely tied to the commodity sector. This affords the economic system compactness and integrity between its different parts.

Equity

Islamic banks, if given the right tools, can contribute to the society's efforts to eradicate poverty. *Zakāh* can be perceived as a tax-subsidy approach to reducing poverty. It is paid out by those whose wealth exceeds a certain minimum level in proportion to their property or income.

Zakāh proceeds are for several uses including *income* and *wealth maintenance* for the poor. *Income maintenance* is provided provisionally to the poor until *wealth maintenance* is restored. *Zakāh* proceeds would be earmarked to finance micro projects whose titles are given to the poor. The Islamic approach to poverty reduction can be closely intertwined with that of economic development. Making the poor more productive through redistribution will ultimately contribute to economic development. Undoubtedly, *zakāh* management institutions must be structured and empowered to be able to fulfill such a mission.

Islamic banks can help by acting as custodians of *zakāh* proceeds and in their disbursement. Islamic banks are also mandated to have special accounts to which

shareholders' *zakāh* on their equity is credited. They can even accept direct payments of *zakāh* and other donations on behalf of depositors and other donors. Banks can then use funds available in their *zakāh* accounts for the purposes of income and wealth maintenance of the poor.

The ability to repay loans attracts the utmost attention of conventional finance. The provisions of collateral and guarantees are major tools used to ascertain such ability. The wealthy have the most access to finance. In contrast, Islamic finance can be advanced on equity or PLS basis. It would give prime attention to profitability and less attention to collateral. Low net worth people with worthy investment projects would have more access to finance.

Debt sustainability

In conventional finance, debtors facing temporary insolvency would have severe problems in settling their debt. The amount of debt, not fixed from the start, multiplies as interest is calculated on the outstanding balance of debt; interest is also compounded annually and sometimes at shorter intervals. Penalty rates of interest are imposed on insolvent debtors, which are higher than regular rates. Borrowers often end up paying debt service many times more than the original principal they had borrowed without being able to settle their debt obligations, particularly in credit card and developing countries' debt. Debt payment difficulties sometimes reach crisis levels. Debt relief through bankruptcy procedures and through developing countries appealing their cases to creditors' clubs in London and Paris is often sought after.

Conventional debt generally lacks sustainability. That has been demonstrated repeatedly at times of crises, when attention is usually directed to bail out lenders (banks) and not borrowers.

Islamic finance creates debt that is more sustainable. The total value of debt, which includes the value of commodities purchased on credit as well as an implicit mark-up, is set from the very beginning.

Debtors may still face unavoidable circumstances making them temporarily insolvent. The Sharīʿah mandates that financing banks grant them free rescheduling to help them bring their finances back to order. No penalty or rescheduling fees can be levied in this case[18].

Due to the information asymmetry associated with conventional finance, moral hazard leads to using borrowed funds for non-prescribed purposes, leading to default. In contrast, the greater ability of Islamic finance to avoid information asymmetry and moral hazard through mixing and matching among the numerous Islamic finance contracts, makes sure that the advanced funds are used only for their prescribed purposes. Default resulting from moral hazard would therefore be most unlikely.

Reform agenda for conventional finance

Conventional finance has shown exposure to instability and contagion. The latest international financial crisis was accompanied by widespread bank failure confronted by expensive bank bailouts, in addition to a serious recession that lingered for four years after the onset of the crisis. Some economists advanced reform proposals revolving around tighter regulation. Others suggested that capital movements should be curtailed. An interesting opinion goes back to the Chicago Plan submitted during the Great Depression.

The above analysis regarding Islamic finance contains a prescription to the problems of contemporary market economies in the following institutional changes:

- replacing the classical loan contract with the Sharīʿah-compliant finance contracts;
- exclusive monopoly of the issuing of money through a government-owned central bank;
- all issued money is to be placed in PLS investment accounts with banks;
- the central bank issues central investment certificates to be held by banks and the public and traded in an open market as an interbank and monetary policy instrument;
- debt trading as well as the use of all risk-trading contracts are prohibited in financial markets; and
- debtors would be granted free rescheduling in case of temporary illiquidity but penalized in case of delinquency.

This prescription has been taken directly from the features that contribute to the stability of Islamic finance and make it less prone to crises.

Mixed systems hurdles

The above-mentioned advantages of Islamic finance appear to be externalities that accrue to the system as a whole but do not accrue directly to any Islamic bank or financial institution in particular. This creates an incentive problem; Islamic bankers would not be sufficiently motivated to follow the Islamic finance paradigm to the letter. The incentive problem can be solved through some method of internalizing the external benefits.

In mixed systems with the absence of any means of internalization, Islamic bankers have to compete with conventional bankers who use the classical loan contract, which is simpler, requiring fewer procedures and less documentation than the Islamic modes of finance. Following the Islamic finance paradigm strictly would lead to a serious competitive loss to Islamic banks and financial institutions.

To maintain a competitive edge, they maintain their nominal brand name and mimic conventional finance. This enables them to streamline procedures and documentation as well as cut down costs. This calls for special regulations to force Islamic banks to be true to their Islamic banking license. Without such regulations, Islamic finance will never be able to live up to its ideal (Al-Jarhi, 2014).

Conclusions and policy recommendations

Starting with certain macroeconomic, banking, price and finance theories, it is found that Islamic finance, when applied according to Al-Jarhi's (1981) paradigm, would have distinct advantages. In addition, it provides a justifiable prescription for reforming the contemporary market economy. The fact that there is economic rationale for Islamic finance can therefore be accepted.

There is one important caveat to these results. The noteworthy advantages of Islamic finance are not sufficient to induce Islamic bankers to be true to the Islamic finance paradigm. Being mostly external, such advantages can induce behavior only after being internalized, which is left to banking and finance regulators. Only when the license of Islamic banking is strictly enforced by the monetary regulators will Islamic bankers avoid mimicking conventional finance.

Notes

1. This runs in contrast to the opinion of Naqvi (1977) who claims that the institution of interest helps achieve economic efficiency, but provides no proof.
2. If a supermarket were faced with an increase in interest rates, it would attempt to collect cash faster from its tellers and rush it more often to the bank, using more labor (people who collect cash as well as security guards) and capital (armored cars). Obviously, the withdrawal of real resources from production into transactions reduces total output and efficiency (Al-Jarhi, 2016).
3. This quotation shows that what is intended is not to impose a zero rate of interest on the national economy, but to reach the desired level through the process of deflation.
4. Economists also recommended the application of 100 per cent required reserve ratio. However, policymakers have not been impressed, despite the obvious benefits.
5. Universal banks are defined as "large-scale banks that operate extensive networks of branches, provide many different services, hold several claims on firms (including equity and debt), and participate directly in the corporate governance of the firms that rely on the banks as sources of funding or as securities underwriters" (Calomiris, 2000).
6. When both counter-values are deferred, market authorities set safeguards to ensure that both parties to the gamble will pay their obligations.
7. The phenomenon of financialization, which has led to the financial sector dwarfing the real sector, would mean that only a small part of monetary expansion would trickle down to the real sector, rendering monetary policy ineffective.
8. Some might think that the way to establish an interest-free economy is to exclusively use *qarḍ ḥasan* (interest-free loans) to finance economic activities. Such loans are usually considered as charity and would not suit business finance. Others think that a cashless society would fulfill the objectives of Islamic finance. However, a cashless society still has money in a non-physical form which can be created and allocated on the basis of interest.
9. Private foundations are considered to be perpetual after-life charities that earn rewards from God while their founders are dead. That is why Muslims have been keen to establish them. In the past, most health and education services were provided through private foundations.
10. Although such a rule can be deducted from both Samuelson's and Friedman's analysis, the rule is exclusively Friedman's.
11. Of course, the fact that Islamic finance suffers from malpractice and serious excesses cannot be hidden. This however is a problem that requires explanation.
12. The classical loan contract, in the case of deposits, mandates that banks guarantee both principal and interest. However, this should not be interpreted as a guarantee against bank default.
13. The mark-up rate is the difference between the spot price and the deferred price as a percentage of the spot price.
14. Debt can be swapped against tangible goods or services (according to Imam Malik and Ibn Taymiah), but not for cash.
15. This meaning includes all sale finance. Partnership and investment agency finance can be considered as money advanced for shares in future income resulting from commodity-related activities.
16. Much of the doubt about the role of universal banking centers around the issue of governance. Those who claim that universal banks take part in the management of the firms they finance, credit universal banks with an important role in economic development. Those who doubt that participation takes place to any effective extent take the opposite position. Equity participation in Islamic finance prescribes effective participation in management. This would settle the issue.

17. One cannot help but notice that the word "Islamic" in this context could have two meanings. The first refers to the quality of the financial product, namely, that it satisfies the Islamic requirements for lawful contracts. The second is that it satisfies ethical standards as defined by religion. In the latter sense, Islamic finance would equally be attractive to Christians, Jews, Buddhists and Hindus.

18. During the international financial crisis, had the authorities directed their attention to support debtors instead of creditors, the crisis would have stopped without an ensuing serious depression. However, this particular part of Islamic finance cannot be expected to be implemented without strict and well-enforced regulations.

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About the author

Mabid Ali Al-Jarhi, PhD, is currently a Professor at the International Centre for Education in Islamic Finance (INCEIF), Kuala Lumpur, Malaysia. He holds a Doctor of Philosophy in Economics from the University of Southern California, Los Angeles. His areas of specialization include Islamic economics, monetary and financial economics, public finance and international trade finance. Mabid Ali Al-Jarhi can be contacted at: mabid.al.jarhi@outlook.com