

Prudential Regulation of Islamic Banks: An Analysis of Capital Adequacy Standards

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Abstract: Prudential regulation of banks necessitates the identification, measurement and evaluation of banks' total risk exposure in order to ensure the adequacy of their capital to absorb losses. However, the issue of prudential standards applicable to Islamic banks has only recently attracted the attention of the global Islamic banking industry. This article examines the present application of the Basle Committee's principles on capital adequacy to Islamic banking operations. It establishes that its application is incompatible with Islamic banking, while demonstrating that a compatible system would tie Islamic banks' capital more closely to the risks they hold. Drawing from the experiences in the European Union, it considers the 'building block' approach in developing a capital adequacy system that recognizes the risks associated with Islamic banking. It highlights the decisive solution contained in the Basle Committee's proposed new Capital Accord (Basle II), which provides a flexible structure in which banks would adopt approaches that best fit their risk profile.

I. Introduction

Banking business typically involves risks in prospect of gains and losses. Public policy intervenes with regulation to curb banks from undertaking excessive risks in order to maintain systemic stability and protect the consumers of bank services. This is necessary because of the centrality of the banking sector to the payments system and to the savings and investment process. The present nature of banking regulation is the result of a process of deregulation and diversification

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over the last three decades. It is also a reaction to the solvency crises experienced by banks in the 1980s, and a consequence of the tendency towards international harmonization of prudential regulation (Dewatripont and Tirole, 1993:48).

The fundamental stance of banking regulation is the maintenance of a level playing field between banking institutions. Regulatory authorities, therefore, apply the same principles in the handling of risks to all banks, including those operating Islamic principles (Fiennes, 2001). Although Islamic-banking business is underpinned by Islamic principles, regulators are responsible for applying national supervisory principles to all banks, regardless of the services they are offering.¹ However, these generic principles are not always applicable in an Islamic banking framework.² It is therefore imperative that regulatory requirements should be tailored to accommodate the unique characteristics of Islamic banking (Parker, 1998).

The issue of prudential standards applicable to Islamic banks has only recently attracted the attention of the global Islamic banking industry. The industry is faced with the challenge of developing uniform regulatory standards that are tailored to the specific features of Islamic financing. These standards ought to be acceptable within the industry and accord with basic global regulatory standards.

The aim of this article is to address the issue of the capital adequacy system for Islamic banks. Islamic banking is placed on the Basle Accord template in order to establish its incompatibility. A strategy for developing a compatible system is explored by assessing the peculiarities of Islamic banking assets and liabilities, and considering the application of the European Union's 'building block' approach and the Bahraini Initiative.

Sections 2 and 3 respectively examine the role of capital adequacy as a tool for the prudential regulation of banks, and provide an overview of the Basle Committee's capital adequacy initiative – the Basle Accord. Section 4 attempts to apply the principles of the Basle Accord to Islamic banking operations, while section 5 looks at the AAOIFI capital adequacy recommendations for Islamic banks. Section 6 explores the suitability of the 'building block' approach for developing an alternative way of assessing the capital adequacy of Islamic banks. Section 7 looks at the Bahraini approach, being the first local initiative for Islamic banks' capital adequacy. Section 8

highlights the salient points of a strategy for devising a suitable capital adequacy system for Islamic banking operations.

II. Capital Adequacy

A key to current prudential regulation is the obligation to continually meet minimum capital ratios, as solvency risk is ultimately concerned with the question of banks' capital adequacy (Dale, 1984:58). It is imperative that banks' total risk exposure should be identified, measured in some useful operational way, and evaluated in the light of banks' capital cushion. Usually, capital adequacy ratios are historic indicators of the already existing banking problems. Yet, an adverse trend in those ratios may signal increased risk exposures and possible capital adequacy problems (Hassan and Bashir, n.d.). Hence, the extent of banks' capital adequacy is used as an early warning system that can signal the need for more thorough investigation.

In the broadest terms, capital is 'adequate' either when it reduces the chances of future insolvency to some predetermined level or, alternatively, when the premium to be paid by banks to an insurer is 'fair' (Gardener, 1986:19). An adequate capital base should effectively help to forestall the ultimate event(s) it is designed to meet and also preserve confidence in the banking system (*ibid*). Although regulatory authorities could approach capital adequacy in a number of ways (Dale, 1984:59),³ capital adequacy requirements address banks' overall portfolio, or a mix of risks, both on and off the balance sheet. It is applied by relating banks capital or own-funds to the total sum of risk-bearing assets weighted by the degree of risk involved. The objective is to ensure that banks' capital will be adequate to absorb their losses (Nwankwo, 1990: 38f., and Dale, 1984:57).

The Bank of England was the first regulatory authority to take measures to improve the capital adequacy of its local banks in 1980. The Bank put in place an informal risk-related framework of capital adequacy standards. The issue of bank capital was brought to the forefront of the Basle Committee⁴ at the beginning of the 1980s following the world-wide trend of erosion of capital-to-asset ratios at a time of very aggressive expansion of banks' international lending. At the time, Third World debt was met only through coordinated rescheduling, which exposed the inadequacy of bank capital in comparison to the volume of international lending. Furthermore,

there was explosion of off-balance-sheet credit exposures, frequently in the form of innovative securitized instruments (Hadjjemmanuel, 1996: 61f.).

Without sufficient capital even the most conservatively run banking institutions cannot survive. Experience has shown that capital and its allocation gets rather a low priority from most small to medium-sized emerging market banks, including Islamic banks (Jackson-Moore, 2002). This puts a greater onus on regulatory authorities to ensure that regulations do capture the risks. It also means that, where institutions are operating in ways that introduce new risks, authorities are aware of this and are able to take appropriation action.

III. Basle Accord

In 1988, the Basle Committee published its most important initiative guidelines on prudential regulation entitled 'International Convergence of Capital Measurement and Capital Standards' (Basle Accord). The standard is underlined by the assumption that banks' strength and safety is importantly related to the size of their capital base (UNCTAD, 1992:35). The Basle Committee believes that it is of great importance that the capital adequacy framework should cover all off-balance-sheet activities. The Committee's approach is that all off-balance-sheet activities are to be converted to credit risk equivalent. This is achieved by multiplying the nominal principal amounts by a credit conversion factor: the resulting amounts then being weighted according to the nature of the counter party (Basle Committee, 1988: Annex 2).

The Basle committee bases its definition of capital on a two part constituent:

- (i) Tier 1 (core) capital stock issues as well as disclosed reserves without any limit.
- (ii) Tier 2 (supplementary) capital perpetual securities, undisclosed reserves, subordinated debt with maturity exceeding five years, and shares redeemable at the option of the issuer.⁵

Tier 1 must constitute at least 50 per cent of total capital, while Tier 2 capital cannot exceed 100 per cent of Tier 1 capital as a

contribution to total capital. Moreover shares redeemable at the option of the issuer and subordinated debt cannot exceed 50 per cent of Tier 1 capital (Basle Committee, 1988).

The Basle Accord establishes a scheme whereby capital adequacy of banks is based on an overall minimum ratio of 8%⁶ in which capital and off-balance-sheet exposures are related to different categories of weighted risk. A bank's capital base is related to its risk weighted assets. In differentiating between the categories of asset riskiness, higher risk assets are assigned corresponding higher percentage capital loading; that is, they accordingly require more capital adequacy. Five risk weights (0, 10, 20, 50, and 100 per cent) are utilized and assets are assigned to the five respective categories of 'risk assets', on the basis of their perceived relative level of risk.⁷

IV. Capital Adequacy of Islamic Banks

A primary issue with Islamic banking is that certain assets and liabilities of Islamic banks differ from those of conventional banks. The issue raises questions about the classification of Islamic banks' risk-sharing funds, as capital or investments (Bank of England, 1997), and has implications for assessing their capital requirements. Although the global Islamic banking industry was ignored in the process of developing global banking regulation standards, global trends in banking regulation have created new challenges and realities for Islamic banks.

Despite the fundamental differences from the conventional sector, the Basle Committee's 1987 core principles for effective banking supervision did not consider the implications for the Islamic-banking sector. Unfortunately, countries where most of the Islamic banks are located, did not participate in the intense global financial deregulation that took place in the 1980s (Al-Rimawi, 1998:2). Although the core principles were drawn up by the Group of Ten Industrialised Countries (G10) in close collaboration with central banks in fifteen emerging countries, only two Muslim countries – Malaysia and Indonesia – with a relatively young Islamic banking sector, were involved in the process (Islamic Banker, 1997:2).

The first issue that emerges in the process of applying the Basle Accord to Islamic banks is that their capital adequacy ratio formula for Islamic banks ought to be different from the formula for

conventional banks. This is based on differences in the nature of Islamic banks' assets and liabilities. The two main types of deposits in Islamic banks' demand deposits and term deposits function differently from those in conventional banks. The demand deposits may be zero-return deposits with the principal guaranteed by the bank. However, a proportion of demand deposits may be invested in low risk, relatively liquid, income-producing assets.

Term deposits are invested on the basis of restricted⁸ or unrestricted⁹ profit-and-loss-sharing (PLS) basis. Funds from restricted or unrestricted accounts are invested in a designated pool of non-interest-bearing assets managed by the bank. The holders of these accounts agree to bear the business risk associated with investing their funds. The return on depositors' funds is dependent on the return on the pool of non-interest-bearing assets. The legal entitlement of investment account holder is the principal and a contractual share of the bank's profit, or liability in the event of a loss. Under normal circumstances, these PLS investment funds are not liabilities of Islamic banks.¹⁰

The assets that Islamic banks finance should, therefore, not appear on their balance sheet. They could, however, be deducted from both sides of their balance sheet, thereby reducing pro rata the amount of banks' risk-weighted assets (Archer, 2000). Hence, the strict adherence to Basle guidelines would not bring the assets funded by investment account holders into Islamic banks' capital adequacy calculations. Nevertheless, a capital adequacy calculation that is simply based upon the assets carried on the balance sheet would be misleading because Islamic banks' investment accounts, like deposits in conventional banks, form the major proportion of the funds used by most Islamic banks.

Conceptually, PLS transactions, such as *muḍārabah* and *mushārahah* are at the core of Islamic banking, while non-PLS transactions are at the margin (Errico and Farahbaksh, 1998). However, in practice, PLS features marginally as most Islamic banks offer trade and project finance on mark-up, commissioned manufacturing, or leasing bases (Dar and Presley, 2000). PLS transactions are mostly unsecured equity financing, which are far riskier than the secured non-PLS transactions.¹¹ The conflict in the

conceptual and practical approach to Islamic banking is due to the following factors:

- (i). Vulnerability of PLS transactions to agency problems;
- (ii). Absence of a well defined property right;
- (iii). Competition with conventional banks necessitates relatively less risky modes of finance;
- (iv). Restrictive role of investors for participatory decision-making;
- (v). Feasibility of PLS instruments for funding short-term projects; and
- (vi). Non-existence of secondary markets for trading in PLS financial instruments.

It has been suggested that the Basle Accord may be applied to Islamic modes of financing through reconciliation of the latter with the three broad categories of conventional banks' assets – current facilities, net investments and mortgage loans. Such reconciliation ought to be on the basis of their economic functions, although they may involve some approximation (Errico & Farahbaksh, 1998). However, such reconciliation may impose a higher cost on Islamic banking products. For example, in the U.K, *ijārah* mortgages are subjected to a higher capital risk weighting of 100% (as against 50% for conventional mortgages) in accordance with the Basle Committee's reference risk weight for mortgage loans on residential properties.

Some writers have argued that the minimum capital adequacy ratio for Islamic banks should be higher than the Basle Committee's minimum level of 8 per cent (Errico and Farahbaksh, 1998).¹² It was further argued that, since deposits are not guaranteed in Islamic banking, the ratio should be kept higher to protect depositors in case of insolvency (Iqbal, 1999). While it is difficult to state a precise higher capital adequacy ratio for Islamic banks, it is suggested that the assessment of an appropriate level of capital adequacy ratio for Islamic banks should be carried out on a bank-by-bank and country-by-country basis (Errico and Farahbaksh, 1998). However, available evidence indicates that Islamic banks tend to maintain much higher ratio in the process of complying with capital requirements¹³ and are better capitalized when compared to conventional banks of similar size (Hassan and Bashir, n.d.; Iqbal, 1999).

V. AAOIFI Standards

The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI),¹⁴ in conjunction with several central banks in Islamic countries, has explored the issue of Islamic banks' capital adequacy and has made recommendations contained in the *Statement on the Purpose and Calculation of the Capital Adequacy Ratio for Islamic Banks*. AAOIFI's capital adequacy committee set out the issues in terms of the denominator of the capital adequacy ratio by focusing on two main issues:

- (i). Investment accounts are not liabilities, but are used to finance assets managed by the bank as *muḍārib*. Given that profit and loss sharing investment accounts are, in principle, a form of limited-term equity investment, the Committee asked whether they should be reflected in the numerator of the Capital Adequacy Ratio, as an addition to the Islamic banks' own capital (as an additional component of Tier 2 capital, restricted to a certain proportion of Tier 1); and
- (ii). There are certain risks that will make an Islamic bank liable for PLS accounts, which has implications for the capital adequacy ratio. Given that fiduciary and displaced commercial risks arise in respect of both unrestricted and restricted PLS investment accounts, the Committee asked how the assets financed by these investment accounts (subject to risk weighting) should be included in the denominator of the Capital Adequacy Ratio.

The Committee concluded that, although the banks' own capital is not legally exposed to the risk of the assets under management, they may be exposed to 'displaced commercial risk' and 'fiduciary risk'. Displaced commercial risk arises as a result of market pressures that lead to Islamic banks subsidizing the returns paid to investors. Thus, Islamic banks' own capital is exposed to the volatility of returns on the assets managed on behalf of investors.¹⁵ Fiduciary risk arises as a result of misconduct, negligence or breach of contract on the bank's part (Archer, 2000). The capital adequacy implications of fiduciary risk and displaced commercial risk are similar for both unrestricted and restricted investment. Hence, rather than deducting the amount of unrestricted accounts from both sides of the balance sheet, the issue

becomes that of how fiduciary and displaced commercial risk, arising on both types of accounts, should be taken in to account in calculating the capital adequacy ratio of an Islamic bank.

The Committee also concluded that it would not be appropriate to treat PLS investment accounts as part of the banks' Tier 2 capital in the numerator of the Capital Adequacy Ratio, especially since they would not generally meet the Basle requirement of having maturity of at least five years. An exception to this would be prudential reserves. These are profit equalization reserve and investment risk,¹⁶ which mitigate Islamic banks' displaced commercial risk. They are set up as part of the equity of investment, but not as part of the bank's own reserves, which are already included in the bank's own capital (Archer, 2000 and 2001). AAOIFI concluded that only a portion of the investment account-financed assets (subject to risk weighting) should be included in the denominator of the capital adequacy ratio, since only fiduciary risk and displaced commercial risk (and not normal commercial risk) need to be reflected. The Committee decided that the proportion of the investment account-financed assets, to be so included, should be 50 per cent.

VI. Building Block Approach

Risk weightings under the Basle scheme are intended to reflect credit or default risk (Archer, 2000 and Gardener, 1991:114f.). Nevertheless, national supervisory authorities have discretion to build in some other kinds of risk. This notwithstanding, the requirement to maintain 8 per cent capital adequacy ratio is not appropriate where the assets are not loans and the concern is not the creditworthiness of the borrowing party (O'Neil, 1992: 146). It is therefore appropriate that capital adequacy provision should accurately reflect different risks, such as position or market risk, which the bank is drawn against – in addition to those faced in the core lending business undertaken. These position or market risks require a very different capital calculation to take account of the different, more complex and varied nature of the risks.

These risks apply in different circumstances with regard to Islamic banking on-balance-sheet assets held outside, and in the trading book. The on-balance-sheet assets, held in the trading book are subject only to the market risk. When an Islamic bank is engaged

in equity trading or equity portfolio management operations, which are at times under *muḍārabah*, such assets should be subject to market risk capital requirements. This should also apply to trading and portfolio management in commodities and real estate. However, on-balance-sheet assets held outside the trading book, such as medium to long-term equity participations, joint ventures in the form of *mushārah* and *muḍārabah*, and denominated in a foreign currency are subject to both the market risk (i.e. foreign exchange) and credit risk capital requirements (Obiadullah, n.d.).

Regulatory authorities are in general agreement that the building-block approach is the correct solution to the regulation of position or market risk (O'Neil, 1992). This approach entails the setting of capital requirements in reference to the type of financial instruments. The total capital cost varies according to the types of particular risks, which are perceived to arise from holding particular types of financial instruments.¹⁷ This contrasts with the 'comprehensive' approach where all the risks are calculated as universal figures.

The European Union has adopted the building-block approach,¹⁸ which seeks to incorporate market risks faced by banks. It involves the allocation of a credit institution's holdings of financial instruments between trading book and the non-trading/banking book, on the basis of objective and consistently applied criteria.¹⁹ The trading-book is required to be 'marked to market', that is, to calculate the current market value of financial instruments on a daily basis. The trading-book position is supported by separately calculating appropriate amounts of capital cover for the various identifiable risks inherent in the holding of trading positions, as a fraction of the nominal value of the underlying contract or exposure. These separately calculated amounts are added to make up the institution's overall capital requirement.

In theory, the European Union's trading-book risks must be covered out of an institution's capital base. However, the Capital Adequacy Directive permits the use, for this purpose only, of a modified definition of capital, which includes additional (Tier 3) items. This comprises the following:

- (i). an institution's net trading book profits, net of charges or dividends, less net losses on its other business, provided that these have not already been included in the calculation of the capital base;
- (ii). subordinated debt having an initial maturity of over two years; and
- (iii). the institution's illiquid assets.

The 'PLS Book', an archetype of the building-block approach, can be adopted for Islamic banks' PLS transactions. This would involve a modified definition of capital and a capital, adequacy requirement that is based on the relevant identifiable risks of the funds under management. Invariably this will lead to two types of capital adequacy ratios, namely deposit-based ratio for non-PLS operations (these will be more or less the same as the existing banking ratio), and fiduciary-based ratio for PLS banking operations.

The question has been asked: should the 'Trading Book' merely relate to proprietary positions taken by investment firms and banks or should it also extend to positions taken on for third parties on an agency basis (O'Neil, 1992:146)? Widening the scope of the 'Trading Book' would be very significant for banks' PLS operations. In the process of carrying out their PLS operations, Islamic banks act as investment agent/manager for their account holders, and this involves fiduciary and displaced commercial risk as against credit risk.

VII. The Bahraini Initiative

In 2002, the Bahrain Monetary Agency (BMA) took the lead in the regulation of Islamic banking by issuing the *Prudential Information and Regulatory Framework for Islamic Banks*. The regulations were developed in conjunction with accounting firm Ernst and Young, following consultations with many of Bahrain's banks. The various standards developed by the AAIOFI, the International Accounting Standards and the Basle Committee on Banking Supervision were considered in developing the regulations. The regulations are applicable to all Islamic banks operating in Bahrain, and cover the following areas of regulation:

- (i). Capital adequacy – credit and market risks;
- (ii). Asset quality, including monitoring of large exposures and related party exposures;
- (iii). Management of investment accounts – both restricted and unrestricted and on-and off-balance-sheet;
- (iv). Liquidity management – on- balance-sheet and separate funds pertaining to restricted investment accounts; and
- (v). Earnings quality.

The objective of the regulations is not only to provide a regulatory framework, but also to access information from the returns that banks have to fill out. The information is used to monitor banks' operations and identify any sign of deterioration in their performance. The returns for each section must be submitted to the BMA by the twentieth day after the end of each quarter. The regulations amended the framework of banking regulation in Bahrain with the implication of clearly highlighting the dual nature of Bahrain's banking system. The BMA had employed the same general banking law for the regulation of Islamic banks and other conventional banking institutions. Banks were required to use Basle guidelines, although they did not cover Islamic banks' off-balance-sheet profit-sharing agreements.

Under the regulations, the BMA sets a capital adequacy target figure of 12%, to cater for fiduciary risk and displaced commercial risk. It adopted the AAOIFI's recommendations by stipulating 50% of the risk-weighted assets of the profit-sharing investment accounts to be included in the denominator of the capital adequacy ratio. The essential elements for computing the capital adequacy ratio for Islamic banks are tier capital, credit risk, market risk and risk weighted total assets, less than 50% of profit-sharing investment accounts.

The regulations did not reconcile Islamic modes of finance with categories of conventional banks' assets, and separately address the issue of risk weightings for some of the commonly used Islamic contracts, such as *murābahah* (resale contract for short term credit), *muḍārabah* (equity sharing between bank and client), *mushārahah* (profit-sharing partnership between bank and client), *ijārah* (leasing contract) *ijārah muntahia bi-tamlīk* (leasing concluding with transfer of ownership) assets, *istithnā'* (manufacturing contract) and parallel

istithnā' contracts, and *salam* (forward sale where bank advances money and client delivers goods later on) and parallel *salam*.

The regulations cater for future innovation by providing for BMA's prior approval for the application of an appropriate risk weighting category, when Islamic banks utilize contracts that are not covered in the regulations. Islamic banks in Bahrain require the BMA's prior approval for establishing associated companies or subsidiaries. The banks are also required to compute capital adequacy on a consolidated basis, for investments with such associated or subsidiary companies. Islamic banks with negligible foreign currencies business and those that do not take foreign exchange positions for their own account may be exempt from calculating the capital adequacy for these positions.²⁰

VIII. Conclusion

The measurement of capital adequacy is a very important element in the overall process of assessing banks' soundness. In an operational context, capital adequacy is a vital supervisory area, as an efficient bank's overall risk exposure may draw out important risk relationships, and a probe into a bank's capacity to carry its current and projected risk exposures. However, the Basle Accord is a product of specific experiences in some highly industrialized countries where Islamic banking is not conceptually grounded, and Islamic banking was, therefore, outside the considerations that informed the Accord.

The nature of deposits in Islamic banking deposits renders it significantly incompatible with conventional benchmarks for the assessment of Islamic banks' asset and liability management system. Only a benchmark that would tie Islamic banks' capital more closely to the risks they hold would be compatible. The building block approach offers an appropriate capital adequacy system in the form of the 'PLS Book', which recognizes the risks associated with profit and loss sharing (PLS) operations.

The BMA's effort to tackle the use of capital adequacy for Islamic banks operating in Bahrain is laudable and ought to be emulated globally as an international standard. There are two major developments that are likely to influence the development of a global capital adequacy standard for Islamic banks. The first is the welcome

establishment of the Kuala Lumpur based Islamic Financial Services Board (IFSB). The IFSB is an association of central banks and monetary authorities, and other institutions responsible for the regulation and supervision of the Islamic financial services industry. It aims to ensure that Islamic banking and finance incorporates international best practices and standards for supervision and regulation.²¹ The board is presently working on standards for prudential regulation, which inevitably address the issue of capital adequacy for Islamic banks. The proposals of the Kuala Lumpur-based IFSB, although not mandatory, will carry considerable moral authority with its members.

The second development is the Basle Committee's proposed new Capital Accord (Basle II), scheduled for implementation in the year 2007. This Accord provides a flexible structure in which banks, subject to supervisory review, would adopt approaches that best fit their risk profile. Basle II goes beyond the established credit and market risk principles and includes a capital allocation of 12 per cent for operational risk. Operational risk is the risk of loss resulting from inadequate or failed internal process, from people and systems, from external shocks. History shows that many of the losses experienced by Islamic banks can be directly attributed to operational factors, such as inadequate or failed internal processes, people and systems or from external shocks – the Basle definition of operational risk (Jackson-Moore, 2002 and 2003).²²

Table 1: Islamic Banks' balance sheet risks

Liabilities	Assets	Transactions	Risks
Current and Savings Accounts	Profit-sharing Agreement	<i>Murābahah</i>	Credit Risk
Unrestricted Investment Accounts	Commodity Investment	<i>Muḍārabah</i>	Market Risk
Restricted Investment Accounts	Equity Participations	<i>Mushārahah</i>	Operation Risk
	Leasing (asset-backed)	<i>Ijārah</i>	Fiduciary Risk
	Pre-payment for future delivery	<i>Salam</i>	Displaced Commercial Risk
	Instalment Sale – Inventories	<i>istithnā'</i>	

Source: Adapted from Van Greuning, H. (2003)

NOTES

1. In the majority of countries where Islamic banks operate, the same regulatory framework that follows Basle Committee's standards and guidelines applies to both conventional and Islamic banks.
2. Islamic banking differs from conventional banking in that it excludes all transactions based on a fixed or predetermined rate of interest. Islamic banking is based instead on profit-and-loss sharing principles where the rate of return is determined on the basis of actual profit accrued. The banks operate through Islamic modes of finance, which affect both the assets and liabilities sides of a bank's balance sheet.
3. Uniform minimum capital ratios may be laid down while seeking, as a separate exercise, to place regulatory limits on the levels of risk incurred by banks. Alternatively, these two aspects of regulation may be dealt with simultaneously by imposing standardized minimum capital requirements that are then adjusted for risk. Hence, different categories of assets are accorded specific risk weighting and then subjected to overall capital requirement calculations. Each bank could be addressed separately and subjected to a capital adequacy test related to the institution's own historic loan loss and earnings record. An essentially subjective

- judgement may be formed as to the capital of each needs based on contacts with management, prudent returns and/or on-site examination.
4. Following the collapse of the German Bankhaus I.D Herstatt and the American Franklin National in 1974, the governors of the central banks of the Group of 10 countries and Switzerland formed an *ad hoc* committee on Banking Regulations and Supervision Practices. The Committee became better known as the Basle Committee from its permanent meeting place at the Bank of International Settlement in Basle, Switzerland. The Committee provides a forum for the discussion of international aspects of prudential regulation and policy issues between the participating national authorities, leading gradually to the elaboration of common principles, concerning the strengthening of banking supervision and the harmonization of prudential standards.
 5. Paragraph 8, Report of the Basle Committee on International Convergence of Capital Measurement and Capital Standards.
 6. Regulators in each country were left free to impose higher requirements.
 7. In recent years, the Basle Committee has turned its attention to refinement of the Accord – “Amendment to the Capital Accord” (November, 1991); “Amendment to the Capital Accord of July 1988” (July, 1994); “The Capital Adequacy Treatment of the Credit Associated with Certain Off-Balance-Sheet Items” (July, 1994); and “Basle Capital Accord: Treatment of Potential Exposure for Off-Balance-Sheet Items” (April, 1995). The Basle Committee is currently working on a proposed new Capital Accord (Basle II), which provides a flexible structure in which banks, subject to supervisory review, would adopt approaches that best fit their level of sophistication and risk profile.
 8. Restricted investments are applied to specific types of assets, as stated in the bank’s contract with the investor. The investments do not appear in the Islamic bank’s balance sheet, as they are synonymous with investments in mutual funds.
 9. Unrestricted investments take the place of the term deposits received by conventional banks. They are used to finance income-producing assets on the Islamic bank’s balance sheet.
 10. The most common form of contract used by Islamic banks for profit-and-loss sharing investment account is the *mudarabah* contract, whereby the bank as *mudarib* is remunerated by a contractual entitlement with a percentage share in the profits generated by the assets that it manages on behalf of the investor. In the event of a loss, the bank receives no remuneration but does not share in the loss. In the case of unrestricted investment the Islamic bank, as co-investor, shares in both profits and losses.
 11. Among the PLS modes, *mudarabah* transactions appear to be riskier than *musharakah* or direct investment transactions because banks do not hold any ‘tangible’ assets (i.e. shares representing a portion of equity capital of enterprises). These banks have limited or no control on the management of the enterprise they finance through the *mudarabah* contract.
 12. This position has been taken by the writers due to the high-risk environment in which most Islamic banks operate.
 13. Studies have shown that the ratio for Islamic banks was averaging 14% for the period 1994-2001.
 14. AAOIFI was established in accordance with the Agreement of Association, which was signed by financial institutions on 26th February 1990 in Algiers, and

registered in Bahrain as an international autonomous non-profit making corporate body on 27th March 1991. AAOIFI's objective is to develop and disseminate accounting and auditing thought relevant to Islamic financial institutions, and its applications through training, seminars, publication of periodical newsletters, carrying-out and commissioning of research, and other means. AAOIFI is also required to prepare, promulgate, interpret, review and amend accounting and auditing standards for Islamic financial institutions. AAOIFI started addressing the difficulties of applying the Basle methodology to Islamic banks in 1996.

15. The finance extended by Islamic banks is asset backed. It is connected to the value of tangible assets, such as buildings and machinery, which are subjected to asset valuation volatility – quite apart from natural depreciation. It, therefore, creates a problem for the provider of the funds in the event of the need to realize the assets. This is in addition to the possibility of the recipient of the funds also defaulting.
16. Investment risk has been identified as the most critical operational risk affecting Islamic banks providing finance through PLS transactions. The profit equalization reserves and investment risks reserve are those defined in the AAOIFI Financial Accounting Standard Number 11, Provisions and Reserves.
17. For example, in the case of equities, an element of capital is required to provide against the risk of a general downturn in the market concerned. The capital is held against the specific risks inherent in holding the particular equity.
18. Capital Adequacy Directive 93/6/EEC of March 15, 1993.
19. In the light of national accounting and supervisory regulation, the inclusion of the two tier elements is at the discretion of national authorities. See Gardener (1991:115).
20. Such banks' holdings or positions taken in foreign currencies, including gold, must not exceed 100% of its eligible capital, and the bank's net overall open position must not exceed 2% of its eligible capital.
21. The Board is required to:
 - (i). Set and disseminate standards and core principles – as well as adapt existing international standards – for supervision and regulation, consistent with *Shari'ah* principles governing the industry;
 - (ii). Liaise and cooperate with other standard-setters in the areas of monetary and financial stability; and
 - (iii). Promote good practices in risk management in the industry through research, training and technical assistance.

The IFSB's regulatory standards are non-binding so as not to encroach on the financial sovereignty of member countries. Nevertheless, since those standards were developed with the help of representatives from member countries' central banks and international monetary authorities and agreements, it is expected that they would be widely adopted.

22. The level of operational risk in Islamic banks has been attributed to Islamic banking being a young and developing business with young and developing institutions. Islamic products are also less well established and therefore the underlying systems and procedures on which they depend are also less well established.

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