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# CAPITAL ADEQUACY NORMS FOR ISLAMIC FINANCIAL INSTITUTIONS

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*This paper argues that a uniform application of the Basle capital adequacy norms to both conventional and Islamic financial institutions may be discriminatory and defeat the very purpose of the regulations, that of ensuring a "level playing field" for banks across the globe. The business of Islamic banking is different. The paper discusses some unique characteristics of assets and liabilities of Islamic banks. The nature and magnitude of relevant risk factors for Islamic banks are observed to be quite different as compared to conventional riba-based banks. Further, Islamic banks can "pass on" asset risk to investment account holders unlike their conventional counterparts. Given the possibility of such risk absorption, the paper questions the relevance of the Basle norms in their present form and discusses certain modifications and alternative ways to compute capital adequacy measures for Islamic financial institutions.*

## 1. INTRODUCTION

Risk is an integral part of the business of financing. Islamic financial institution, like their conventional counterparts, are subject to many forms of risk, which may broadly be classified into credit risk and market risk. The former relates to the probability of defaults by a counterparty in a financial contract in its obligations, while the latter arises out of possible adverse movements in market prices of commodities, stocks, bonds, currencies, and derivatives. The purpose of capital adequacy regulations is to limit the probability that adverse outcomes would exceed the bank's capacity to bear losses. The focus is on capital, since capital alone provides a buffer or cushion for absorbing potential losses inherent in the bank's conduct of its normal business. Bank regulators across the globe have traditionally required Islamic financial institutions to adhere to the same norms as are applicable to conventional banking. Since, the business of Islamic banking has many distinctive features, the nature and magnitude of risk confronting such institutions may be significantly different. Hence, a uniform application of the norms for both conventional and Islamic financial institutions may result in an inequitable scenario and discrimination against the latter, contrary to the 'level

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playing field" objective of the regulator. In this paper we review the existing norms of capital adequacy and discuss their relevance for Islamic financial institutions. In section 2, we briefly review the existing norms of capital adequacy, popularly known as, the Basle norms. Section 3 attempts to highlight the risk factors relevant for Islamic financial institutions and how these differ from the ones confronting their conventional counterparts in nature and magnitude. It also discusses the capital requirements for relevant risk factors as per the Basle norms. Section 4 discusses the unique characteristics of sources of financing for Islamic banks and examines the need to bring in suitable modifications in the Basle norms in the light of these characteristics. Some alternative proposals are examined in the light of empirical findings. Section 5 provides a summary of the discussion.

## 2. THE NORMS

The capital adequacy norms have evolved over time. The norms as outlined by the Basle Capital Accord 1988, focus entirely on credit risk and quality of assets. With a rapid expansion in trading activities by banks all over the global in stocks, bonds, currencies, commodities, and derivatives markets, however, market risk has assumed significance and the regulators have responded to the changing scenario with modifications to the original accord in 1996. Further modifications are also being contemplated in the light of new developments[1].

The norms assign each asset owned by a bank to one of four risk categories. Each risk category is assigned a "risk weight," which is used to multiply the amounts in each risk category to determine the amount of capital required by the bank. Category 1 (zero percent) includes risk-free assets, such as, cash (domestic and foreign) held in the bank or in transit, balances due from central banks, claims on or that are unconditionally guaranteed by central governments, and net assets in the form of gold, Category 2 (twenty percent) includes very low-risk assets, such as, cash items in the process of collection, claims on or that are guaranteed by local governments or government-sponsored agencies etc. Category 3 (fifty percent) includes riskier assets, such as, revenue bonds or similar claims that are obligations of state or local governments but for which the government entity is committed to repay the debt only out of revenues from the facilities financed, credit equivalent amounts of interest rate and foreign exchange rate related contracts, except for those assigned to a lower risk category. Category 4 (hundred percent) includes assets in the highest risk category, such as, all other claims on private parties, all fixed assets including premises, plant and equipment, investments in

[1] For complete details on these norms, refer to the Compendium of Documents produced by the Basle Committee on Banking Supervision. Specifically the following documents provided a complete discussion of the norms: (1) International Convergence of Capital Measurement and Capital Standards, April 1997, and (2) Amendment to the Capital Accord to Incorporate Market Risks, 1966.

unconsolidated subsidiaries, joint ventures, or associated companies if not deducted from capital, and the like[2].

The norms also explicitly take into account off-balance sheet exposures of a bank in the assessment of capital adequacy. Off-balance sheet items represent contingent assets (or liabilities) that the accounting profession does not require to be entered on the face of a bank's financial statements because of the uncertain nature of the contingencies that determine whether these items become due and payable (i.e., move onto the balance sheet). Most accountants do require that, as contingent items, they be disclosed in footnotes to the financial statements. Some typical off-balance sheet transactions are letters of credit, sale and repurchase agreements, forward agreements, futures, swaps, etc. The face amount of the off-balance sheet item is taken into the risk-based capital ratio by multiplying it by a 'credit conversion factor'. The resultant 'credit equivalent amount' is assigned to the appropriate risk category (according to the identity of the obligor or guarantor).

Capital is divided into "Tier 1," or "core" capital (consisting of retained earnings, common stock, and non-cumulative perpetual preferred stock and minority interests in equity accounts of consolidated subsidiaries, minus "goodwill") and "Tier 2" capital (various forms of "supplementary" capital, such as, hybrid instruments, equity contract notes, intermediate term preferred stock, subordinated debt, allowances for loans and leases). The total of tier 2 capital cannot exceed hundred percent of tier 1 capital for the purpose of assessment of capital adequacy. There are also further limits on specific individual items.

The above provides a brief sketch of the norms contained in the Basle Capital Accord of 1988. As in evident, the focus of these norms is on credit risk and the quality of assets. Subsequent amendments to the above have been suggested primarily to take into account market risk[3]. Market risk is the risk of losses in on- and off-balance sheet positions arising from movements in market prices. The various forms of market risk are: interest rate position risk, equity position risk, foreign exchange risk, and commodities risk. Under the modified framework, credit risk capital requirements apply to non-trading on-balance sheet assets and off-balance sheet assets (such as, guarantees, letters of credit, and derivatives).

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[2] The list of assets to be included in various risk categories, is not complete and is supposed to be indicative of the nature of categorization only.

[3] The market risk guidelines, at present, apply to a limited group of institutions with significant trading activity. Specially, the guideline will apply to institutions where the greater of the value of trading book assets or the value of trading book liabilities is at least 10 per cent of total assets; and exceeds $1 billion, though national regulatory bodies may retain the right to apply the framework to other institutions, on a case by case basis, if trading activities are a large proportion of overall operations. There is, however, room for national discretion in applying the norms to specific institutions on a case by case basis.

Market risk capital requirements additionally apply to instruments in the trading book – for interest rate position risk and equity position risk; and to all relevant assets for currency risk and commodities risk.

In measuring their market risks, institutions may choose between two broad alternatives: the standardized method or use of international models. There is also the possibility of using a combination of the two. Institutions having significant and substantial trading operations are encouraged to use internal models approach.

In the standardized method, the capital charge for each risk category is determined separately. Within the interest rate and equity position risk categories, separate capital charges for specific risk and the general market risk arising from debt and equity positions are calculated. While the former is defined as the risk of loss caused by an adverse price movement of a security due principally to factors related to the issuer, the latter is defined as the risk of loss arising from adverse changes in aggregate market prices. For commodities and foreign exchange, there is only a general market risk capital requirement.

Alternatively, banks may use internal models to measure risk. The internal models approach essentially involves computation of 'value-at-risk" (VAR) whereby the maximum loss a portfolio is like to experience in a given time interval is quantified to a certain level of probability. A 2 percent VAR of $5 million implies that a loss exceeding $5 million is expected to occur one period out of fifty, at most. Institutions will have flexibility in devising the precise nature of their models subject to certain minimum standards for the purpose of calculating their capital charge. One, the VAR should be computed on a daily basis. Two, in calculating the VAR a $99^{th}$ percentile, one-tailed confidence interval is to be used. This means the maximum loss would be quantified to 1 percent probability. Each institution must meet, only a daily basis, a capital requirement expressed as the higher of : (1) the previous day's value-at-risk number measured according to the parameters specified and (2) an average of the daily value-at-risk measures on each of the preceding 60 business days, converted to a ten-day VAR (by first multiplying a factor – square root of ten or 3.16- for converting a daily VAR to ten-day VAR) and then multiplied by 3.

No particular type of model is prescribed. So long as each model used captures all the material risks run by the institution, as set out in the guidelines, institutions are free to use models based on variance-covariance matrices, historical simulations, or Monte Carlo simulations. Institutions have discretion to recognize empirical correlation within broad risk categories (e.g., interest rates, exchange rates, equity prices and commodity prices, including related options volatility in

each risk factor category). The only requirement is that the regulator is satisfied[4] that the institution's system for measuring correlation is sound and implemented with integrity. Institutions using models are subject to a separate capital charge to cover the specific risk of interest rate related instruments and equity securities to the extent that this risk is not incorporated into their models.

As in case of credit risk, the capital requirements for market risk apply on a consolidated basis. Financial entities in a group which is running a global consolidated book and whose capital is being assessed on a global basis are permitted to report short and long positions in exactly the same instrument (e.g., currencies, commodities, equities or bonds), on a net basis, except when there are obstacles to the quick repatriation of profits from a foreign subsidiary or where there are legal and procedural difficulties in carrying out the timely management of risks on a consolidated basis.

The criteria for tier 1 and tier 2 capital are already discussed above. Capital that can be used to satisfy the market risk requirements is:

a) tier 1 and 2 capital to the extent that it is not being used to satisfy the credit risk capital requirement; and

b) tier 3 capital. Tier 3 capital is subordinated debt with a minimum original maturity of two years. Other conditions are that it should be possible to defer the payment of either interest or principal (even at maturity) if such payment would cause the institution to fall below its minimum capital requirement and that the debt is not redeemable before maturity without prior approval by the regulators. The total of tier 2 and tier 3 capital used to meet the market risk capital requirements must not exceed 200% of the tier 1 capital used to meet those requirements and the total of tier 2 and tier 3 capital cannot normally exceed 100% of the institution's tier 1 capital. Each institution will be expected to monitor and report the level of risk against which a capital requirement is to be applied. The institution's overall minimum capital requirement will be:

i) the credit risk requirements, excluding debt and equity securities in the trading book and all positions in commodities, but including the

[4] The use of an internal model is conditional upon the explicit approval of the regulator. The conditions are: (1) the institution's risk management system is conceptually sound and is implemented with integrity; (2) the institution has sufficient numbers of staff skilled in the use of sophisticated models not only in the trading area but also in the risk control, audit, and if necessary, back office areas; (3) the institution's models have in the regulator's judgement a proven track record of reasonable accuracy in measuring risk; and (4) the institution regularly conducts stress tests along prescribed lines.

credit counterparty risk on all over-the-counter derivatives whether in the trading or non-trading book; plus

ii) either the sum of the capital charges for market risks as determined using the standardized approach; or

iii) the measure of market risk derived from the models approach; or

iv) a mixture of (ii) and (iii) summed arithmetically.

## 3. RISK FACTORS FOR ISLAMIC FIs AND CAPITAL REQUIREMENT NORMS

The business of Islamic banking is different. The assets of Islamic financial institutions are distinct from those of their conventional counterparts. As per the definitions of the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), these are generally in the form of: cash and cash equivalents; receivables relating to *murabahah, salam,* and *istisna;* investments in securities; *mudarabah,* investments; *musharakah,* (participation and joint ventures) investments; investment in other entities; inventories (including goods purchased for *murabahah* customers prior to consummation or *murabahah* agreement); investments in real estate; assets acquired for *ijarah*; fixed and other assets.[5] What is the degree of credit and market risk involved in these assets and what are the corresponding capital requirements?

The general rule is to distinguish between on-balance sheet assets held outside and in the trading book. The on-balance sheet assets held outside the trading book are subject to credit risk requirements as highlighted earlier. For instance, medium to long term equity participations, joint ventures in the form of *musharakah* and *mudarabah* should invite hundred percent weightage.[6] The on-balance sheet assets, held in the trading book are subject only to the market risk capital requirements. Hence, when the Islamic bank is engaged in equity trading or equity portfolio management operations which is at times under a *mudarabah* operation, such assets should be subject to market risk capital requirements. This should apply to trading and portfolio management in commodities and real estate too. However, on-balance sheet assets held outside the trading book and denominated in a foreign currency are subject to both the market risk (i.e., foreign exchange) and credit risk capital requirements.

Islamic banks aim to substitute trading and real investments in projects for interest-based transactions. Unlike conventional banks, Islamic banks are not

[5] See *Accounting and Auditing Standards for Islamic Financial Institutions*, 1996, Accounting and Auditing Organization for Islamic Financial Institutions [AAOIFI], Bahrain, pp. 80-81.

[6] Alternatively, the Basle committee norms, 1988 also permit deduction of such investments in joint ventures, investments in associated companies from the capital.

supposed to include interest-based debt transactions. For Islamic banks with predominantly trade-based *murabahah* operations, market risk exposure may be quite significant. Similarly Islamic banks with significant investments in *bai-bithaman-ajil, ijara* and *ijara-wa-iqtina*, credit risk assumes great significance. And Islamic banks with international operations have foreign currency risk exposure. Institutions conducting a limited amount of business in the various markets are supposed use the simplified and standardized methods while institutions with significant exposure in various markets are supposed to adopt an internal model system that conforms to several criteria.

### 3.1 Credit Risk

As per the Basle norms, cash and cash equivalents be placed in the zero risk category. Islamic banks also have off-balance sheet positions in letters of credit, guarantee requiring a similar treatment as in case of conventional banks. Receivable from *murabahah, ijara, ijara-wa-iqtina, bai-bithaman-ajil*, etc. would be assigned to one of the latter three categories depending upon the identity of the obligor or the guarantor. Presently, almost all the operations of Islamic banks are confined to private sector and hence, the above assets invite hundred per cent risk weight. There are several points to be noted with respect to credit risk for Islamic banks vis-à-vis the conventional banks. One, it is a time argued that the *riba*-based transactions of conventional banks have a built-in mechanism to penalize defaults and delays in payments. Islamic banks cannot increase the nominal value of debt in case of defaults and hence, are likely to witness greater incidence of defaults. It may be noted here that there are many *shari'ah*-approved ways of minimizing the risk of default. For example, "in Islamic law, it is permissible to hold responsible a financially capable debtor, who delays payment of the debt without any genuine reason, and to compensate the lender for any loss resulting from late payment ….. the amount of this compensation will be decided according to the loss incurred by the lender in the normal profit that he could have earned if he had invested this amount in a project during the period of the delayed payment."[7] The fact that these penalties must be just and ethical and only to serve as effective deterrents against deliberate delays does not imply greater credit risk exposure for Islamic banks. Two, as per the Basle norms, equity participations, joint ventures in the form of *musharakah* and *mudarabah* would be placed in hundred percent risk category. All investments in fixed assets would also be in the hundred percent risk category. While for conventional banks, these do not constitute important assets; the same is not true for Islamic banks. For such investments in the real projects, a focus on credit risk is perhaps grossly misplaced.

### 3.2. Risk with Derivatives

[7] See *Fatwa: Shari'ah Ruling on Economics* (1994), Dallah Albaraka Research and Development Dept, pp. 79-92.

Unlike their conventional counterparts, Islamic banks do not deal in derivative contracts such as, options, futures, swaps, and their other exotic variants in a significant way – either for trading or for hedging purposes. *Shari'ah* Boards of a majority of Islamic banks consider these instruments as un-Islamic on several grounds.[8] While a discussion of the *shari'ah*-related issues is beyond the scope of this paper, the fact remains that the extent of use of such instruments by Islamic financial institutions is grossly insignificant. While for conventional banks, the derivative instruments held in their trading book are subject to both the market risk and the credit risk capital requirements (since they face the risk of loss due to market fluctuations in the value of the underlying instrument as also due to failure of the counterparty to the derivative contract), Islamic banks would be largely free from such capital requirements.

### 3.3 Interest Rate Risk

The interest rate exposure of conventional banks includes exposures arising from interest-bearing and discounted financial instruments, derivatives base don the movement of interest rates and interest rate exposures embedded in derivatives based on non-interest related derivatives including foreign exchange forward contracts. While conventional banks are required a capital charge calculated either using the standardized approach or internal model approach, Islamic banks are largely immune to this risk factor. An Islamic bank would however, be exposed to interest rate risk to the extent the bank resorts to debt sales in the secondary market at a price different from the nominal value of the debt[9] and the market continues to use interest rates directly or indirectly in investment and financing decisions, as in case of floating-rate *ijara.*[10]

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[8] Conventional derivatives, such as, options, futures, swaps, are, in general, found to fall outside the framework of *shari'ah*-nominate contracts. This does not rule out of the possibility of designing specific derivative contracts within the *shari'ah*-approved framework. Such instruments are still in a process of development and would require further research and analysis to assess the extent of risk associated with each one of them.

[9] Debt sales at a price different from their nominal value are prohibited according to an overwhelming majority of *Fiqh* scholars. Some Islamic banks in Malaysia are however, reported to have designed a variety of Islamic debt instruments which is being possible through granting permissibility to sale of debt (of course originating with sale of a physical asset) at a discount to the nominal value of the debt. The rate of discount structure in such cases would be hardly distinguishable from the interest rate structure with the associated risk factors for the bank.

[10] Again, the same is a controversial product where the *ijara* rate is not predetermined, but linked to some benchmark (often the interest rate of a proxy). Majority of scholars do not find the same acceptable; and the bank with such assets would naturally be exposed to interest rate position risk indirectly.

### 3.4 Equity Price Risk

As mentioned above, equity inside the trading book of an Islamic bank is subject to market risk. A large number of Islamic banks have investments in equity – both as long term participations and joint venture *musharakah* and also in the form of equity *mudarabah* funds. The latter are exposed market risk due to price volatility. Market risk has two components - specific risk and general risk. The specific risk requirements recognize that individual equities are subject to issuer risk and liquidity risk, and that these risks may be reduced by portfolio diversification.

For example, according to the standardized approach, the measurement of specific risk capital requirements is calculated on the basis of the institution's gross equity positions. The gross position is the sum of the absolute value of all short equity positions and all long equity positions calculated at the current market value. The specific risk capital requirement is 8% of this sum. However, if the portfolio is both liquid and well diversified,[11] the specific risk capital requirement may be 4% of the gross equity position. To calculate general market risk long and short positions in equity instruments are offset to arrive at a net position. Instruments are valued at current market and a net position is separately calculated for each country in which the institution holds equity instruments. The capital requirement for general market risk is 8% of each net position.

It is generally felt that equity *mudarabah* of many Islamic institutions comprise stocks with low levels of liquidity. Many of the Muslim countries do not have developed secondary equity markets. While there is some truth in this assertion, an analysis of various equity *mudarabah* reveal that many of these have been floated in developed markets as well.[12] Another point to be noted in this connection is that speculation is, in general, frowned upon by *shari'ah* Boards of Islamic banks. Islamic banks are generally expected to have longer holding periods and refrain from excessive speculation in equity markets and thus, be insulated from the risk-enhancing properties of excessive speculation.

[11] Individual equities included in selected national indices in developed markets are considered to be liquid. A portfolio of liquid equities will be considered to be well diversified if (i) no individual liquid equity position comprises more than 10% of the gross value of the institution's portfolio of equities traded on the markets in each particular country (the "country portfolio"); and (ii) the portfolio is comprised of 15 or more securities not concentrated in any one market sector.

[12] See Rodney Wilson (1997), *New Opportunities for Islamic Investment*, Paper presented at the Gulf Economic Forum Fifth Annual Conference held during April 7-9, Bahrain.

### 3.5 Currency Risk

Trading of currencies wherever undertaken by an Islamic bank is on a spot basis. Currency transactions on a deferred basis is not permissible according to an overwhelming majority of *shari'ah* scholars. Hence, fluctuations in currency rates do not constitute an element of market risk for such trading. However, on-balance sheet assets held outside the trading book and denominated in a foreign currency are subject to such risk and hence to capital requirements. These are also subject to credit risk capital requirements.

For an Islamic bank, according the standardized approach, the capital requirement for foreign exchange risk would require computation of the exposure in each individual currency. The net open position for each individual currency (and gold) would be calculated by summing:

1. the net spot position (i.e., all asset items less all liability items, including accrued income, such as, relating to *ijara* and *bai-bithman-ajil* and accrued expenses, denominated in the currency in question;
2. guarantees (and similar instruments) that are certain to be called and are likely to be irrecoverable; and
3. any other item representing a profit or loss in foreign currencies. Structural positions, such as, any position arising from an instrument which qualifies to be included in an institution's capital base; or any position entered into in relation to the net investment of a capital nature in subsidiaries are exempt from the calculation of net open currency positions (subject to certain conditions). The nominal amount of the net open position in each foreign currency (and gold) is then converted at spot rates into the reporting currency. The capital charge is 8% of the overall net open position calculated as the sum of: the greater of the sum of the net open short positions or the sum of the net open long positions (absolute values); and the net open position in gold, either long or short, regardless of sign.[13]

[13] For example, an Islamic Bank with Indian rupee as the reporting currency has the following net currency positions. These open positions have been converted at sport rates to rupee (+) signifies a long position and (-) signifies a short position.

Japanese Yen + 150 German Mark – 200 British Pounds – 300, US Dollars + 50, and Gold – 50. The sum of long positions is 200 while the sum of short positions is – 500. Ignoring the signs, the capital requirement is 8% of [500 (the greater of 200 and 500) plus 50 (ignoring sing again) or Rs. 44.00.

### 3.6 Commodity Price Risk

A large number of Islamic banks trade in commodities. The norms provide minimum capital requirement to cover the market risk of holding or taking positions in commodities including precious metals but excluding gold (gold is treated as a foreign currency). Under the simplified standardized method, each long and short commodity position is expressed in terms of the standard unit of measurement (such as barrels, kilos, or grams). The open positions in each category of commodities are then converted at current spot rates into the reporting currency, with long and short positions offset to arrive at the net open position in each commodity separately. The base capital requirement is 15% of the net open position, long or short, in each commodity. An additional capital charge of 3% on gross positions is required to protect against basis risk, interest rate risk, and forward gap risk. While forward gap and interest rate risk arise out of the exposure to changes in forward prices arising from maturity mismatches; basis risk arises out of exposure to changes in the price relationships between two similar, but not identical, commodities. Of these, only basis risk is relevant for Islamic bank and hence, a lower capital charge is called for.

Islamic financial institutions having significant trading operations and having a robust risk management systems may also use the internal models approach for computing their capital requirements, as discussed earlier (subject to meeting the criteria prescribed by the regulator and its permission). What follows from the discussion in this section, is that the risk factors confronting an Islamic FI are quite different in nature and magnitude as compared to their conventional counterparts. While there is general agreement on this, difference of opinion exists regarding whether, risk profile for the former is higher or lower than that of the latter. According to Andrew Beikos,[14] the risk-profile for an Islamic bank is higher than that of a conventional interest-based bank for the following reasons:

1. As most of the investments of an Islamic bank are on a profit-and-loss basis, its risk of variation of rate of ultimate return to the bank in its investments is greater;
2. There is greater liquidity risk since a large proportion of the assets of an Islamic bank are in illiquid form;
3. Islamic banks are exposed to foreign currency positions which they are not able to hedge against;
4. Islamic banks are more exposed to the risk of changes in government fiscal and monetary policies than the conventional

[14] See Andrew Beikos (1997), *Credit Rating and Islamic Financial Institutions*, Paper presented at the Conference on Structuring, Pricing, Marketing and Managing Islamic Funds, organized by IBC Asia at Kuala Lumpur during June 23-24, 1997.

> banks as they participate in profit-and-loss of the business enterprises.[15]

Islamic banks, by definition, are not supposed to be seeking risk-free returns, or *riba* either through straightforward interest-based transactions, or indirectly through hedging or complete risk transfer. Risk bearing is at the heart of Islamic banking. At the same time, risk should not assume the proportions of *gharar* or uncertainty and Islamic banks are also supposed to keep away from speculating on price differences in the organized markets. Both objectives are diametrically opposite to what conventional banks seek. The latter seek *riba*-based returns through risk-free growth with debt financing while their participation in organized markets for commodities, stocks, and currencies (with low liquidity risk as compared to participation in real projects characterized by high liquidity risk as well as other risk factors) is largely governed by speculative motives. It is perhaps difficult to ascertain whether the risk transfer (through hedging) or risk enhancing (through speculation) properties of transactions in organized markets predominate. However, even if one accepts the contention that Islamic banks are exposed to greater risk, this does not automatically imply that capital charges as per the norms should be higher for them. There are significant differences in the matter of absorption of such risk factors within the bank. We now turn to this in the following section.

## 4. CAPITAL AND RISK ABSORPTION FOR ISLAMIC FIs

Risk sharing and absorption by depositors is a unique feature of Islamic banking. Such risk-sharing deposits, known as, investment accounts, constitute the most significant point of difference between Islamic banks and their conventional counterparts. While depositors in commercial banks are entitled to predetermined income, and do not share in losses of the bank, holders of investment accounts do. Further, investment accounts contribute in a significant way to the total investible resources for Islamic banks. Hence, the treatment of such funds for assessment of capital adequacy assumes great importance.

Total investible funds for an Islamic bank broadly comprise owner's equity, current accounts (based on the principle of *al-wadiyya*), and investment accounts (based of *al-mudarabah* concept). The latter may again be in the nature of unrestricted and restricted *mudarabah* depending on whether the bank is under any kind of constraint as per the contract with the depositor regarding where and how to invest the funds. While owner's equity does not require a fresh definition, the other sources of funds need to be defined and distinguished clearly for a proper appreciation of their risk absorption characteristics.

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[15] *Ibid*.

Unrestricted investment accounts are unique to Islamic financial institutions. The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) defines unrestricted investment accounts as "fund received by the Islamic bank from individuals and others on the basis that the Islamic bank will have the right to use and invest those funds without restrictions, including the Islamic bank's right to commingle those invested funds with its own investment in exchange for proportionate participation in profits and losses after the Islamic bank receives its share of profit as a *mudarib*." The bank can commingle the investment account holder's funds with its own funds or with other funds the bank has the right to use (such as, current accounts). These are valued at the amount remaining from the funds originally received by the Islamic bank from the account holders plus (minus) their share in the profits (losses) and decreased by withdrawals or transfers to other types of accounts. Holders of unrestricted investment accounts and their equivalent receive their share of profits according what is agreed in their contract with the Islamic bank and bear their share of loss based on the relative contribution of their invested funds.[16]

Equity of unrestricted investment account holders and their equivalent is not considered a liability, since the Islamic bank is not obligated in case of loss to return the original amount of funds received from the account holders unless the loss is due to negligence or breach of contract. Thus, these differ from the conventional deposits which involve an obligation on the part of the bank to service them at a fixed or floating rate, as the case may be, irrespective of whether the bank generates profits or losses on its assets. Since an Islamic bank can pass on its losses to the holders of such accounts, these should form part of the capital for the purpose of assessment of capital adequacy (for possible absorption of losses on assets and investments).

With restricted investment accounts, the depositor imposes certain restrictions as to where, how and for what purpose the funds are to be invested. Further, the Islamic bank may be restricted from commingling its own funds with the restricted investment account funds for purposes of investment. In addition, there may be other restrictions that may be imposed on the bank as part of the contract, say, investment in specific sectors or specific types of assets. The relationship between the bank and holders of restricted investment accounts may be based on a *mudarabah* contract or an agency contract. In the first case, the bank's compensation, as an investment manger, takes the form of a percentage of investment profits. No compensation would be due to the bank as investment manger, in the case of investment losses. However, the bank's invested funds

[16] AAOIFI, *op.cit.*, pp.41-42.

would bear its share of investment losses. In the second case, the bank's compensation takes the form of a fixed fee regardless of the investment results.[17]

The AAOIFI standards prefer to treat restricted investment accounts as off-balance sheet items, since the Islamic bank does not have unconditional right to use or dispose of these funds. Restricted investments are not considered as assets of the bank (under the assumption that the underlying *mudarabah* contract is non-participating). Given this, the bank would not share in the losses which would be absorbed entirely by the investment account holders. Hence, for capital adequacy purposes, the same may be completely ignored. However, as pointed out above, if the bank contributes a part of the funds (restrictions pertain to conditions regarding investment and deployment of funds), then it would bear its share of investment losses. Under such circumstances, there would be no difference between unrestricted and restricted investment accounts from the point of view of absorption of potential losses. Both should be treated as part of capital.

Owner's equity would obviously form part of tier 1 capital. There are, however, divergent views regarding inclusion of investment accounts in a specific category of capital.

Should investment accounts be treated as tier 1 capital at par with owner's equity? The answer seems to be negative because of some differences between the two. Equity of unrestricted investment account holders and their equivalent is different from ownership equity in the sense that the holders of these accounts and their equivalent do not enjoy the same ownership rights, for example, voting rights and entitlement to profits realized from investing funds provided by current and other non-investment accounts. Current accounts and other non-investment account are guaranteed by owners' equity and not by the equity of investment account holders or their equivalent. Further, while owner's equity is perpetual capital, the latter normally have a finite maturity period and also may contain a put option or a right for the holders to exist even before the time of redemption.

Should investment accounts be treated as tier-2 capital? The answer seems to be in the affirmative. It may be noted that Basle committee norms include intermediate term preferred stock, subordinated debt, and hybrid capital instruments in tier-2 capital. Investment accounts certainly involve much greater degree of flexibility for the bank in terms of servicing as compared to the above and the degree of risk sharing and absorption is higher in case of the former.

Critics of the above contention however, point out that the so-called flexibility may be a myth in times of declining profits and cash flows, since the banks may be forced to maintain stable returns in the face of intense competitive

[17] AAOIFI, *op.cit.*, pp. 41-42.

pressures to retain their deposits. The fear of loss of market may lead to a distribution policy unrelated to the profit generating ability of the bank. As Beikos notes,

> "Given the fact that Islamic banks operate on a risk sharing basis, the need to carry a level of capital equivalent to that required by banks which are required to pay their liabilities in full, appears to the overly restrictive. Very often, Islamic bankers have utilized this argument to claim that the purpose of capital is to protect depositors and creditors from the business risks inherent in any banking operation. If depositors share in the risk, then less capital is needed to protect them. However, in practice, although in some years the return paid to investors is lower than the interest in savings and time deposits in traditional banks, in general, the rates mirror each other quite closely. Investors do not expect to share risks in the same way as the shareholders. Indeed, it seems likely that some depositors would choose to withdraw their funds if the return did not meet their exceptions … the relatively short maturity of deposits and investors' expectations of a higher than average return make Capital Intelligence believe that Islamic banks should be required to meet higher levels of capitalization as compared to their *riba*-based peers."[18]

It may be noted, however, that the Beikos provides little empirical support for his assertions regardign expectations and behavior of the investment account holder. Indeed, available empirical evidence is contrary to the author's belief. A number of empirical studies in various countries on buyer behavior for Islamic banks, such as, Erol et al[19], Haron et al[20], Kader[21] have observed that explicity interest rates, fixed price-related banking services play an insignificant role in selecting an Islamic bank. The findings underscore widespread concerns about *riba* and importance of the religion factor in selecting a bank and certainly did not find existence of a trade-off between Islamic values and returns in the short-run.

Investment accounts of Islamic financial institutions operate in a manner similar to open-end or closed-end mutual funds depending upon whether or not the account holders have a right to withdraw. Mutual funds, are, in general, clearly categorized

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[18] See Andrew Beikos, *op.cit*.

[19] Cengiz Erol, Erdener Kayank and Radi El-Bdour (1990), "Conventional and Islamic Banks: Patronage Behavior of Jordanian Customers" *International Journal of Bank Marketing*, Vol. 8, No. 4, pp.25-35.

[20] Sudin Haron, Noraffiah Ahmad and Sandra Planisek (1994), "Bank Patronage Factors of Muslim and Non-Muslim Customers" *International Journal of Bank Marketing*, Vol. 12, No.1, pp.33-38.

[21] Radia Abdul Kader (1993), *Performance and Market Implications of Islamic Banking: A Case Study of Bank Islam Malaysia Bhd*, unpublished Ph.D. thesis, University of Durham, United Kingdom.

into growth-oriented and income-oriented ones. In case of a growth-oriented fund, the investor looks forward to capital appreciation and not recurring income and the investments of the fund are predominantly in equity. In an income-fund, however, the investor expects a stable stream of periodic income and hence, funds are predominantly invested in fixed-income securities. As far as the funds mobilized under investment accounts are concerned, a rational Islamic investor should not expect a stable income; unless of course, the asset composition of the bank is predominantly in *murabahah* or *ijara-wa-iqtina*. If the investments are concentrated in long-term avenues, then the investor should also have a long time horizon and should look forward to returns in the form of capital appreciation. There is merit in the argument that banks in such cases need not be under pressure to stabilize the periodic disbursements to account holders. The banks must however, in such case, declare the Net Asset Value (NAV) of these funds at frequent intervals. This would enable the investors to continuously monitor the performance of the fund suing NAV. The level of distributed income would automatically lose its significance as a performance measure. The NAV measure would also ensure a fair deal to investors who would like to opt out. There is a need, therefore, of clarity and adequate disclosure about the investment objective and a possible bifurcation of the investment accounts in lines similar to growth or income-oriented funds. In any case, there is no reason why these should not be treated as similar to risk-absorbing capital.

It follows from the above discussion that investment accounts fall somewhere in between tier 1 capital and various sources of tier 2 capital as defined by the Basle norms. There is perhaps merit in the argument that minimum requirement of tier 1 capital, that is owner's equity, should be lower than what is required for conventional banks since the latter do not have recourse to risk-absorbing capital in the form of investment accounts.[22] At the same time, The maximum permissible tier 2 capital (if investment accounts become part of tier 2 capital) need not be restricted to 100 percent of tier 1 capital. The robustness of Islamic banks follows largely from their heavy recourse to raising resources through investment accounts. In table 1, we attempt to provide certain relevant ratios for a sample of ten Islamic banks using data from their annual reports which throw more light on the capital adequacy of Islamic banks. In view of the fact that there is a gross discrepancy between accounting practices of Islamic banks, these ratios are crude and at best, indicative. Further, due to lack of information on identity of obligors or guarantors in case of receivables, we placed all receivables and investments except risk-free assets, such as, cash in the hundred percent categories. Hence, the ratios are grossly understood. Even then, they reflect the significance of the above arguments. The requirement of a four percent floor for

[22] Adnan Buyukdeniz recommends a minimum capital ratio of three percent. See Adnan Buyukdeniz, "Why Islamic Banks are Sufficiently Capitalized?" *Islamic Banker*, Issue 9, p. 6.

owner's equity and a ceiling of 100 percent of owner's equity on tier 2 sources without taking cognizance of the heavy dependence of Islamic FIs on investment accounts would require at least some banks (two out of ten) to increase their equity base. All others are however, seen to be comfortably placed.

Table 1*

**Selected Financial Ratios of Islamic Financial Institutions**

| Name of institution | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Dar Al-Mall Al-Islami Trust | 0.3598 | 0.8463 | 0.3833 | 0.9017 |
| Bahrain Islamic Bank | 0.0992 | 0.9013 | 0.1029 | 0.9348 |
| Qatar Islamic Bank | 0.0597 | 0.6807 | 0.0618 | 0.7049 |
| Faisal Islamic Bank of Egypt | 0.0346 | 0.7939 | 0.0443 | 1.0157 |
| AlBaraka Islamic Bank Bahrain | 0.3301 | 0.8307 | 0.3813 | 0.9595 |
| Dubai Islamic Bank | 0.0566 | 0.7668 | 0.0658 | 0.8913 |
| Tadamon Islamic Bank | 0.0126 | 0.2295 | 0.0318 | 0.5800 |
| Bahrain Islamic Inv. Company | 0.4261 | 0.6704 | 0.4536 | 0.7137 |
| Bank Muamalat Indonesia | 0.2742 | 0.8771 | 0.2819 | 0.9019 |
| Faisal Finance Turkey | 0.0380 | 0.8549 | 0.0424 | 0.9549 |

*Computed from the latest Annual Reports of the Islamic Banks as on 31st March 1997.

1. Owner's Equity plus Minority Interests/ Total Assets.
2. Owners' Equity plus Minority Interests plus Unrestricted Investment Accounts/Total Assets.
3. Owners' Equity plus Minority Interests/Risk-Weighted Assets.
4. Owners' Equity plus Minority Interests plus Unrestricted Investment Accounts/Risk-Weighted Assets.

As discussed earlier, capital to satisfy the market risk requirements may also be in the nature of tier 3 capital. While tier 3 capital for conventional banks is subordinated debt with a minimum original maturity of two years, the same is non-existent for Islamic banks. It may be noted that investment accounts of similar maturity should have greater risk-absorption capacity. It should also be possible to ensure that these carry additional conditions regarding deferment of the servicing and redemption (even at maturity) if such payment would cause the institution to fall below its minimum capital requirement and that the same is not redeemable before maturity without prior approval by the regulators.

What follows from the above discussion is that there is justifiable, a need to completely reformulate the Basle norms for ensuring capital adequacy of Islamic

financial institutions. As Karim notes, "The irrelevance of the Basle framework to Islamic banks would put the regulatory authorities in an unenviable situation. If the whole banking sector is "Islamized" then a major departure from the recommendations of the framework would be required to make it compatible with the characteristics of Islamic banks. This would belittle one of the fundamental objectives of the framework, which is to achieve a high degree of consistency in its application to banks in different countries. Nevertheless it may be argued that, since Islamic banks are different in nature, then issues of competitive neutrality are not strictly relevant."[23]

The notion of "level playing field" implies eliminating discrimination and inequity rather than maintain uniformity. Unfortunately, many regulators use the following arguments in favor of uniformity in the application of the norms:

1. there are numerous problems, particularly the difficulty of evaluating the assets of an Islamic bank and assessing the capital adequacy of an institution engaging in essentially capital uncertain transactions;
2. there is the risk of misleading and confusing the general public with two sets of norms.[24]

It should be noted that the Basle regulatory norms themselves are an outcome of extensive debates and discussions. The norms have essentially evolved over time. For example, the so-called uniformity ensured by standardized approach to market risk measurements are being found to be inferior to the internal models approach. The latter approach recognizes heterogeneity in banking operations and the ability of each bank to measure its own risk exposure. Some Islamic banks are already having a process of internal assessment of risks in place and are making special provisions for risk associated with their investments.[25] Of course, there is need for greater sophistication in the assessment process.

## 5. SUMMARY AND CONCLUSION

The purpose of the Basle Capital Adequacy Norms is to ensure that banks across the global have sufficient capital to absorb credit risk and market risk inherent in various assets which banks hold. Losses may arise out of defaults by counterparties in contracts and/or adverse movements in various markets in which the bank participates. It is envisaged that such losses would not threaten the

[23] See Rifat Ahmed Abdel Karim (1996), "The Impact of Basle Capital Adequacy Ratio Regulation on the Financial and Marketing Strategies of Islamic Banks", *International Journal of Bank Marketing*, Vol.14, No.7, p.37.
[24] See Andrew Beikos, *op.cit.*
[25] See Rifat Ahmed Abdel Karim, *op.cit.*, Vol. 14, No. 7, p.35.

survival of an institution if it has adequate capital. The norms prescribed by the Basle Accord also seek to ensure a "level-playing field" for banks across the global. Islamic banks and financial institutions, like their conventional counterparts, are exposed to various forms of risk. However, the nature and magnitude of risk for Islamic financial institutions are different as compared to the conventional interest-based banks. The type of assets that an Islamic bank invests in are dictated by *shari'ah*.

While for conventional banks, volatility in interest rates is a major component of market risk, Islamic banks and financial institutions are, by definition, less vulnerable to fluctuations in interest rates as their transactions are supposed to be free from any element of *riba* or interest. Islamic banks participating in equity and commodity markets are exposed to price volatility risk. However, unlike conventional banks, they are not expected to engage in excessive speculation. Hence, they are relatively free from the risk-enhancing properties of speculation. They are also immune to the risk-enhancing properties of derivatives trading because of non-participation. Islamic banks, like their conventional counterparts, are exposed to currency risk. Here again the nature and magnitude of impact is likely to be different. For Islamic banks, currency risk would constitute a possible fall in the value of assets, such as, receivables relating to *ijara, ijara-wa-iqitna, bai-bithaman-ajil, murabahah* operations originating in a foreign country. Islamic banks, unlike their conventional counterparts would be largely immune to a currency risk inherent in trading operations, since, these must be on a spot basis. The Islamic banks are not allowed to trade currencies on a deferred basis. The most significant and distinct feature of Islamic banking is, however, the participation in real projects in the form of *mudarabah* and *musharakah* operations. According to one view, participation in the real economy involves additional risk factors (such as, sensitivity to government policy changes, etc.) as compared to interest-based banks.

While a strict comparison of total asset risk for Islamic banks with conventional banks may elicit conflicting views, the fact remains that the former can "share" and "pass on" asset risk to their depositors, namely, the investment account holders. Like capital, investment accounts can absorb potential losses on the assets of Islamic banks. This is the unique feature of Islamic banking and finance. Hence, there is a strong case for inclusion of investment accounts in capital and a need for alternative formulations of capital adequacy measures for Islamic banks. These measures computed for Islamic financial institutions are, in general, found to be extremely high, much higher than the minimum required as per Basle committee norms. Hence, Islamic financial institutions are observed to be quite robust.