

# Unique Risks of Islamic Modes of Finance: Systemic, Credit and Market Risks

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## Abstract

*A distinctive feature of Islamic finance is the element of risk, which is largely considered as being the dividing line between halal profit and haram pre-determined return (riba). Uncertainty, which is often used to denote risk, is present in all Islamic financial transactions, even those that are deemed by conventional financing as low-risk financial activities, such as saving or deposit accounts. However, risk in Islamic finance has its unique attributes and distinctive characteristics. The globalization of financial markets makes it difficult, if not impossible, for national or regional financial markets to be immunised against the impact of the volatility of the international financial environment. However, being equity-based, the Islamic financial system has a built-in mechanism that, if it does not totally prevent, it certainly minimises the negative implications and potential risks associated with the international financial market instability.*

*This paper examines the unique attributes of systemic risks (the possibility of financial system or institution to collapse or fall down), credit risks (bad loans), and market risks (currency fluctuation) of Islamic modes of finance, as these issues are considered as contemporary concerns for the global financial industry. In addition, as types and sources of risk in finance are interrelated and encompass diversity of risks, other types of financial risks, which are associated with systemic, credit and market risks, such as the operational, and liquidity risk, will be explored and discussed accordingly. Furthermore, the paper argues that implementing Al Shariah compliant guidelines and procedures devised from the principle of Islamic finance would be an effective instrument in controlling these risks.*

**Keywords:** Systemic risk, Al Shariah compliance, risk management, financial globalisation

## 1. Introduction

The uniqueness of risks associated with the Islamic modes of finance are overtly signified by: the prohibition of debt-based financial activities and the concept of Profit-and-Loss Sharing (PLS), which jointly constitute the core foundation of Islamic banking and finance. In other words, risk must be present in any financial

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transactions in order for such transactions to comply with *Shariah* rules and regulations.

However, *Al-Shariah* financial rules and regulations do not only involve the prohibition of interest-based activities, as most people tend to believe, but they also comprise ethical standards and community-based principles that contribute to avoiding many unfavourable outcomes, including the negative consequences of systemic risk. Indeed, engaging investors in the Profit-and-Loss Sharing (PLS) process such as through *Murabahah*, *Mudarabah* and *Musharakah* is an effective measure for involving all stakeholders in sharing risks (DiVanna, 2006).

Systemic risk is usually present when discussing financial-based risks. Without a doubt, financial institutions, in general, strive for survival and continuity through developing mechanisms for controlling and dealing with potential threats and unfavourable factors. As systemic risk is an umbrella that is affected by other types and sources of risk, as well as environmental factors, financial institutions pay major attention to scan and examine causes, sources and consequences of these factors and sources of risk. Otherwise, these institutions may find themselves facing uncontrollable challenges that could undermine their existence.

This paper aims to discuss the concept and meaning; sources and causes; and mechanisms of dealing with and controlling systemic risk, and other associated risks, with the focus on the Islamic perspective and *Al Shariah* rules in dealing with such risks. This involves highlighting whether or not Islamic financial institutions, especially banks, are more secure than their comparable conventional financial institutions under the rules of *Al Shariah*. Although some investors often view compliance with the principles of *Al Shariah* as restrictions, an in-depth analysis and comprehensive review of Islamic financial rules and regulations demonstrate otherwise. Islam puts in place a well-established system for dealing with financial risk and protecting the economy from unforeseen circumstances and unpleasant events.

## 2. Financial Risks

Risk awareness has become increasingly important as a common issue, not only in institutions but also at the individual level. Anything we do or intend to do has, in one form or another, some degree of risk. Risk is a common feature of any human action or behaviour as there is no single outcome that is absolutely assured. Ansell and Wharton (1992: 3) maintain, "It is simply not possible to avoid taking risk. In every human decision or action the question is never one of whether or not to take a risk but rather which risk choosing".

The correlation between risk and Islamic economy, and financial transactions in particular, stimulates many researchers, even those who are non-Muslims, to examine

this relationship in literature. Researchers, such as Ansel and Warton (1992), argue that the origin of the word risk is thought to be either the Arabic word *Risq* or the Latin word *Risicum*. According to Ansel and Warton (1992), “the Arabic *risq* signifies anything that has been given to you [by God] and from which you draw profit and has connotations of a fortuitous and favourable outcome” (Ansell & Wharton, 1992: 4).

The concept of risk in the financial sector, whether Islamic or conventional, has two unique attributes. The first attribute is that the concept of risk, for instances not as within the environmental field, does not necessary mean the possibility of harm or adverse impact, rather risk in the financial field is related to the uncertainty. Therefore, risk in the financial sector is, usually, viewed and identified from two angles: pure and speculative risk. If the outcome carries some benefit (more than the expectation), risk is termed speculative, whereas, pure risk is one that produces negative consequences only (Nader, 2002). From the financial perspective, taking or avoiding risk is assessed in terms of expected loss or gain according to the cost-benefit analysis, and therefore gain and progress are usually linked with taking risk (Trieschmann, Hoyt & Sommer, 2005; Verandas, 2005). In this regard, Aven (2003: 3) points out that in the financial investment “we cannot avoid negative outcomes from time to time, but we should see positive outcomes as the overall picture”. Consequently, risk is viewed as a measurement tool of uncertainty, rather than a negative event by itself. The Institute of Internal Auditors notes that

*Risk... is simply a measure of uncertainty, the chance that some event will have an impact on objectives. Risk is most commonly thought of as having negative consequences -harm, loss, danger, and hazard- when in fact it may just as easily involve opportunities (The Institute of Internal Auditors, 2001: 1).*

Risk, therefore, is the possibility of something happening, whether it is purely negative, or it may bring opportunities. Risk is seen as a matter of probability, rather than consequences. This implication of risk is exactly the reason that prompted researchers such as Ansell and Warton (1992) to explain the essence of the word ‘Risk’ by the Islamic concept of ‘Risq’, where the uncertainty is high and it is something that is related to the knowledge of The Almighty ALLAH (Subhanahu wa Taala).

However, and despite the above, there is a commonality amongst researchers that risk, in general, involves two elements: the uncertainty and the possibility of unfavourable outcome (e.g., Vaughan, 1997; 1997; Culp, 2001). Even for those researchers, such as Frame (2003) and Knight (as cited in Adams, 1995), who differentiate between risk and uncertainty, or those who deem that risk may involve opportunities, beside losses, risk from their viewpoint should involve these two elements. For this reason, explanations regarding risk in general, even from academics, investors and financial experts and specialists, describe risk as something

unfavourable, and thus focus on its adverse impact. Therefore, although the word 'possibility' means that there are at least two potential outcomes, a number of researchers, such as Fox (1999) and Borge (2001) note that the risk concept is extensively used to describe the probability of undesired outcomes, and risk management is generally concerned with circumstances in which no gain is probable. Other researchers, such as Adams (1995), state that people tend to use, habitually, the terms risk and harm interchangeably. In this meaning, Fox (1999: 12) points to this universal perspective of risk, as an adverse impact, and points out "the modern period, risk has been co-opted as a term reserved for a negative or undesirable outcome, and as such, is synonymous with the terms danger or hazard".

The second attribute of risk in the financial sector is that risk is a major component in which the Maxim states 'no risk, no gain'. Therefore, any financial activity is subject to internal as well as external environmental factors, thus to a high degree of uncertainty; in other words, a high degree of risk. This became apparently obvious in the last decade in light of the vast technological developments where the globe is converging and becoming a small village sharing one open economy and accordingly becomes subjected to the internationalisation of risk.

Therefore, in order to be active and competitive in the financial sector, organizations must account for various types and sources of risk, and scan the entire environmental factors that increase the volatility of risk. Although risk is varied and multiple in the financial industry, there are some types of risks that involve a comprehensive impact not only on the organization, but also on the financial market as a whole. One of these risks is the systemic risk. However examining systemic risk usually requires considering market, credit and liquidity risks, besides operational risk.

Both the Islamic, as well as conventional finance, are subject to a diverse set of risks. Bacha (2007: 1) notes, "If there is one key feature that has an equal presence in both the Islamic and Conventional Financial System, it must be the presence of Risk". However, the risk of adherence to Al-Shariah guidelines, which automatically prevents Muslim investors from participating in certain business activities, even if these activities are deemed economically viable, is unique to the Islamic finance. Al-Shariah compliance risk is divided into two types: the first type is caused by the failure to comply with Al Shariah rules by investing in a business that is prohibited by Islam; these companies may have high debit/equity ratio ( $> 33\%$ ); and also includes companies where their income from interest comprises an unacceptable level ( $> 5\%$ ). The second type of risk is related to the internal and external conditions that lead to the failure of meeting objectives and achieving expectations (Ahmed, 2001; Iqbal & Mirakhor, 2007; Mohammed & Kayed, 2007).

The efficiency of any financial system is subject to its ability to meet its legal responsibilities and to attend to the requirements of investors even in unforeseen

circumstances. A major problem facing the global financial industry is that investors in general tend to act in response to certain events driven by their own perceptions and personal viewpoints. The surrounding environmental factors play a major role in influencing public perspectives in such a way that financial institutions may find themselves facing a sudden withdrawal of savings, causing the failure of one or more large financial institutions. The impact of such a failure in globalised economies will not, in all probability, be limited to the concerned organization, or even to the boundaries of the host country, leading to “systemic failure” which will be evidenced by the disruption and breakdown of the international financial system. Systemic risk, therefore, is one of the many types of risks that the global financial industry has no alternative but to deal with promptly (Rochet, Tirole & Rajan, 1996).

### **Systemic Risk: Concept and Implication**

The concept of systemic risk is not limited to a particular definition, nor does it have specific causes. Indeed, although this type of risk could be a mirror that reflects a range of different factors and elements, systemic risk is mainly used to describe unexpected crises leading to collapse of banks due to the lack of confidence that incite investors to a sudden withdrawal of their savings, thus causing a lack in liquidity (Rochet, Tirole & Rajan, 1996). In this regard, Chan, Getmansky, Haas and Lo (2005: 1) note that “Systemic risk is commonly used to describe the possibility of a series of correlated defaults among financial institutions – typically banks – that occur over a short period of time, often caused by a single major event”.

Systemic risk has far-reaching implications that go beyond the institution in question and even outside the boundaries of the country that houses the failing institution. Financial globalization facilitates risk to be transferred across national boundaries. Therefore, the failure of one participant in financial markets could lead to global financial crises. This is evident by the current global financial meltdown caused by the collapse of some US financial institutions associated with the subprime mortgage predicament.

Unlike other financial risks, systemic risk, although it typically refers to the collapse of the financial system of the organization due to the lack of liquidity, there are no common or similar circumstances in the financial industry in terms of systemic risk. Historically, there are usually different causes and factors specific to each singular-collapse case among banks which makes it harder to predict a type of impending risk. Another challenge of systemic risk is that this type of risk is difficult, if not impossible, to be managed thorough transference (i. e., insurance). Therefore, banks extensively endeavour to formulate strategies and develop mechanisms to handle and control the manifestations of systemic risk and mitigate its adverse impact. Despite

the fact that the frequency of systemic risk's occurrence is less than other types of risk, the enormity of the implications of such a risk are too enormous to be overlooked or ignored (Khan, 2004).

Based on the given definition of systemic risk, understanding the main internal and external factors, as well as the main sources of systemic risk, is a vital issue to generate suitable courses of action and techniques to manage this risk. Maintaining the capital level in the firm is a main tool of any regulatory approach to manage systemic risk. Controlling the equity/debt, and the liability/asset, ratio is considered to be at the heart of Islamic finance to protect against systemic risk.

### Systemic Risk: Causes and Factors

Wright (2007) categorised the origin of shocks to the financial system that cause systemic failure, into four types of risks: 1) credit risk or counterparty (bad loans and the inability of borrowers to repay their debts), 2) market risk (volatility in the currency exchange rates), 3) liquidity risk (inability to meet financial obligations), and 4) operational risk (inadequacy or failure of internal process).

Although market, credit, liquidity, and to a certain extent, operational risks are viewed as independent types of financial risks, many researchers (DiVanna, 2006; Khan & Ahmed, 2003;) consider them, due to the interrelationship of the payment system and the ability of organisation to meet their liabilities, as sources of systemic risk. The interrelationship between systemic risk and other types of risk prompts many researchers such as Wright (2007), Chan, Getmansky, Haas and Lo (2005), as well as the authors of this paper, to include market, credit, and liquidity risks under the umbrella of systemic risk, thus categorised as sources of systemic risk (see figure I).

Figure I: Types of Risks

Risk Definition	
<b>Systemic</b>	The risk that the failure of one participant in a transfer system, or in financial markets generally, to meet its required obligations will cause other participants or financial institutions to be unable to meet their obligations when due. Such a failure may cause significant liquidity or credit problems and, as a result, might threaten the stability of financial markets
<b>Credit</b>	The risk that a participant in a payment system will be unable to meet, in full, its financial obligations in the system when due or at any future time. In other words, it is the potential that the borrowing entity fails to meet its obligations as per agreed terms.

<b>Market Risk</b> , which is common to an entire class of assets or liabilities. The value of investments may decline over a given time period simply because of economic changes or other events that impact large portions of the market. Asset allocation and diversification can protect against market risk because different portions of the market tend to under perform at different times. Also called systematic risk.
<b>Liquidity</b> The risk that a participant in a payment system will be unable to meet its financial obligations in the system when expected due to insufficient funds, but may be able to pay in full at some later time.
<b>Operational</b> The risk that technical or mechanical problems in a system or mistakes by human operators (failure of internal process) will cause disruptions to a system that could result in unexpected losses.

Source: Derived from General Accounting Office [GAO] (2002: 10)

### Market Risk:

The first key potential source of systemic risk is strongly linked to the external market factors, whether those in the mega environment or those which are related to the financial industry in particular. Discussing systemic risk requires examining the market risk, which is also called systematic risk. Thus it is critical to undertake an in-depth examination and strategic analysis of the four main components (factors) of the mega environment: political, economical, social and technological factors (PEST) - (See figure II). Indeed, "the global environment is an ever-changing and uneven playing field" "Changes in the international domain can abruptly turn the domestic environment upside down" (Samson & Daft, 2005: 85). However, in the financial field some factors have more weight than other factors in terms of their close interrelationship with financial markets and economic settings. These factors are the interest rate, currency fluctuation, political stability and general business performance. Although all financial institutions and the entire business would be influenced by these factors, conventional institutions seem to be more vulnerable than Islamic institutions, to be negatively affected; at least in respect of the changes in the interest rate. This point will be discussed extensively in the next section while considering the Islamic approach in dealing with systemic risk.

At the time of war or instability in the political system, as well as, the lack of well-established and secure monetary policy, the market would be exposed to a lack of confidence from the investors who usually tend to sell their securities or withdraw their savings suddenly and swiftly. This situation may lead to a widespread collapse

of those institutions, which do not have enough assets or cash to meet this unforeseen situation or unexpected withdrawal of money.

Historically, many security markets such as Souq Al-Manakh in Kuwait (Darwiche, 1986), the black Monday of 1987 where “the Dow Jones index lost 31% in one week” and the Nasdaq crises in which 65% of the index was vanished between March 2000 and March 2001 (Marrison, 2002: 4), were examples that demonstrated such circumstances. The changing interest rate and the fluctuation of currency exchange rate are other facets that fuel systemic risk. The upward and downward movement of exchange rates results in higher exchange rate risk, which definitely has profound implications for international business. The currency crises that hit South-East Asia’s financial markets in 1997 and the Mexican Peso crises manifested by the hefty depreciation of their currencies, resulted in massive losses to their economies and beyond (Mishkin, 1999, Jomo, 2001; Milesi-Ferretti & Razin, 2000). Kenen (2000) gives the reason for this crisis, which is classified as a systemic risk that led to a collapse of some countries’ financial and monetary systems, such as Thailand, to some external micro and macroeconomic factors that were related to the currency exchange rate and the foreign currency reserves. Kenen (2000: 339) states “on the microeconomic side, inadequate prudential supervision allowed financial institutions to take on huge amounts of foreign currency debt and offset it by foreign currency lending to local borrowers having no foreign currency revenues. On the macroeconomic side, the current account deficit was large and growing ... defence of an overvalued currency and to failing export growth”.

Unsystematic risk, on the other hand, which is also called business specific risk, has its impact on the systemic risk, although it is related to specific sector(s) or particular business (es). As mentioned earlier, the globe has become a small village; markets are no exception. In many instances, when there is a strike in a specific sector, or there is deceleration in some parts of the financial market (i.e., banks), other parts (i.e., securities market) could be influenced negatively (Lasher, 2000). However, systematic (market) risk, which is usually unavoidable and difficult to be managed through diversification, and unsystematic risk, in which it can be controlled through diversification, both should be examined and analysed for ensuring an effective dealing with systemic risk. In the systemic risk management process, the question is mostly and frequently about how to mitigate the negative consequences of market risk and unsystematic risk, to avoid massive failures and crisis, such as the entire collapse, rather than how to prevent these risks from occurring, hence they are external factors that are difficult to be controlled (Beal, Goyen, Shamsuddin, & Gibson, 2005). Indeed, as systematic risk affects the entire market and is related to external, usually uncontrollable, factors, financial organisations tend to minimise



losses and manage the expected side effects to cope with the new changes, rather than solving the causes. The best strategy here is to protect the organisation through preventive procedures, as in the Islamic rules, before such factors take place.

In this regard, scanning the external environmental factors (and internal factors as well) is carried out through many analytical tools. The main three tools are SWOT analysis, the fundamental and technical analysis, and the quantitative analysis of risk. According to the first analytical tool (SWOT), this means analysing strengths, weaknesses, opportunities and threats of the firm and its surrounding environment. Scanning the factors that are associated with the external and internal strategic environment of a particular organisation, firm or industry helps in identifying sources of threats that could develop to be real risks that could threaten the organisation's survival. Regarding the fundamental and technical analysis, dealing with market (systematic) risk as a major cause of systemic risk, requires reviewing the historical data about the financial markets through analyzing financial performance charts and tables (Murphy, 1999), to effectively forecast the trends of the market and potential risks, as well as the reliability of the current growth, or reduction, in the financial markets. Fundamental analysis, on the other side, involves studying all adjoining issues, including the financial situation and business performance of the financial institutions and firms as a whole, to find out the future tendency of the financial market in terms of the surrounding conditions and factors (Lasher, 2000).

The third approach for dealing with the potential market risks is through quantifying risk. Despite risk is usually described as a subjective and an individualistic issue (Sharder-Frechette, 1990; Mun, 2004) due to the uncertainty element of risk, many researchers in the financial investments field (i.e., Said, Shafqat and Zahid ur Rehman, 2007; Khan & Ahmed, 2001) see that risk could be quantified in such a way that could facilitate measuring and evaluating risk objectively. The main methodology used to assess risk mathematically is Value-at-Risk (VaR). Khan and Ahmed (2001: 43) describe this approach as following: "a simpler parametric method can be used to estimate VaR by converting the general distribution into a standard normal distribution...that indicates how much a firm can lose or make with a certain probability in a given time horizon"<sup>3</sup>. Baldwin (2005) argued that currency fluctuation is the main source of risk that affects most Islamic financial institutions (IFIs). This is especially important in some Islamic countries, such as Gulf Cooperation Council (GCC), since they use the US dollar as a base of their financial transactions and currencies. Baldwin (2005) suggests that since the Islamic ethical rules require investors to avoid exposure to risk whenever possible, or to mitigate its

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<sup>3</sup> For more details, see Khan and Ahmed (2001).

adverse impacts, then IFIs are obliged to protect themselves from total collapse through investing in different markets, or by using multiple currencies.

Figure II: Mega External Market Factors (PEST)

<b>Political Factors</b> <ul style="list-style-type: none"> <li>• Ecological/environmental issues</li> <li>• Current legislation home market</li> <li>• Future legislation</li> <li>• European/international legislation</li> <li>• Regulatory bodies and processes</li> <li>• Government policies</li> <li>• Government term and change</li> <li>• Trading policies</li> <li>• Funding, grants and initiatives</li> <li>• Home market lobbying/pressure groups</li> <li>• International pressure groups</li> <li>• Wars and conflict</li> </ul>	<b>Economical Factors</b> <ul style="list-style-type: none"> <li>• Home economy situation</li> <li>• Home economy trends</li> <li>• Overseas economies and trends</li> <li>• General taxation issues</li> <li>• Taxation specific to product/services</li> <li>• Seasonality/weather issues</li> <li>• Market and trade cycles</li> <li>• Specific industry factors</li> <li>• Market routes and distribution trends</li> <li>• Customer/end-user drivers</li> <li>• Interest and exchange rates</li> <li>• International trade/monetary issues</li> </ul>
<b>Social Factors</b> <ul style="list-style-type: none"> <li>• Lifestyle trends</li> <li>• Demographics</li> <li>• Consumer attitudes and opinions</li> <li>• Media views</li> <li>• Law changes affecting social factors</li> <li>• Brand, company, technology image</li> <li>• Consumer buying patterns</li> <li>• Major events and influences</li> <li>• Ethnic/religious factors</li> <li>• Ethical issue</li> </ul>	<b>Technological Factors</b> <ul style="list-style-type: none"> <li>• Competing technology development</li> <li>• Research funding</li> <li>• Associated/dependent technologies</li> <li>• Replacement technology/solutions</li> <li>• Maturity of technology</li> <li>• Manufacturing maturity and capacity</li> <li>• Information and communications</li> <li>• Consumer buying mechanisms/technology</li> <li>• Technology legislation</li> <li>• Innovation potential</li> <li>• Technology access, licensing, patents</li> <li>• Intellectual property issues</li> <li>• Global communications</li> </ul>

Source: Derived from Chapman (2006: 4)

### Credit Risk

Credit risk is broadly defined as the inability of debtors to meet their financial obligations, such as loans and other lines of credit (Peacock, et al., 2003; Iqbal & Mirakhor, 2007). Credit risk mainly exists in those financial institutions, which

depend on lending and borrowing as the main sources of their revenues. However, other sources of credit risk may arise due to other financial instruments, such as inter-bank transactions, currency exchange transactions, equities and transactions settlements (Basel Committee, 1999).

In some instances, when borrowers repeatedly fail to pay their maturing debts over a certain period of time, the lending financial institution may find itself severely disadvantaged in terms of cash on hand in a way that affects its ability to meet its financial liabilities and obligations. Two unfavourable situations could arise from such a scenario: shortage in liquidity leading to failure in meeting liabilities, and loss of confidence of investors/depositors in the institution (Basel Committee, 1999; Lasher, 2005). These two outcomes, in particular, could lead to an entire collapse of the financial institution. Reputation (thus reputation risk) and the confidence of customers are main tools for attracting investors and surviving in the market. Marrison (2002: 5) presented two examples where large firms have defaulted on the repayment of their maturing loans:

- *In January of 1999, Guangdong International Trust and Investment Corporation defaulted on the repayment of \$4.5 billion, half of which was owed to overseas banks.*
- *In August of 1999, Iridium, the Satellite Telecommunication Company defaulted on two syndicated loans of \$1,5 billion that it had borrowed to launch the satellites but could not repay due to unexpected low earnings.*

The current housing crisis in the USA, which is hurting millions of families, was caused by the actions of dishonest brokers and lenders by qualifying people for houses they could not afford. Also, home prices are declining nationwide and the downturn in housing is expected to wipe out \$3 trillion in household wealth. As home prices fall, consumer confidence is weakening and it is increasingly difficult for homeowners to refinance costly mortgages. The negative impact of the American housing crises and the failure of borrowers to promptly repay their mortgages have been felt across the US economy and beyond.

Islamically, where the ratio of debt to equity should not exceed 33%, Islamic financial institutions (Hakim & Rashidian, 1999) will be in a better position than conventional financial institutions to manage and deal with credit risk, as they have sufficient assets and deposits to meet unpaid commitments from borrowers (or partners, such as in *Al-Musharakah* and *Al-Mudarabah*) (Ahmed, 2001; Venardos, 2005; Muljawan, Dar & Hall, 2004). In this regard, the International Financial Risk Institute (2000: 1) points to the Islamic principle regarding the percentage of equity to debt and mentions that “we need to understand why maintaining a particular level of capital at individual firms has become generally recognised as the primary regulatory tool to protect against international systemic risk”.

### **Liquidity Risk**

Although in the financial sector there is risk everywhere and in everything, some types and sources of risk involve a high degree of negative consequences that affect the entire business of the financial institution and, in many instances, its survival. Liquidity risk is one of these risks that could lead to develop systemic risk (Peacock et al., 2003). Liquidity risk is defined as the lack of cash flow due to insufficient amount or lack of capability of the financial institutions to liquidate some of their assets to raise needed funds (Lasher, 2005; Peacock et al., 2003). Kapoor (n.d.) explains the causes of liquidity risk by the “inability of counterparty to honour payment obligation(s) in time, either due to cash follow short fall or insufficient funds”. Adds that, technically, liquidity risk “can be termed as failed transaction rather than a default” (Kapoor, n.d.: 2). The major unfavourable outcome of liquidity risk is the firm’s risk of insolvency: “the situation in which the firm is unable to meet its maturing liabilities on time” (Peacock et al., 2003: 198). Lack of an adequate and sufficient amount to pay on time the current debit could lead to harming the reputation and confidence in the financial organisation and a shortfall within the business, thus leading to a collapse. Peacock et al. (2003: 198) propose “a firm could avoid this problem by carrying large cash balances to pay the bills that come due”. Otherwise, many financial risks, such as credit, reputation and even legal risks, beside liquidity risk, may be developed.

For this reason, many international conventional organisations, such as Basel Committee, put standards and quantitative equations that help in determining the minimum level of balance that financial institutions should keep to avoid insolvency and liquidity risk. For example, in 2001, the Basel Committee on Banking Supervision put a consultative package (The New Basel Capital Accord, Basel II). The proposal involves the methods by which banks can determine their minimum capital obligations, thus it determines the risk weights. The Committee proposes the following formula to compute risk weights (RW):  $RW = (LGD/50) \times BRW (PD)$  (whereas: PD means probability of default, and LGD points to loss given default) (Reisen, 2001). This proposed approach (the internal ratings-based (IRB) approach), as Reisen states, “represents a fundamental shift in the treatment of regulatory bank capital. It builds on internal risk rating practices of leading banks to estimate the amount of capital they believe necessary to support their credit and operational risks” (Reisen, 2001: 4).

One main source of systemic risk, as well as its main sources such as liquidity and credit risks, is the task environmental factors. These factors, which include factors that influence the institution/sector directly, are: consumers, competitors, suppliers, labour market, trade/industry, and financial resources (Samson & Daft, 2005). The importance of analysing this environment, in terms of systemic risk, is that any

change or deficit in these factors, could involve negative impacts on the organisation's performance and profits.

However, the key factor here, among task environment factors, is the competitive factors. In many instances, some financial institutions could expand in giving facilities and loans without sufficient securities from borrowers or without committing to a particular level of cash in order to compete with other rivals and financial institutions and gain a big market share. However, although attaining a good market share and maximising profit is a key goal of business, the failure of controlling financial transactions, and maintaining an adequate level of liquidity rate, could have a severe adverse impact, such as a collapse of the financial institution. As mentioned earlier, the pre-determined percentage of debt to equity ratio (which should not exceed 33%), according to Al-Shariah, is a protective principle and procedure that contributes in reducing the possibility of liquidity risk occurring, and in mitigating the adverse impact of credit risk. Organising the behaviour of investors and financial institutions is an essential process for effective controlling of these risks. Moreover, Al-Shariah principles in this regard involve an ethical dimension, as it protects society, investors and financial institutions, as well from irrational and unjustified actions (DiVanna2006).

On the other hand, there are internal environmental factors, which are related to the financial institution's own capabilities, resources, manpower, policies and management system, and have strong interrelationship with the institution's strengths and weaknesses (Samson & Draft, 2005). The two main factors in connection with systemic risk and credit and liquidity risk as well, are the internal policy and mission of the organisation, and the competency of employees of the financial institution. Lack of an explicit policy and clear procedures that control financial transactions within the organisation plays a crucial role in increasing the possibility of liquidity and credit risks to take place within these organizations. Also, lack of competent and skilled human resources to deal with financial market's developments and the entire environment, or to analyse surrounding factors and outline appropriate plans and measures, all are major causes of failure in evaluating and assessing risk, thus contributing to undesired outcomes (Mills & Presley, 1999).

### **3. Risk Management of Islamic Financial Institutions: Protective Measures and Preventive Mechanisms**

Discussion thus far has confirmed the strong causal relationship between systemic risk and the high debt/equity ratio at individual, business and institutional levels. The failure of one or more large banks or security houses in a country is most likely to

cause a chain reaction and thus have wider adverse implications that can cause major disruptions and possible breakdown to the global financial system.

Unsurprisingly, a great deal of relevant literature, based on the findings of several recent studies, has confirmed that the best guarantee against total collapse of financial institutions is to allocate an adequate debt/equity ratio and to set an appropriate minimum capital adequacy requirements for Islamic banks. Moreover, transforming the economy to be equity-based rather than debt-based, coupled with honest implementation of the vision of PLS, by sharing rather than bearing the risk through diversification, profit and loss sharing instruments and ventures capitalism would be the best assurance against financial risk. The fact that both Islamic and conventional financial institutions are subject to various types of risks, underscores the need to develop an inclusive framework and practical mechanism to identify, measure, report, manage, and control such risks that are deemed threats to the survival of functional financial systems. Although risk is a key element that is equally shared between both systems, the fact remains that each system is distinct and has its own distinguishing features, and accordingly is associated with specific types of risks that require instituting explicit counter-measures.

Needless to say that in addition to its abidance by Al Shariah rules and regulations, any proposed Islamic risk management system must be derived from and based on the principles of Al Shariah. Iqbal and Mirakhor (2007) presented a comprehensive overview of the major types of risk that are most likely to encounter the operations Islamic financial institutions. The following discussion is limited in its scope to the main types of risks, with particular implications for Islamic financial institutions, which constitute major sources of systemic risk. The outlined risk management guidelines (Figure III) are to be considered and applied concurrently (when applicable) with the risk management principles devised by Basel II (Basel Committee on Banking Supervision II), and the standards document on risk management issued by the Islamic Financial Services Board (IFSB)<sup>4</sup>.

A central and fundamental issue that must be kept within perspective at all times when debating and discussing economic issues, including dealing with financial risks, is that Islam is a dynamic, forward and enabler religion rather than a constraint to development and creativity. Therefore, the efforts of Muslim scholars, practitioners, and regulators must be channelled towards rigorous exploration of the Islamic business vision in order to maximise the true potential of the Islamic attitude towards business activity in general.

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<sup>4</sup> IFSB which is a regulatory authority for Islamic Financial services has issued in December 2005 a document that examined, debated, and identified variety of risks pertain to Islamic finance and devised fifteen guiding principles of risk management for Islamic financial institutions (IFSB, 2005).

Figure III: Islamic Management of Sources of Systemic Risk

Type of Risk	Islamic modes of finance (Areas of potential risk)	Risk mitigation/preventive techniques
<b>Credit Risk<sup>5</sup></b>	<p>- <b>Murabaha:</b> where the bank makes prompt delivery of assets but client fails to make timely payment. The bank is in no position to take effective measures to cover its dues nor can it charge interest or impose penalty on the outstanding balance.</p> <p>- <b>Mudarabah:</b> the bank as a silent partner has no means to monitor the investment or to participate in the management of the project. The bank is exposed to total loss of its investment (the amount advanced to the entrepreneur)</p> <p>- <b>Musharakah:</b> In case of proven negligence or wrongdoing by the business partner (the entrepreneur), the bank is entitled to recover its investment. However, the recovery process is not transparent since the rules of debt recovery rather than the rules of musharakah contracts are applied.</p> <p>As a PLS contracts, both <b>Mudarabah and Musharakah</b> partnership arrangements are subject to loss of invested capital due to business losses</p>	<p>- Maintaining comprehensive database and reference checklist on the character and past performance of potential business partners to evaluate their personal and business attributes and to “determine the probability of default”.</p> <p>- Using collateral as security against credit risk and accepting personal and institutional guarantees to minimise credit risk.</p> <p>- Utilising reliable monitoring measures</p> <p>- Being actively involved in the business venture throughout its various stages</p>
<b>Market Risk<sup>6</sup></b>	<p>- <b>Mark-up Risk:</b> mark-up rate under <b>murabaha</b> and other trade-financing instruments is fixed at the time of the contract for the entire length of the</p>	

<sup>5</sup> IFIs shall have in place Shariah-compliant credit risk mitigating techniques appropriate for each Islamic Financial Institution (IFSB Principles of Credit Risk: Principle 2.4)

<sup>6</sup> IFSs shall have in place an appropriate framework for market risk management (including reporting) in respect of all assets held, including those that do not have ready market and/or are exposed high price volatility (IFSB Principles of Market Risk: Principle 4.1).

	<p>contract. The IFI is exposed to the risk of upward movement of the mark-up rate without being able to benefit from such an increase.</p> <p>- <b>Price Risk:</b> this type of risk is prevalent in the case of <i>Bay' al-Salam</i>, where the Islamic bank bears the risk of having to deal with volatile environment where the prices of goods could vary considerably between the delivery time and the actual sale of the goods at the current market price.</p> <p>- <b>Foreign Exchange (FX) rate movement:</b> currency risk is deemed to the most important market risk facing IFIs -considering the weakening US\$ and the fact that the majority of IFIs have a US dollar base currency. IFIs are subject to FX rate movement as currency may appreciate when payables are due and it may depreciate when receivables are due.</p> <p>- <b>Securities Price Risk:</b> the risk associated with investing in marketable securities such as Islamic bonds (sukuk), since the rate of return on such investments is determined by business performance rather than pre-determined fixed rate of return.</p>	<p>- Developing new hedging products in the pursuit to seek for Shariah compliance compatible risk mitigating products.</p> <p>- The currency risk mitigation options for IFIs are very limited. Uncommon option for IFIs is to transfer the risk to business alliance partners who are better positioned and/or better equipped to take on these risks.</p> <p>- To invest concurrently in several assets dominated in other currencies at any given time</p> <p>- IFIs can diversify their investments in wider range of securities.</p> <p>- Further development of non-bank IFIs such as Islamic insurance (Takaful)</p>
<b>Liquidity Risk<sup>7</sup></b>	<p><b>Liquidity risk:</b> IFIs are affected by two types of liquidity risks: lack of liquidity as the vast majority of their assets are maintained in the illiquid</p>	<p>- Maintain certain level of liquidity to meet withdrawal requirements</p>

<sup>5</sup> IFIs shall undertake liquidity risk commensurate with their ability to have sufficient resource to shariah complaint funds to mitigate such risk (IFSB Principles of Liquidity Risk: Principle 5.2).



	<p>assets, and the limited ability of IFIs to raise funds to meet their liabilities and other financial obligations at reasonable cost.</p> <p><b>Sources of liquidity risk:</b></p> <ul style="list-style-type: none"> <li>- Limited availability of Shariah-compatible money market and the absence of true inter-bank money market.</li> <li>- Undeveloped secondary markets</li> <li>- Money held in current accounts is largely maintained in the form idle cash due to the absence of illiquid short-term instruments.</li> </ul>	<ul style="list-style-type: none"> <li>- Developing strong secondary markets and engineering sound financial instruments (asset-backed tradable securities such as sukuk) that can be traded in these markets.</li> <li>- Developing financial institutions, saving institutions and housing credit institutions to serve the diversified customer demands</li> </ul>
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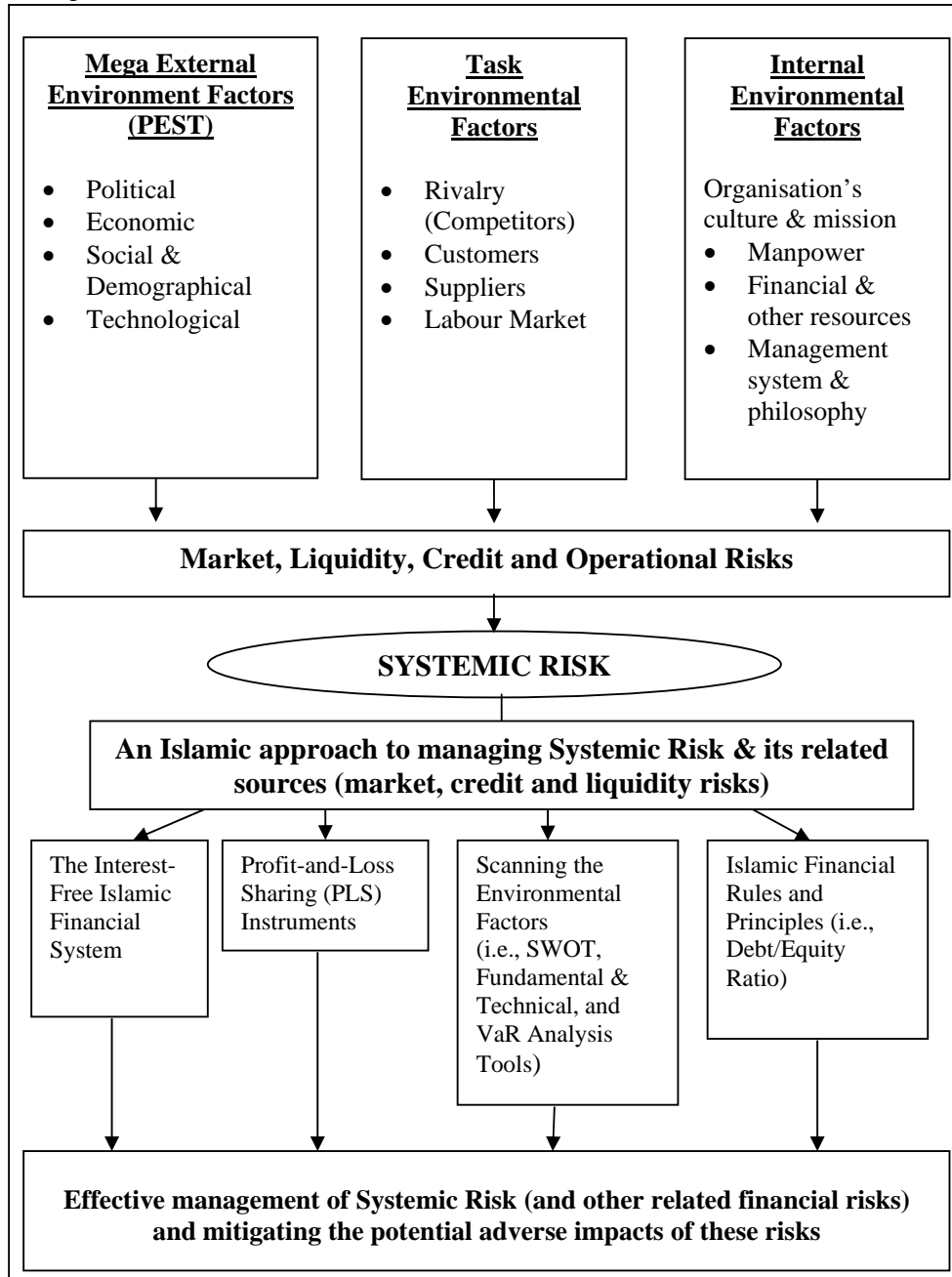
Source: Derived from (Iqbal & Mirakhor, 2007: 227-250; Said, Shafqat & Rehman, 2007; Baldwin, 2005)

The distinctive Islamic approach of dealing with risk makes the Islamic management of financial risks very unique. In fact, the same as in dealing with other unfavourable issues, the Islamic system, represented in Al Shariah rules and regulations, is based on devising preventive procedures to protect the Muslim ummah and its financial institutions from potential harms of risk. For example, when Al Shariah fronted to solve alcohol problems, the Nobel Quran commanded Muslims not only to give up alcohol, it rather instructed Muslims to avoid all avenues leading to it and to stay away from the places that involve alcohol. Such laws came to solve the problem from its roots and to protect individuals and societies from this destructive behaviour before it takes place and becomes a real dilemma. Similarly, in finance, the Islamic system put in place unique rules and principles that protect financial institutions from potential risks, or at least to mitigate the negative impacts of these risks if they occur. These principles are especially important in case of systemic risk and its main sources, such as market risk, which are difficult to be managed or controlled. As mentioned earlier, causes and factors that lead to market risk in general, and some other sources of risk, such as credit and liquidity risks, are mainly external factors that are out of the financial sector's domain. Thus, the protective procedures, as in Al Shariah, are the best mechanism to deal with these risks. The main three principles of Al Shariah in dealing with and controlling systemic risk and its sources are (See Figure IV): the interest-free financial system; the profit-and loss (PLS) sharing model; and the minimum level of liabilities to assets rule (Mills & Presley, 1999; Khan & Ahmed, 2001; DiVanna, 2006; Bacha, 2007).

The fundamental principle of any Shariah compliant financial transactions is that it should be a non-contingent pay off; in other words, free from interest. Indeed, many researchers point to the role of the conventional financial system, which is based on interests (Riba), as being a main source of credit risk. Mills and Presley (1999: 67) found that the interest-based financial system leads to “the disruption of the payments mechanisms and reduction in depositor real wealth” as well as, “it entails the destruction of valuable information-capital acquired through bank-borrower relationships”. The economic rationale behind the prohibition of fixed return is the fact that the valuation of the underlying economic activity is not constant; thus “returns must be allowed to fully reflect that reality” (Garis, 2007: 4). The problem, as Mills and Presley explain, “Lies in the lender’s return being unrelated to the realised capital gain” (1999: 67). Whether in the case of unforeseen circumstances occurrence or when the economic and business performance downsizes, borrowers, especially high quality, and large borrowers, cannot convincingly meet their debts and financial liabilities to the financial institutions. As a result, this situation will diminish the ability of financial institutions to meet their liabilities and financial responsibilities for investors.

In this regard, Mills and Presley (1999: 117) condemn the interest-based financial system and state that “compound interest is compound sins: it lets loose in a finite economic world exponential growth causing great injustice and making debits unpayable”. In contrast to the notion that a fixed interest rate is a safe and sound mechanism that secures investment, Islamic financial instruments, such as Al-Musharakah, Al-Murabahah and Al-Mudarabah, are effective mechanisms for a more secure and stable financial system that engages all stakeholders in profits and returns, as well as, in risk and possible hazards (Khan & Mirakhor, 1987). Besides encouraging investments, such principles are effective devices that minimise the credit risk and reduce the exposure to interest rate volatility that may push some borrowers to sell on a diminishing market or dishonour their financial obligations to financial institutions. In this regard, Mohsin (1982: 190) notes that non-interest financial institutions are “less risk averse in their allocation of funds than conventional counterparts because they would not have issued liabilities whose value and return they have guaranteed”. Indeed, what maximises the negative impacts of credit risk of conventional financial institutions is the pre-expected return of investors. According to the expectancy theory (Samson & Daft, 2005), when investors expect to receive, for sure, a certain return based on pre-determined fixed interest rate, they become more frustrated and annoyed than those investing under the Islamic system where the return is determined and is subject to the performance of business.

Figure IV: An Effective Management Systemic Risk Model from an Islamic Perspective



The second contribution of the Islamic free-interest financial system is that it reinforces Al-Takaful principle amongst stakeholders, and the justice within the community (Wahab, Lewis & Hassan, 2007). Indeed, these two principles are significant in the case of market risk (due to wars or political disputes for example) or credit risk (i.e., due to regression in economy); where fair dealing, Al-Takaful and cooperation between stakeholders reduce the unfavourable outcomes of these risks and may protect financial institutions from collapse. Mills and Presley (1999: 107) emphasises the importance of this principle when they state that the interest-free financial system “is foundational to economic brotherhood”. Therefore, many researchers (such as Mishan, 1971; Mills and Presley, 1999) point to the unethical issue of interest-based financial system, as this could lead to embed “initial inequalities of wealth and the resulting social divisions” (Mishan, 1971: 205). Interestingly, all major religions (Judaism, Christianity and Islam) and other ethical systems such as Buddhism and Hinduism were united in rejecting interest on moral and ethical grounds.

The contributions of the Islamic financial system, which is, based on PLS modes of finance in controlling risk involves many faces. Firstly, the financial institution will be able to practice more control and will have more authorities than conventional system in following-up the business performance, as a partner, and to “monitor borrower actions more closely” (Mills & Presley, 1999: 81). In contrast to conventional financial institutions (i.e., banks), the main role of the institution is to lend money and cannot interfere until the problem (risk) occurs (such as when the borrowers fail to pay their financial obligations on time). Secondly, as the financial institution under the Islamic law is a partner, which shares the risks and rewards, this may prompt the organisation to be more prudent and accountable in its financial activities. Furthermore, a PLS financial system is “less susceptible to asset price boom and slump by restricting credit for leverage, speculative ventures” (Mills & Presley, 1999: 82).

Thirdly, the principles of Al Shariah prohibit investors and financial institutions from investing in high risky investments (high degree of uncertainty), or hold stake in investments that may involve extreme unfavourable outcomes if a particular risk occurs. Indeed, as risk is a perceptual issue that depends on individuals and institutions’ perspectives and judgements to the potentiality and severity of harm, Al Shariah devises and puts in place rules and regulations specifically designed to control the behaviour and culture of risk taking. In this regard, Aven (2003: 112) notes that the risk perception and acceptance are influenced by many factors such as “large uncertainties related to what will be the consequences”. Al Shariah considered this issue and set financial-related rules and regulations that organise the risk-taking

process and control the risk-taking behaviour. Indeed, although religious sentiment has played a part in attracting depositors”, investors, in general, are also interested in achieving competitive return and high profit (Mills & Presley, 1999: 50). This could lead to expanding on lending or lack of proper management of investment and employing funds. One of these rules relates to the debt-to-equity ratio, which should not exceed, according to Al Shariah, 33% (Hakim & Rashidian, 1999; Nisar, 2005). Nisar (2005: 5) mentions that according to Al Shariah “the total investment of the investee Company... should not exceed 33% of the total assets”. This financial principle, although it could be seen by some financial institution as constrain, it involves a security element for investors from some types of risk such as liquidity and credit risks.

However, the greatest risk facing the Islamic financial services industry is the Shariah risk; the risk of non-compliance with Shariah rules and ethics by some IFIs thus risking the loss of investors’ confidence in the process with all what that entails to Islamic financial industry. El Qorchi (2005) rightly maintains that building confidence in Islamic finance is fundamental and crucial for the development of the evolving Islamic financial services industry. *Murabaha* for instance is a much-debated financial instrument in Islamic finance. It has been argued that Islamic banks in reality are practising ‘artificial *murabaha*’ by extending interest-based loans to their customers, and in fact charging (predetermined) mark up under different names and pretexts to justify their illicit practices<sup>8</sup>. Islamic finance therefore is facing the challenge of reclaiming the legitimacy of its *murabaha* financing and retaining the implicit trust held by the majority of investors that Islamic financial institutions would fully comply with the rules of *Al Shariah* by offering purely Islamic financial products and services. Therefore, IFIs are “expected not only to avoid interest-based transactions, prohibited in Islamic *Shariah*, but also to avoid unethical practices and participate actively in achieving the goals and objectives of an Islamic economy” (Divanna, 2006: 2).

Al Shariah compliance is critical to the survival and the development of IFIs since the overwhelming majority of fund providers opt to utilize Shariah banking services as a matter of principle based on religious convictions rather than on financial performance considerations (Gerrard & Cunningham, 1997; Haron & Nursufiza, 2005; Kayed, 2006; Wasposito, 2007). However, it is imperative to emphasise that while maximising return is neither the dominant motive nor the overriding priority of faithful Muslim investors, this by no means implies that Islamic financial institutions should settle for less than “the best” in the services they render and the return they

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<sup>8</sup> Such as administrative fee, commission, and service charge (usually equivalent to the ongoing interest rate).

endeavour to generate for their customers as well as for their shareholders while complying with the principles of Al Shariah.

#### **4. Conclusion**

Along with the opportunities created by the contemporary financial industry and the power of consolidation of financial organisations beyond national boundaries, financial globalisation has brought tremendous challenges for financial institutions regardless of their whereabouts and for national economies as well. Identifying and consequently managing systemic risk which, does not recognise national borders or behave in certain patterns, is considered as being one of the most threatening challenges confronting financial systems around the globe. This paper has argued that although Islamic financial industry is not immunised against systemic risk, which is a product of diverse national and global issues of the financial industry, the Islamic financial system has a built-in mechanism that minimises and protects from unfavourable consequences of such risk.

The paper has also established that Islamic financial industry, which is subject to unique forms and types of risk, mainly systemic risk, and other related sources of risk (i.e., market, credit, liquidity and operational risks), comprises a distinct component of the global financial industry. It further argued Muslim scholars, practitioners, and regulators to accept the challenge by undertaking an in-depth systematic exploration of the Islamic financial vision in order to devise Al Shariah compliant protective measures and functional preventive mechanisms in dealing with various types of financial risks based on the following principles: the prohibition of interest-based financing at all levels and in all forms and shapes; the true and honest implementation of the PLS contracts; and Maintaining (appropriate) minimum capital adequacy requirements for IFIs that reflect the level of risk undertaken by these institutions.

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