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1: RISKS IN ISLAMIC FINANCIAL INSTITUTIONS AND MARKETS

1.1 FINANCIAL INTERMEDIATION THEORY

- Financial intermediaries are arguably the most important institutions within the world’s economies.
- Financial intermediaries act as vehicles between various financial institutions with contrasting need.
  - Examples include banks, but also certain investment funds, such as pension and mutual funds.
- A large portion of every dollar of finance globally in the US, comes from banks.
- Banks, by providing finance, play a role in corporate governance, providing signals to firms in distress and bankruptcy.
- Islamic financial intermediation differs from its conventional counterpart.
- Islamic financial intermediation can be dated back to the early periods of Islam and the duties of *sarrafs*, or financiers.
- All IFI activities are all firmly grounded in some sort of contractual
- Islamic financial contracts can be divided into two distinct types:
  - *Transactional contracts* govern activities, including exchange, trade, and financing
  - *Intermediation contracts* facilitate the proper execution of the former
- Islamic banks typically employ funds by means of instruments that avoid interest.
- Islamic financial contracts vary in function, scope, and complexity.
1.2 ISLAMIC FINANCIAL CONTRACTS

- It is useful to divide Islamic financial contacts into three categories:
- (1) Intermediation contracts: Mudaraba, Amana, Takaful, Kifala, Joala, Wakala;
- (2) Transaction Contracts: Qard Hasana; and
- (3) Asset-Based contracts:
  - a. Trade Financing (Murabaha, Baimuajjal, bai salaam)
  - b. Collateral-based (Ijara, Istisna)
  - c. Equity Based: Musaharaka.
1.3 STRUCTURE AND FINANCIAL INTERMEDIATION PRACTICES OF IFIS

- It is important to note how those contracts are applied within the scope of the theoretical balance sheet of an Islamic bank.
- Note that the liabilities side is divided into two deposit windows: demand deposits and investment/special investment accounts.

- On the **asset side**, there is:

  - **Conventional practice**
    - Short-term trade finance
    - Medium-term investments
    - Long-term partnerships
    - Fee-based services

  - **Islamic method**
    - *Murabaha; Salaam*
    - *Ijarah; Istisn’a*
    - *Musharakah*
    - *Joala; Kifala; etc.*

- On the **liabilities side**:

  - **Conventional practice**
    - Demand Deposits
    - Medium-term investments
    - Long-term partnerships

  - **Islamic method**
    - *Amanah*
    - *Mudarabah*
    - *Mudarabah; Musharakah*
1.3 STRUCTURE AND FINANCIAL INTERMEDIATION PRACTICES OF IFIS

• Of the two theoretical models discussed, the two-tier, mudaraba model amalgamates the liability and asset sides of the balance sheet.

• The first tier contact is between the investor and the bank, where the bank invests on behalf of the investor.

• The second tier is between the bank and the entrepreneurs seeking funds in order to produce profits
  – Those profits are shared with the bank according to a contractually dictated percentage.

• This model does not have any special reserve requirements on either the investment or demand deposits.

• In practice, the “two windows” model requires banks to hold a 100 percent reserve on the demand deposits, which are guaranteed by the bank, and zero percent on the investment deposits, used by banks to finance instruments bearing risk.
1.4 RISK PROFILE OF ISLAMIC FINANCIAL INSTITUTIONS

- Islamic banking, like conventional finance, is vulnerable to a wide range of risks.
- **Credit risk** is the failure of the counter party to meet the obligations stipulated by the contract.
- **Market risk** deals with the risks associated with changes to the underlying market value of a pool of assets.
  - **Foreign exchange risk** is the risk of exchange rate movements on assets of foreign currency.
- **Business risks** include displaced commercial risk, which is the risk that an asset’s performance diverges from expectations for returns and liabilities.
- Three **treasury risks** are:
  - (1) **asset and liability mismanagement** (i.e. ALM risk)
  - (2) **liquidity risk**, the risk of a bank being unable to access sufficient liquidity and leaving them unable to meet their obligations
  - (3) **hedging risk**, the possibility that a bank is unable to effectively mitigate their exposure to risks of all varieties.
- **Government risks** are present where economies are still developing.
- **Operational risks** are the failure of internal processes relating to people or systems.
- **Fiduciary risks** cause banks’ reputations to diminish in the eyes of the public.
- **Systematic risks** are risks that no bank can avoid.
- There is one, non-systematic risk exclusive to Islamic banks termed **Shari’ah risk**.
- **Shari’ah risk** deals with the risk of non-compliance with the Shari’ah.
<table>
<thead>
<tr>
<th>Type of Risk</th>
<th>Definition</th>
<th>Institution</th>
<th>Depositors</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Risks</td>
<td>Credit Risk</td>
<td>Credit risk is failure of counter - party to meet his or her obligations timely and on the agreed terms of the contract.</td>
<td>The bank faces counter - party risks in the various forms of contracts such as, Bay muqālāt, mudarabah, murābaha.</td>
<td>They face the risk that the bank does not honor requests for withdrawals at market value.</td>
</tr>
<tr>
<td></td>
<td>Market Risk</td>
<td>Market risk is the risk associated with change in the market value of held assets.</td>
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<td></td>
<td></td>
<td>Mark-up Risk is risk of divergence between the murābaha contract mark – up and the market benchmark rate.</td>
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<tr>
<td></td>
<td></td>
<td>Foreign Exchange Risk is the risk of the impact of exchange rate movements on assets denominated in foreign currency.</td>
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</tr>
<tr>
<td>Business Risks</td>
<td>Business Risk</td>
<td>Business risk results from competitive pressures from existing counter parts.</td>
<td>Displaced commercial risk may adversely affect the value of the bank's capital. Return on equity goes down.</td>
<td>Shareholders are exposed to the risk of not receiving their share of the bank's profit.</td>
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<td></td>
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<tr>
<td></td>
<td>Business Risk</td>
<td>Displaced Commercial Risk is the risk of divergence between assets' performance and expectations for returns on liabilities.</td>
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<tr>
<td></td>
<td></td>
<td>Withdrawal Risk where the bank is exposed to the risk of withdrawal of deposits.</td>
<td>Withdrawal risk exposes the bank to liquidity problems and erosion of its franchise value.</td>
<td>Insolvency risk exposes the different stakeholders to counter – party risks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Insolvency Risk is the risk of bank's failure to meet its obligations when they fall due.</td>
<td>Insolvency risk may expose the bank to loss of its reputation.</td>
<td></td>
</tr>
<tr>
<td>Treasury Risks</td>
<td>Asset &amp; Liability Management (ALM) Risk</td>
<td>Asset &amp; Liability Management (ALM) Risk is a balance sheet mismatch risk resulting from the difference in terms and conditions of a bank's portfolio on its asset &amp; liability sides.</td>
<td>This may adversely affect the bank's capital.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liquidity Risk</td>
<td>Liquidity Risk is the risk of bank's inability to access liquid funds to meet its obligations.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Hedging Risk</td>
<td>Hedging Risk is the risk of failure to mitigate &amp; manage the different types of risks.</td>
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</tr>
<tr>
<td>Governance Risks</td>
<td>Operational Risk</td>
<td>Operational Risk is the risk of failure of internal processes as related to people or systems.</td>
<td>The bank incurs losses due to occurrence of that risk hence may fail to meet its obligations towards the different stakeholders.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fiduciary Risk</td>
<td>Fiduciary Risk is the risk of facing legal recourse action in case the bank breaches its fiduciary responsibility towards depositors and shareholders.</td>
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<td></td>
<td></td>
<td>Risk of loss of reputation.</td>
<td>Legal recourse may lead to charging the bank a penalty or compensation. This may lead to withdrawal of deposits, sale of shares, bad access to liquidity or decline in the market price of shares if listed on the stock exchange.</td>
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<td></td>
<td>Transparency Risk</td>
<td>Transparency Risk is the risk of consequences of decisions based on inaccurate or incomplete information which is the outcome of poor disclosure.</td>
<td>Losses may occur as a result of bad decisions based on inaccurate or incomplete information.</td>
<td></td>
</tr>
<tr>
<td>System Risks</td>
<td>Business Environment Risk</td>
<td>Business Environment Risk is the risk of poor broad institutional environment including legal risk whereby banks are unable to enforce their contracts.</td>
<td>Business environment risk increases banks' exposure to counter - party risk as weak contracts are not easily enforceable.</td>
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<tr>
<td></td>
<td>Institutional Risk</td>
<td>Institutional Risk is the risk of divergence between product definition and practices.</td>
<td>Institutional risk exposes the bank to counter - party risks due to the unsettled nature of the contract.</td>
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</tr>
<tr>
<td></td>
<td>Regulatory Risk</td>
<td>Regulatory Risk is the risk of non - compliance with regulations due to confusion, bad management or mistakes.</td>
<td>Banks may be penalized for non complying with the rules or regulations. It could be an issue with the regulator or supervisor.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adopted from Hazwari, Grais and Iqbal (2003)
1.4 RISK PROFILE OF ISLAMIC FINANCIAL INSTITUTIONS

Policy Suggestions

• There have been many suggestions as to how to best mitigate these risks.
• IFIs can benefit from systematic data collection efforts, namely the establishment of credit (and equity) registries.
• IFSIs should require both centralized and integrated risk management that help control different types of
• Appropriate regulatory coordination and cooperation among banking, securities, and insurance supervisors is needed in order for such policies to be effective.
• Generally, financial system infrastructure needs to be strengthened in order to provide a stronger platform for market
• Capital markets need to be fostered with an emphasis on asset securitization
• Islamic Money markets and systemic liquidity arrangements should also be strengthened.
• disclosure regimes for IFSIs need to become more comprehensive and transparent, with a focus on disclosures of risk profile, risk-return mix and internal governance.
1.5 SUKUK MARKET RISK

• The *sukuk* market has reduced certain risks, but has also created new ones.
• There are two types of sukuk
• **Asset-based sukuk** allow the obligor to raise unsecured funding (they do not have to part with their asset to get money).
  – these sukuks fail to fulfill one of the most essential features of securitization, the ‘true sale’ requirement, which stipulates that the sale of the originator’s asset must fulfill all and accounting and legal requirements in order for the asset to be properly removed from the originator’s books.
  – There are issues relating to the Shari’ah legitimacy of sukuks structured in this way
• **Asset-backed sukuks** require the obligor to utilize monies generated from said asset, and at maturity, a true sale from a legal perspective must take place
• Interest rate risk is probably the risk that concerns sukuk the most
  – when market rates rise, fixed income values fall.
• Sukuk holders’ income is partly contingent upon the amount of revenue generate by the underlying asset.
Exhibit 1: Classification of Sukuk

- **Asset-Based**
  - **Sales-Based**
    - BBA
    - Murabahah
    - Salam
    - Istisna
  - Ijarah
  - Ijarah Muntahiyah bi Tamlik
  - Ijarah Mawsufah fi Zimmah
- **Lease-Based**
- **Partnership-Based**
  - Mudarabah
  - Musharakah
- **Agency-Based**
  - Wakalah bi Istithmar
- **Hybrid**
  - Convertible
  - Exchangeable
1.6 TAKAFUL MARKET RISKS

- *Takaful* are Islamic insurance mechanisms,
- There are two main *takaful* structures:
  - *wakalah* and *mudarabah*-based models
- The nature and fast expansion of the takaful industry has left glaring risk/Shari’ah gaps in the eyes of Islamic scholars, many of whom do not believe Islamic insurance is a viable Islamic financial structure.
- One distinct feature of *takaful* is that the participant and the operator of the fund are clearly segregated, with the operator’s reward being contingent upon which kind of *takaful* model is used.
Takaful: Cooperative Model

Diagram:
- Participant
- Contribution (Premium)
- Policy Benefits
- Underwriting Surplus
- Participants Special Account (Common)
- Participants Account (Personal)
- Investment Profit
- Operator
- Actual Management Expenses
- Investment Profit

100% flows between the nodes.
1.6 TAKAFUL MARKET RISKS

- Generally, the theoretical model is a mutually beneficial and cooperative framework.
- The main conflict is that contributors may demand financial remuneration in exchange for their participation in the fund.
- Two main takaful models: wakalah and mudarabah.
- Under a mudaraba contract, a profit is generated to be distributed between the rabb al-mal and the mudarib (entrepreneur or takaful operator).
- Under a wakala contract, the operator receives fixed fees for services rendered in managing the takaful fund, but not in the form of a performance fee.
- There are questions concerning whether or not wakala contracts are adequate in a competitive market environment.
- Takaful pool should extend to shari’ah boards, as well as utilizing shura, the Islamic concept of mutual consultation.
- Most of the issues pertaining to takaful are issues regarding the Shari’ah compliancy of takaful.
Takaful - Mudarabah on Investments

Takaful - Wakalah
1.7 ISLAMIC MICROFINANCE RISK

• Microfinance institutions in the conventional market provide entrepreneurial entities and individuals with capital critical to their ventures
• Credit risks are alleviated by the group-based consciousness and team linkages created by a repayment environment that is conducive to effective repayment
• there are risks in providing credit to poor in developing countries
  – There is no evidence to suggest that providing poor people with credit will facilitate successful entrepreneurial projects.
  – Loan capital may eventually end up in the hands of male family members to be used for purposes other than those intended.
• High operating and administrative costs can range up to 400 percent per dollar lent
• A diversion of microcredit for consumption purposes by the borrowers is one of the main reasons for credit default (in conventional microfinance), but can be resolved if IMFIs are designed in an integrated manner to include the two basic and traditional institutions of Islam, the Awqaf and the Zakah.
1.8 DERIVATIVE INSTRUMENTS IN ISLAMIC FINANCE

• Derivatives are financial instruments whose values are derived from another variable.
  – Options, forwards, futures, options and swaps are all examples of derivatives.
• Derivatives were developed to mitigate risks, but may also be speculative.
• Gharar is often discussed in the context of conversations surrounding derivatives and Islamic finance.
• Scholars have cited that, because derivatives often encompass the sale of one debt for another, the sale of nonexistent objects, and/or the sale of items before possession is taken, they are at odds with the principal Islamic finance guidelines outlined in the Shari’ah.
• Contemporary scholars, for the most part, have ruled that a futures sale, which comprises deferment of both counter-values, is a sale of one debt for another, and is forbidden.
• Due to their inherent speculative nature, innovative derivative instruments that satisfy the tenets of Islamic financial theory may not be feasible.
• However, through Islamic financial engineering, contentious compliant-derivative instruments have been developed.
• Introduced by CIMB in 2004, common types of Islamic swap structures used are the Islamic Profit Rate Swap (IPRS) and the Islamic Cross Currency Swap (ICCS).
• At present, all Islamic derivative contracts are privately negotiated or concluded over-the-counter.
1.9 RISK MITIGATION AND REGULATION IN ISLAMIC FINANCE

• The Risk identification and management processes available to the Islamic banks can be of two types:
  – Standard techniques, such as risk reporting, internal and external audit, GAP analysis, RAROC, internal rating, etc.
  – Techniques that either need to be developed or adapted, keeping in view the requirements for Shari'ah compliance.

• In order to manage interest rate risk, use GAP analysis and two-step contracts

• Another mitigative function recommended by Ahmed and Khan is on-balance sheet netting.

• Immunization, in order to mitigate potential FX risks, and risk transferring techniques, including the use of credit derivatives, namely swaps and options contracts, are also functional for risk mitigation purposes.

• There is a need to introduce a risk management culture in Islamic banks and

• The non-availability of compliant financial instruments to Islamic banks presents a challenge to their ability to combat market risks, as compared to the conventional banks.
2: COMPARATIVE ANALYSIS OF RISK MATRICES FOR ISLAMIC AND CONVENTIONAL BANKS

2.1 BRIEF DESCRIPTION OF RISK MATRICES

- A comparative analysis of risk management for conventional and Islamic banks across the geographic regions.
- Risk matrices provided by the BankScope Database can be broadly categorized into four major types:
  - **a) Asset quality ratios**
    - Loan Loss Res/Gross Loans
    - Loan Loss Prov / Net Int Rev
    - Loan Loss Res / Impaired Loans
    - NCO / Net Inc Bef Ln Lss Prov
  - **b) Capital Adequacy ratios**
    - Equity / Tot Assets
    - Equity / Net Loans
    - Equity / Liabilities
  - **c) Operational efficiency ratios**
    - Net Interest Margin
    - Net Int Rev / Avg Assets
    - Pre-Tax Op Inc / Avg Assets:
    - Return On Avg Assets (ROAA)
    - Return On Avg Equity (ROAE)
    - Dividend Pay-Out
  - **d) Liquidity ratios**
    - Interbank Ratio
    - Net Loans / Cust & ST Funding
    - Net Loans / Tot Dep & Bor
    - Liquid Assets / Tot Dep & Bor
2.2 SAMPLE SELECTION CRITERIA

- For each geographic region, a sample of conventional banks is selected as a control sample.
- Conventional banks are matched with Islamic banks from each country, based on the closest total asset size.
- Risk matrices are calculated for both the Islamic and conventional banks, and a comparative analysis is provided.
2.3 ANALYSIS OF RISK MATRICES ACROSS MAJOR GEOGRAPHIC REGIONS

• Among the 57 OIC member countries, 31 countries are considered in the sample based on data availability.
• Country jurisdictions are generally categorized into three major geographical regions:
  – a) Asian region
  – b) MENA (Middle East and North Africa) region (which also includes GCC countries)
  – c) Sub-Saharan African countries
2.3.1 Asian Region

- Islamic banks listed in the BankScope database from Malaysia, Indonesia, Brunei, Singapore, Bangladesh, Philippines, Russia and Pakistan
- 41 Islamic banks from the mentioned 8 countries
- Average asset size of 2,923.478 million USD and Total Deposit volume of 2,545.458 million USD.
- Islamic banks in the region have on, an average, 37.47 branches and 413 employees.
2.3.1 Asian Region

Asset Quality Ratios

• Asset Quality for the Islamic banks’ loan portfolio is rather poor, compared to that of their conventional counterparts.

• Average Loan Loss Res/Gross Loans ratio and average loan loss reserve over gross loan ratio for the Islamic banks are 3.42% and 22.11%, which are higher than those of their conventional counterparts of 2.88% and 10.69%, respectively.

• However, the Islamic banks in general keep higher loan loss reserves, which is represented by higher Loan Loss Res / Impaired Loans ratios.

Capital Adequacy Ratios

• Although the Islamic banks in the Asian region suffer from lower asset quality, the higher Capital Adequacy ratios imply that the Islamic banks keep higher cushions in terms of capital adequacy.
2.3.1 Asian Region

Operational Efficiency ratios

• In general, higher operating ratios represent a lower cost of funds, higher efficiency, and higher yields on equity and assets.
• Higher Net Interest Margins for the Islamic banks represent cheaper sources of funding.
• However, Pre-Tax Op Inc / Avg Assets ratios of around 0.83% are similar for both the Islamic and conventional banks.
• The Returns On Avg Equity (ROAE) are higher for the Islamic banks.
• However, in general, the conventional banks provide higher dividends.

Liquidity Ratios

• Interbank Ratios are lower than 100% for both Islamic and conventional banks, which indicate that both types of banks are net borrowers.
• However, higher ratios of Net Loans / Cust & ST Funding and Net Loans / Tot Dep & Bor. reflect lower liquidity for the Islamic banks,
  – although Islamic banks tend to hold more liquid assets.
Chart 4.1: Asset Quality Ratios for Asia Region

Chart 4.2: Capital Adequacy Ratios for Asia Region
Chart 4.3: Operational Efficiency Ratios for Asia Region

Chart 4.4: Liquidity Ratios for Asia Region
2.3.2 Mena Region

- MENA Islamic banks are domiciled in Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank and Gaza, and Yemen.
- 68 Islamic banks from the 16 countries are selected for the analysis.
- The sample includes 68 Islamic banks with an average asset size of 5,847.867 million USD and average Total Deposit volume of 4,434.627 million USD.
- Islamic banks in the region have on average 28.51 branches and 550 employees.
2.3.2 Mena Region

Asset Quality Ratios

• Average Loan Loss Res/Gross Loans ratio is higher for Islamic banks
• Other asset quality ratios are lower.
• In general, Islamic banks hold a better loan portfolio, compared to their conventional counterparts.
• Average Loan Loss Res/Gross Loans ratio and average loan loss reserve over gross loan ratio for the Islamic banks are 7.69% and 9.78%, compared to that of their conventional counterparts of 3.21% and 16.05% respectively.

Capital Adequacy Ratios

• Higher capital adequacy ratios for the Islamic banks show that they keep higher equity cushions to cover risk exposure and avoid the capital adequacy problem.
• All of the four capital adequacy ratios are, on average, higher for the Islamic banks, compared to those of the conventional banks.
2.3.2 Mena Region

- **Operational Efficiency ratios**
  - In general, higher operating ratios represent a lower cost of funds, higher efficiency, and higher yields on equity and assets.
  - The higher Net Interest Margins of the Islamic banks represent cheaper sources of funding.
  - Pre-Tax Op Inc / Avg Assets, Return On Avg Assets (ROAA) and Return On Avg Equity (ROAE) are all higher for the Islamic banks.
  - However, the conventional banks pay out more dividends, around 16.74%, compared to 8.46% for Islamic banks.

- **Liquidity Ratios**
  - Interbank ratios for the Islamic banks are marginally lower than 100, which indicate that the Islamic banks are generally borrowers in the interbank market, whereas their conventional counterparts are lenders.
  - The higher Liquid Assets / Tot Dep & Bor ratios for the Islamic banks of 63.31%, compared to the conventional banks’ 17.27% indicate that Islamic banks tend to hold more liquid assets in their portfolio.
Chart 4.7: Operational Efficiency Ratios for MENA Region

Chart 4.8: Liquidity Ratios for MENA Region
2.3.3 Sub-Saharan Africa Region

• Only the Islamic banks from Sudan
• The sample includes 8 Islamic banks from Sudan, with an average asset size of 469.082 million USD and average Total Deposit volume of 224.137 million USD.
• Islamic banks in the region have, on average, 6.38 branches and 103 employees.
• Only Islamic banks are considered, as the legal system in Sudan now sustains only Islamic, Shariah compliant banking.
2.3.3 Sub-Saharan Africa Region

Asset Quality Ratios

- Islamic banks in Sudan exhibit an average Loan Loss Res/Gross Loans ratio of 3.02% and a Loan Loss Res / Impaired Loans ratio of 4.91%, which is generally lower than many other peer Islamic banks in other geographic areas.

Capital Adequacy ratios

- In general, the Islamic banks in Sudan maintain a significant cushion to cover their risk exposure and possibly capital adequacy problem.
- Most of the capital ratios are higher than other peer Islamic banks. Higher Equity / Net Loans reflect a higher cushion to absorb losses on the loan book.

Operational Efficiency ratios

- In general, higher operating ratios represent lower cost of funds, higher efficiency and higher yields on equity and assets.
- Although Islamic banks in Sudan do not exhibit high Net Interest Margins (2.57%), they have healthy ROAEs and provide higher dividend payouts (20.43%), compared with their peers in other regions.

Liquidity Ratios

- Islamic banks in Sudan keep a significant portion of their portfolio invested in liquid assets. The high ratio of Liquid Assets / Tot Dep & Bor reflects higher liquidity.
Chart 4.11: Operational Efficiency Ratios for Sub-Saharan Africa Region

Chart 4.12: Liquidity Ratio for Sub-Saharan Africa Region
2.4 ANALYSIS OF RISK MATRICES ACROSS FIVE MAJOR COUNTRY JURISDICTIONS

• The study also presents a comparative analysis of the risk matrices for the Islamic and conventional banks for five major Islamic financial markets:
  – 1) Malaysia
  – 2) Turkey
  – 3) Kingdom of Saudi Arabia
  – 4) United Arab Emirates
  – 5) Bangladesh

• Results are presented in the study
3: SURVEY OF RISK MANAGEMENT PRACTICES OF ISLAMIC FINANCE INSTITUTIONS OIC MEMBER COUNTRIES

3.1: UNDERSTANDING OF RISK IN ISLAMIC FINANCIAL INSTITUTIONS (IFIS)

• In order to maintain a healthy financial atmosphere, IFIs are expected to observe risks in various contracts and integrate risk management plans into the strategic vision of the institution.
• This section is an attempt to identify risks in various financial activities conducted by IFIs in OIC member countries.
• OIC cooperation countries include developed, emerging and developing countries, which accommodate a range of conventional, mixed and Islamic financial services.
• The following section will shed light on what managers of IFIs think about risks in their operations, about the reporting of risks in IFIs, and the readiness of IFIs’ in handling these challenges.
• This study analyses data from a questionnaire that includes questions/statements on six different areas that include:
  – the severity of risk in various contracts,
  – risk reporting standards,
  – the risk management environment,
  – risk monitoring,
  – presence of strong internal mechanisms that help IFIs deal with challenges.
• A total of 18 banks surveyed.
• Out of a total of 18 banks, 12 banks were from the MENA region, two banks were from South Asia, and three banks were taken from the South East Asian region.
3.2 RISK PERCEPTION

- There are six categories of contracts with respect to the four major types of risks that are analysed.
- Both credit and operational risks are considered important in the Murabahah mode of financing.
- Mark-up risk is the second largest risk in the Murabahah mode of financing.
- Credit and the operational risks are the two most important risks for banks in all the remaining five modes of financing as well.
- Except for Murabahah, operating risk has been considered relatively more important than credit risk in the remaining five modes of financing.
- IFIs have to concentrate on investing in developing an efficient system, technologies, and building efficient human capital in order to reduce operational risks.
- Despite a diverse experience with liquidity and mark-up risks, the respondents chose liquidity risk as the third important risk, followed by mark-up risk.
3.2 RISK PERCEPTION

• Credit risk is more important in Mudarabah, Musharakah and Ijarah modes of financing

• Murabahah is the most important mode of financing that faces operational risk, followed by Mudarabah, and Musharakah contacts.

• Operational risk was also important for the Ijarah mode of financing; however, operational risk was found to be the least important for the Salam mode of financing.

• Most of the IFIs have a formal risk management system.

• The chronology of the risks in order of importance starts with operational risk, and extends to credit risk, liquidity risk and mark-up risk.

• In terms of the most challenging modes of financing, Mudarabah is most pronounced, followed by Murabahah and Musharakah.
3.2 RISK PERCEPTION

- Among six different problems, a lack of understanding is the major challenge facing IFIs.
- Lack of understanding is directly connected to availability of efficient human capital for IFIs.
- One of the major components of operational risk is the unavailability of efficient Islamic bankers.
- This is a true reflection of the most important type of risk, as operational risk was seen as most important.
- The next problem is the absence of Islamic money markets in many regions.
- Finally, the absence of efficient regulatory frameworks to deal with problem borrowers and guide other general banking activities is the third most important problem. This problem is connected to credit risk, which is the most important risk.

<table>
<thead>
<tr>
<th>Problems</th>
<th>1</th>
<th>2</th>
<th>3</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Lack of understanding</td>
<td>5.6</td>
<td>5.6</td>
<td>0.00</td>
<td>50.0</td>
<td>38.9</td>
</tr>
<tr>
<td>Rate of return of IFI</td>
<td>5.6</td>
<td>16.7</td>
<td>22.2</td>
<td>27.8</td>
<td>27.8</td>
</tr>
<tr>
<td>Islamic money market</td>
<td>0.00</td>
<td>5.6</td>
<td>16.7</td>
<td>50.0</td>
<td>27.8</td>
</tr>
<tr>
<td>Derivative</td>
<td>0.00</td>
<td>5.6</td>
<td>22.2</td>
<td>33.3</td>
<td>38.9</td>
</tr>
<tr>
<td>Legal system</td>
<td>0.00</td>
<td>11.1</td>
<td>16.7</td>
<td>33.3</td>
<td>38.9</td>
</tr>
<tr>
<td>Regulatory system</td>
<td>0.00</td>
<td>5.6</td>
<td>11.1</td>
<td>44.4</td>
<td>38.9</td>
</tr>
</tbody>
</table>


3.3 RISK REPORTING

• Risk reporting is an essential component of efficient risk management.
• The IFIs are required to report partially or in full content, the amount of risk taken in various financial activities.
• IFIs produce a number of risk reports.
• IFIs did not report changes in commodities prices, which might be of concern for the Salam mode of financing.
• The country risk report was not needed, as the IFIs were not globally diversified.
  – However, we must consider the country risk report very important for cross-border banking activities in the future.
• Operational risk was not reported fully.
  – This risk remains an influential risk among IFIs.
• It is clear why IFIs have operational, credit, liquidity and mark-up risks.
• In order to fully understand the risk profile of the banks, the IFIs must report the types and propensity to such risks in a formal manner.
• These reports should also be monitored at a periodic basis.
Figure 5.2: Risk Reporting

[Bar chart showing the percentage of 'No' and 'Yes' across different risk categories: Capital at risk, Credit risk, Aggregate market risk, Interest rate risk, Liquidity risk, Foreign exchange, Operational risk, Country risk, and Credit rating.]
3.4 RISK MANAGEMENT ENVIRONMENT

- The board of directors should ensure management takes the necessary actions to identify, measure, monitor, and control these risks.
- Senior management is responsible for establishing policies and procedures that manage risk according to the board of director's appetite for risk.
- The policies and procedures include maintaining a review process, limiting risk taking, establishing an adequate system of risk measurement, promoting a comprehensive reporting system, and an ensuring an effective system of internal controls.
- Most of the banks have already established a strong risk management environment.
- Loan grading has been a problem for 39 percent of the banks.
- Over 70 percent of the banks did not have computerized risk management tools.
- Diversification across countries, sectors, and industries has been another important problem area.
- The IFIs were not internally diversified.
- Also, the problem of monitoring benchmark rates has contributed to mark-up risk.
- Since IFIs do not have efficient human capital and the use of computers was very limited, the IFIs reported facing difficulties with operational and mark-up risks.
Figure 5.3: Establishing Strong Risk Management Environment

- Have a formal RM system
- A formal RM section
- Have internal guidelines
- Clear policy promoting asset quality
- Formal loan approval system
- Loan grading
- Computerized system
- Follow credit limits
- Diversify across countries
- Diversify across sectors
- Plans managing problem loans
- Maturity mapping
- Monitoring benchmark

- No (%)
- Yes (%)
3.5 RISK MEASURING AND MANAGEMENT TECHNIQUES

• Banks must establish regular management information systems for measuring, monitoring, controlling, and reporting different risk exposures.
• Duration analysis, earnings at risk analysis, Value at risk analysis, risk adjusted rate of return on capital analysis, and simulation techniques were not utilized properly by the banks.
• One of the reasons could be the limited computerized management of risk.
• The traditional method of maturity matching is quite popular among IFIs.
• The results imply that IFIs do not use sophisticated techniques to measure and manage risks.
• It is not a necessity that banks should be using these techniques.
• A combination of some of the techniques may enrich the experience of the managers by helping them in making informed decision.
• IFIs have moved to the internal rating based approach required by Basel III.
• This approach offers flexibility and freedom to IFIs, but increases the level of commitment and responsibility towards the efficient management of the banks.
Figure 5.4: Risk Measuring and Management Techniques

Gap analysis
Duration analysis
Maturity matching
Earnings at risk analysis
VAR analysis
Simulation techniques
Best vs. Worst case scenarios
Risk adjusted rate of return on capital
Internal rating systems

No (%) Yes (%)
3.6 RISK MONITORING

• IFIs must ensure the presence of an appropriate risk monitoring environment
• Risk ratings should be analysed regularly.
• Around 50 percent of the banks do not reappraise the collateral unless it is required.
• One third of these banks do not regularly check the status of the guarantor.
• Half of the sample banks have never conducted a country risk rating.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Never (%)</th>
<th>Occasionally (%)</th>
<th>Regularly (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appraisal of the collateral</td>
<td>16.7</td>
<td>27.8</td>
<td>55.6</td>
</tr>
<tr>
<td>Confirming guarantor's intention</td>
<td>11.1</td>
<td>22.2</td>
<td>66.7</td>
</tr>
<tr>
<td>Review country ratings</td>
<td>50.0</td>
<td>11.1</td>
<td>38.9</td>
</tr>
<tr>
<td>Review borrower's business performance</td>
<td>11.1</td>
<td>5.6</td>
<td>83.3</td>
</tr>
</tbody>
</table>
3.6 RISK MONITORING

- The use of an accounting system affects the style of financial reporting.
- Different countries use different reporting and accounting systems.
- The most popular among these systems is the one provided by AAOIFI.
- One third of the banks have moved to a market specific accounting reporting system.
- These localized reporting standards are either modified versions of AAOIFI or are completely new, being driven by a mixture two or more systems.
- However, almost a half of the sample banks are still using AAOIFI accounting reporting standards.
- Since the sample in this study is biased towards MENA, the dominance of AAOIFI is expected.

**Figure 5.5: Use of Accounting Reporting System**
3.6 RISK MONITORING

- Banks periodically monitor their profit and loss scenario, and whether these are affected by any major events.
- As monitoring is expensive, it is suggested that IFIs have frequent computerized monitoring of their profit and loss scenario.
- End of day processing of the profit and loss scenario may help bankers better prepare for adverse situations.
- Some highly technology-based IFIs do it daily through a report called the ‘end of day processing report (EDP).
- However, it is highly challenging for the remaining IFIs to maintain a daily report.
- The cost of monitoring is an important aspect, which is expected to rise with a more frequent monitoring exercise.
- IFIs have to devise an optimal plan to balance the cost and benefits of frequent monitoring.
- Internationally, conventional banks monitor large loans very frequently, but lengthen the monitoring of smaller loans to a monthly or quarterly basis.
Figure 5.6: Assessment of Profit-and-Loss Situation

- Monthly: 61%
- Daily: 28%
- Weekly: 11%
3.7 INTERNAL AUDIT AND CONTROL

- The most important risk to IFIs is operational risk.
- This risk is the result of internal mismanagement that is connected to the efficient management of systems, people and technology.
- IFIs need to make sure that the technology in place is updated one and fully secured.
- There must be internal auditors and an internal Shari’ah supervisor board to investigate the introduction of new products by IFIs.
- A major portion of the banks did have an internal control system to swiftly manage changes in the risk management system.
- All the banks in the sample avoided role duality within the staff of the risk management division.
- Banks had contingency plans to manage disasters and accidents.
- Almost all the banks had internal auditors to review and verify risk management frameworks and monitor the outcome of the frameworks.
- All the banks had sufficient safety management for data used to keep records customer information.
- There is active use of research in risk management.
- One third of the banks did not have a research component. This may have severe influence on risk management effort of these IFIs.
Figure 5.7: Internal Control System

- Internal control system to deal with changes
- Separation of duties to avoid role duality
- Contingency plan to manage disasters
- Internal auditor to review and verify RM system
- Backups of software and data files
- Shari'ah board clearance for new product
- Securitization to raise fund
- Investment risk reserve

No (%) Yes (%)
Figure 5.8: Actively Engaged in Research to Manage RM Problems

- Yes: 67%
- No: 33%

Figure 5.9: Requirement of Basel Committee Equally Applicable to IFIs

- Yes: 82%
- No: 18%
3.8 EXTERNAL CONTROLS AND LEGAL SYSTEM

- IFIs must comply with the regulations of central banks and other international organizations.
- The Basel Committee for Banking Supervision (BCBS) publishes Basel capital adequacy requirements.
- However, IFIs have differing opinions on the role of Basel regulation and the requirement of more or less capital, compared to conventional counterparts.
- More than 50 percent of the respondents supported different levels of capital requirements for IFIs.
- Banks are slowly moving towards an internal rating system that will decide the capital adequacy of each bank.
- IFIs, with few exceptions, are yet to follow that lead.
- A portion of IFIs are still of the opinion that the Basel committee capital regulation should not be considered for IFIs.
- Central banks of Islamic countries have introduced modified versions of the Basel capital requirement guidelines for the Islamic banks of their regions.
- IFIs have to invest to develop their internal efficiency.
Figure 5.10: Capital Requirement of IFI and Conventional Banks

- Same: 44%
- Less: 28%
- More: 22%
- Others: 6%
3.9 ARE IFIS HAPPY WITH EXISTING RM SYSTEM?

- Over half of the respondents were not happy with the existing system.
- The industry will face more challenges in the future and IFIs have to be ready with strong internal and external systems to face those challenges.
- Bankers know about their limitations and would like to bring positive changes to risk the management frameworks in their banks.
- There is room for development in the internal and external systems of the Islamic financial systems in terms of strengthening internal mechanisms and widening cross border banking with other countries.
Figure 5.11: Satisfaction with Existing RM System

- Yes: 47%
- No: 53%
3.10 REACHING THE OBJECTIVES OF SHARI’AH

- The Islamic financial does not allow unnecessary profit making, unadjusted for risk.
- The system promotes social development through partnership and entrepreneurship.
- IFIs cannot take any investment activity where the risk is excessive.
- The system does not allow any speculative, highly risky engagement in gambling by bankers.
- The partnership nature of the contracts allows the parties involved to share the risk and profits, based on agreed upon ratios.
- *Shari’ah* principles at the very core and the supervisory board clearly differentiate the uniqueness of IFIs, compared to conventional banks.
Figure 5.12: Risk Management Framework of Islamic Banks

- International authority
- Central Bank
- Shari'ah Supervision
- Internal auditor
- Internal control
- Shari'ah principles
3.11 CONCLUSION

• Risk is must be considered carefully, as banks deal with future uncertainties.
• An online questionnaire method was utilized to collect data from risk management officials across regions.
• Operating risk is the most important risk for the IFIs in the sample.
• Credit risk is the second most important risk.
• Liquidity risk and mark up risk are also found to be important risks.
• A lack of understanding, limited use of technology, limited or no diversification across various products and regions, among others, are the major problems identified by the bank managers.
• Bank managers also identified limited securitization and the unavailability of Islamic money market instruments as barriers to efficient liquidity management.
• Most banks have used AAOIFI risk management guidelines and the guidelines suggested locally by the central banks.
• Two thirds of the bankers had active engagement in research and development in order to identify problems beforehand.
• IFIs are the strongest if they make use of the Shari’ah-based banking system.
  – Many of these controls are absent in conventional financial system.
• This study recommends Investing in the training of employees, investment in education and technology, investment in relationship building with other banks and customers, and diversification of banking operations among like-minded neighboring countries.
• Risk management operations must be robust to the changes in banking operations.