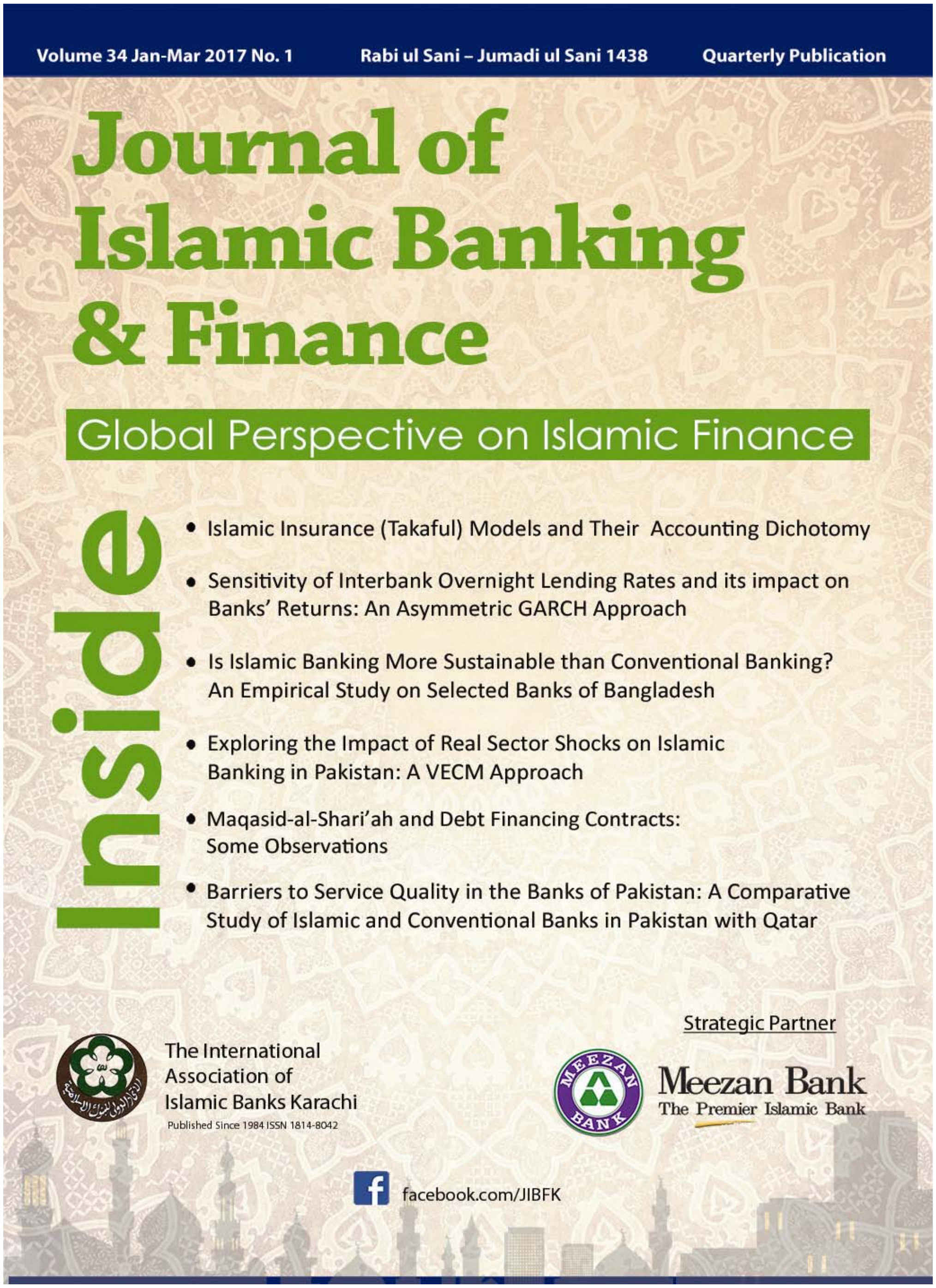

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Journal of Islamic Banking & Finance

Global Perspective on Islamic Finance

Inside

- Islamic Insurance (Takaful) Models and Their Accounting Dichotomy
- Sensitivity of Interbank Overnight Lending Rates and its impact on Banks' Returns: An Asymmetric GARCH Approach
- Is Islamic Banking More Sustainable than Conventional Banking? An Empirical Study on Selected Banks of Bangladesh
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"O Believers: devour not Riba, doubled and redoubled;

and fear Allah, in the hope that you may get prosperity."

Sura Ale-Imran (verse No. 130)

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Editor's Note

Islamic banking has now been around for a while, yet it remains a relatively small industry vis-a-vis conventional banking. It still needs time to bring in all other Islamic attributes in its effects and outcomes. The ideal vision is to provide an egalitarian financial system which would promote equitable distribution of income. But, Islamic banking at all times has to ensure 100% Shari'ah compliance. This objective is something which has never been compromised and can never be compromised. However, this fact is not well understood among the masses. They equate partial contribution to the ideals of economic redistribution as partial achievement in terms of Shari'ah compliance.

Islamic banking has successfully provided 100% Riba-free banking to faith conscious Muslims. There are a large number of faith-conscious people in the Muslim communities of the world. The surge in Islamic banking deposits, in particular, reflects this phenomenon of how people embrace the solution of avoiding Riba through Islamic banking industry.

The industry has been accused of finding only alternates to conventional banking products and services. The Critics' understanding is based on the premise that conventional financial products like mortgage and finance lease also involve assets. In a true Shariah compliant transaction, the financier has to have, i) ownership of the asset, ii) possession of the asset and iii) must bear risks related to the asset to earn a legitimate return on the sale and lease of asset. Default risk is related to non-payment of dues. Conventional banking transactions do not incorporate the three necessary features for valid and worthy compensation related to assets.

Despite additional workload, vigilance required and effort undertaken to make the products Shari'ah compliant, it is an appreciable fact that Islamic banks relatively cost the same in financing cars and homes. This speaks of the resilience and commitment to compete on both spiritual as well as efficiency basis. Depositors also get comparatively similar returns. But, strictly from the Shariah perspective, a particular rate of return is not a criterion of allowance of a contract or otherwise. From economics standpoint, if Islamic banks charge less, they will share lesser returns with depositors. Thus, depositors would be worse off in Islamic investments. If they charge more on their financing products, then the people who are obtaining Islamic lease will be worse off by having to pay more. So, market forces could equate prices at similar levels for similar products. However, the mere similarity in price does not make two products as same.

It is an ongoing effort to provide Shari'ah compliant financial solutions to all segments of the society. But, whatever products and services are provided, whether they target all segments of society or not, they are always sanctioned only after 100% Shari'ah compliance. Shari'ah compliance takes precedence over all other objectives. It must be appreciated that Islamic banking in Pakistan is the closest in reaching the theoretical ideals, besides ensuring 100% Shari'ah compliance. Islamic banking in Pakistan avoids Bai Inah, Organized Tawarruq and some Islamic banks have attempted to develop own benchmark and go for direct purchase by bank in Murabaha transactions.

Going forward, a great deal more needs to be done to enhance the validity and acceptability of Islamic banking by creating mass level awareness through print and electronic media programs. Research and development of new products and services fully compliant with Islamic structure and which bring in more people towards Islamic banking and creating a talent and customer pool that understands the nuances and underlying aspects of Shari'ah compliant finance are two important driving forces for future.

This issue of Journal of Islamic Banking & Finance documents scholarly contributions from authors around the globe. Contributions in this current issue discuss the theoretical underpinnings of an Islamic economy, contemporary issues in Islamic finance and performance based empirical studies on Islamic banking and finance. Below, we introduce the research contributions with their key findings that are selected for inclusion in this issue.

The paper "**Islamic Insurance (Takaful) Models and Their Accounting Dichotomy**" by Prof. Dr. Mohd Ma'Sum Billah and Dr. Yousef Abdullah Basodan gave a descriptive account of accounting issues in Takaful. They highlighted the important differences between Islamic insurance and conventional insurance. Then, they presented that how these differences bring new issues and challenges to perform accounting which could meet the needs of effective reporting, transparency and communication of vital information to the stakeholders.

"**Sensitivity of Interbank overnight Lending Rates and the impact on Bank's return: An Asymmetric GARCH Approach**", authored by Mohammad Asghar Khan, Phd scholar at School of Finance, Southwestern University of Finance and Economics, Sichuan, China, describes in detail the regressive model used to analyse the instability of lending rates and their impact on bank returns. For this study the scholar used secondary data on three Islamic and three conventional banks in Pakistan derived from SBP, KSE and IMF publications. The findings indicate that short term and long-term interest rates and their volatilities do exert significant and differential impacts on the return of bank portfolios. Banks if cognizant of these can better align their lending and borrowing rates to maximize returns.

"Is Islamic Banking More Sustainable than Conventional Banking? An Empirical Study on Selected Banks of Bangladesh" by Mohammed Syedul Islam, and Md. Rafiqul Islam Rafiq both associated with the Islamic International University Chittagong analyze the performance of two Islamic banks against two conventional banks of Bangladesh vis-à-vis the success with which these have successfully been able to implement sustainable green policies prescribed by the central bank of Bangladesh for and through the banking sector. They employ a questionnaire study as well as analysis of secondary data and find that Islamic banks have had a better result which maybe attributable to the social value addition that Islam prescribes.

The paper "**Exploring the Impact of Real Sector Shocks on Islamic Banking in Pakistan: A VECM Approach**" by Salman Ahmed Shaikh and Dr. Tahir Suleman used quarterly data for the period 2006-2016 and applied Vector Error Correction Model (VECM). The results indicated that a shock in large scale manufacturing (LSM) index had an increasing effect on financing and investments, while a shock in exchange rate had a declining effect. Moreover, the findings revealed that a shock in LSM index had an amplifying effect on non-performing loans (NPLs), but a shock in exchange rate did not affect NPLs by much. They also showed that a shock in oil price had a dampening effect on NPLs. Finally, for profitability, their analysis highlighted that a shock in exchange rate and international oil price had a declining effect on ROE, whereas a shock in LSM index enhanced profitability. This study is an important step in understanding the finance-macro linkage in Pakistan's economy.

The paper "**Maqasid-al-Shari'ah and Debt Financing Contracts: Some Observations**" by Syed Munawar-Shah, Dr. Mariani Abdul-Majid, Dr. Zulkefly Abdul Karim and Dr. Anowar Zahid analyzes the fairness and justice in the debt contracts. It recommends that risk-sharing based contracts which are inherently fair, just and egalitarian must be prioritized in the new product developments. On the other hand, the paper recommends that the contracts which resemble conventional products in their effects and consequences must be given less preferences and should be reduced overtime.

The paper "**Barriers to Service Quality in the Banks of Pakistan: A Comparative Study of Islamic and Conventional Banks in Pakistan with Qatar**" by Malik Shahzad Shabbir and Awais Ur Rehman highlighted the crucial importance of service quality. They collected primary data through pretested adopted questionnaire. They argued through empirical analysis that human resource is a key variable determining the service quality. It was recommended that Islamic financial institutions must hire the staff with dual intellect of finance and Shari'ah to serve better quality.

Readers Comments

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"Your team for consistently publishing this journal which is contributing immensely to advancing knowledge on Islamic economic and finance-related issues. Wishing you more power to your elbow. Jazakallahu khayran".

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The opinions, suggestions from our worthy readers are welcome, may be communicated on

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Islamic Insurance (Takaful) Models and Their Accounting Dichotomy

By
Mohd Ma'Sum Billah, PhD[*]
Yousef Abdullah Basodan, PhD[++]

Abstract

Islamic Insurance (Takaful) which is similar to the conventional insurance has its own specific procedures and business discipline. It is governed in Malaysia by the Takaful Act 1984[1] *and conventional Insurance Act 1963*[2]*. The Islamic Insurance (Takaful) and Insurance business are supervised by Bank Negara Malaysia. In Saudi Arabia, it is supervised by Saudi Arabian Monetary Agency (SAMA) and governed by the Law on Supervision of Cooperative Insurance Companies that was issued by the Royal Decree number (32/m) in 2003, in addition to a number of rules and regulations.*[3] *To meet the specific rules and requirements in accordance with Islamic business concept, Islamic Insurance (Takaful) has developed its own specialized accounting system. Islamic Insurance (Takaful) Accounting System complies generally with the existing International Accounting Standard (IAS)*[64]*. But most importantly, the system applied is in accordance with Islamic requirements as mentioned in the holy Qur'an: "So establish weight with justice and fall not short in the balance"* [5]*.*

Keywords: Accounting, Insurance, Shari'ah

JEL Classification No: G2; G22; G34

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[1] *The Takaful Act* (Malaysia) 1984 (Replaced by *the Islamic Financial Services Act* 2013).

[2] *The Insurance Act* (Malaysia) 1996 (Replaced by *the Financial Services Act* 2013).

[3] *Law on Supervision of Cooperative Insurance Companies (SAMA, Saudi Arabia) 1424H - 2003G.*

[4] *International Accounting Standard* (IAS).

[5] *Surah al-Rahman*: 9.

1. Corporate Understanding

A *Shari'ah alternative* to the concept of insurance is the doctrine of *al-takaful*. The word *al-Takaful* is derived from a verb *Kafala*, which means to help or to take care of one's needs. *Islamic Insurance (Takaful)* is operated based on shared responsibility, brotherhood, solidarity and mutual cooperation or assistance, which provides for mutual financial security and assistance to safeguard participants against a defined risk. *Islamic Insurance (Takaful)* operation should be within the *Shari'ah* spirit, and there may not be any justification to involve herewith any element, which is against the *Shari'ah* principles. *Allah (s.w.t)* says to the effect:

> *"…And co-operate ye one another in righteousness and piety, and do not co-operate in sin and rancour…"* [6]

> *"…Allah s.w.t permitted trade and transaction while prohibited in involving usury…"*[7]

The basic notion of *Islamic Insurance (Takaful)* is to bring equity to all parties involved. The profit earning is not the prime objective. The primary objective is to help others who face risks by means of sharing misfortunes.

2. Rulings on Islamic Insurance

Islamic Insurance *(Takaful)* does not protect, but it ensures that if there is any loss or damage in the future, for example, on the property insured, the system of Takaful would provide a financial security. Its operation is based on shared responsibility, mutual cooperation, brotherhood and solidarity, which makes it more significant as compared to the conventional insurance. *Islamic Insurance (Takaful)* policyholders would co-operate among themselves for their common goal of mutual security against risk. The payment of premium made by policyholder is to assist those who need financial security and it is regarded as a donation contract. *Islamic Insurance (Takaful)* transaction is free from element of uncertainty, unjust enrichment, *Riba* which can invalidate an *Islamic Insurance (Takaful)* contract. The Holy Prophet (saw) said to the effect:

> *"Reported by Said Ibn al-Musayyib r.a verily the Holy Prophet S.A.W forbade from an uncertain transaction."*[8]

It also doesn't aim to take advantage at the cost of other individuals. In its all aspects of operations, it shall abide by the absolute *Shari'ah* principles. Therefore, *Islamic Insurance (Takaful)* falls under a condition, which makes it permissible in the Islamic transaction.

> *"…Muslims are bound by their conditions except the condition which prohibits the lawful one or the one which permits the unlawful one…"*[9]

---

[6] al- Qur'an :5:2.

[7] al-Qur'an 2:275.

[8] Muwatta Imam Malik

[9] unan Al-Tirmizi

3. General Structure of Islamic Insurance *(Takaful)* Company

Generally in *Islamic Insurance (Takaful)* company, CEO has a duty to control four departments i.e. Family *Takaful*, General *Takaful*, Finance & Administration, and marketing department. He/ She has a big responsibility to implement overall organizational plans, and to achieve organizational goals. He/She also has full authority to make a decision for all departments under his supervision.

Life Islamic Insurance (Takaful) Division

Family *Islamic Insurance (Takaful)* schemes have been grouped into two classes i.e. individual *Islamic Insurance (Takaful)* and group *takaful*. In individual *takaful*, the participant has a policy to protect himself/herself for security against defined risk. A legal operator will manage the premium paid by the participants. The operator has responsibilities to gain collective rights over contributions and benefits. All these activities will be treated based on the principles of *al-Mudharabah*, i.e. profit and loss sharing in participant's account (PA), while in participants' special account (PSA), it will be treated in the line with the principles of *al-Tabarru'* (charity).

General Islamic Insurance (Takaful) Division

In this division, all operations are managed by functions and it has been grouped into three i.e. underwriting, claim, and re-*takaful*. The underwriter has a responsibility to arrange the terms and conditions of the cover and its price at levels which reflect the degree of risk which the case brings to the General *Islamic Insurance (Takaful)* Fund by way of potential frequency and potential security and loss. The *Islamic Insurance (Takaful)* underwriter must also ensure that the one who proposes has the capacity to contract and is in compliance with *Shari`ah* Law.

The various underwriting plans have been grouped into several main classes i.e. fire *Islamic Insurance (Takaful)* scheme such as basic fire and business interruption, motor *Islamic Insurance (Takaful)* scheme such as private motor car and motor cycle, miscellaneous or accident *Islamic Insurance (Takaful)* scheme such as personal accident and personal accident for pilgrims, and engineering Islamic Insurance (Takaful) scheme such as machinery breakdown.

The General *Islamic Insurance (Takaful)* Fund is treated on the basis of *al-Tabarru`* in PSA account. For example, A has a Family *Islamic Insurance (Takaful)* policy for individual and nominates X as nominee. If he/she is still alive upon the maturity of policy, he/she has a right to claim from the operator the total amount of paid contribution together with a share of the profits made over the contribution. In addition, he/she will also get a bonus and dividend according to the company's policy. But, if A dies before the maturity of the certificate, the trustee / nominee shall have the right to claim the total paid contribution and share of the profit made, bonus and dividend which he/she will get based on the company's policy and also donation from the company's *al-tabarru`* fund. Then, nominee (X) will give all that money to A's legal heirs.

4. Preview of Accounting Treatment in Islamic Insurance (*Takaful*)

Certain specific accounting principles applicable to conventional and Islamic Insurance (Takaful) which have been laid down by the above guidelines and standard are as follows:

- Recognition of Islamic Insurance (Takaful) Contribution / Insurance Premium Contribution received before the effective date of Islamic Insurance (Takaful) cover is treated as advance in the financial statement.

- Technical reserve – reserve is the amount calculated from the unused period of Islamic Insurance (Takaful) cover.

- Provision for claims reserve – sufficient provision for claim must be made before the profit for a financial period is distributed. This is because not all amount of claims forwarded to the company can be approved at the time of claims made. Provision must also be made for claims forwarded after the expired date of Islamic Insurance (Takaful) cover for the accident claim or damages that occur during the Islamic Insurance (Takaful) cover. This provision is known as claims incurred, but not recorded (IBNR). Reserve allocation is important to stabilize the financial position of the company. If the allocation is inadequately determined, the distribution of the profit and the actual loss incurred may not balance for a certain financial period and this may portray the company's disability. The need for this reserve allocation is in tune with Islam. As spoken by the Prophet Muhammad S.A.W: -

'Allah bless those who acquire wealth in good manner, then the wealth is spent accordingly and the remaining is saved for future use when hardship occur"[10]

- o *Re-Islamic Insurance (Takaful) – Like any other conventional insurance company, Islamic Insurance (Takaful) too faces difficulty in fulfilling all the financial claims made by the participants. The risk involved is great; therefore, there is a need for re-Takaful, the risk is redistributed, therefore, less financial burden on Takaful. Re-Islamic Insurance (Takaful) cost is determined to cover the same duration/period of cover as the original cover.*

- o *Family Islamic Insurance (Takaful) Revenue Account – under the family Islamic Insurance (Takaful) fund or life insurance, the excess Islamic Insurance (Takaful) installment as accumulated monthly and treated as fund at year-end. This excess is not treated as profit. The operator will appoint an actuary to evaluate the excess of fund and any profit declared will be distributed accordingly to the eligible participants.*

- o *The accounting concept and other additional basis are as follows:*
  - o *Basis of accounting*
    - ▪ *The financial statement is prepared according to*
      - ➢ *Going concern.*
      - ➢ *Consistency.*
      - ➢ *Accrual.*
    - ▪ *The operator maintains its record according to*

---

[10] Sahih Al-Bukhari

    - *Prudence.*
    - *Substance over Form.*
    - *Materiality.*
- *Income and expenditure recognition*
    - *The income and expenditure is recognized according to the approved accounting standard complying with the principles of Shari'ah.*
    - *Income is accounted for on accrued accounting basis. Unrealized income is differed and receipts in advance are treated as liabilities in the balance sheet.*
    - *Expense is accounted for according to the approved accounting standards.*
    - *Operating expenses is borne by the operator governed by Shari'ah requirement.*

5. Accounting Policies

Basis of accounting

The accounts are prepared under the historical cost conventions that are modified to comply with the principles of Shari’ah and comply with approved accounting standards.

Islamic Life Insurance (Family Takaful) Fund

The Islamic Life Insurance (Family Takaful) Fund is maintained in accordance with the approved requirements of the Takaful[11]. The reserve for the unearned Islamic Insurance (Takaful) contributions for the General and Group Family Islamic Insurance (Takaful) is computed using the 1/365th method.

Islamic General Insurance (General Takaful) Surplus

The Islamic General Insurance (General Takaful) Surplus is determined after deducting re-Takaful, reserve for unearned Islamic Insurance (Takaful) contributions and outstanding claims.

Claims

Provision is made for the full estimated costs of claims together with the related expenses less re-Islamic Insurance (Takaful) recoveries in respect of claims intimated but not paid at the balance sheet date. Any difference between the current estimated cost and subsequent settlement is dealt with in which the settlement takes place. Provision is also made for the cost of claims incurred but not reported (IBNR) at the balance sheet date.

Income Recognition

Income is accounted for an each basis. Unrealized income is deferred and receipt in advance is treated as liabilities in the balance sheet.

---

[11] Islamic Financial Services Act (Malaysia) 2013.

Investments

An investment in Malaysian Government Investment Certificate is stated at cost. Long term investment in quoted shares is stated at cost less provision for any permanent diminution in value and short term investment in quoted shares is stated at the lower of cost and market value determined on an aggregate basis. However, in Saudi Arabia, investment is stated at fair value according to International Accounting Standards[12].

Zakat

This represents tithes payable by the operator to comply with the principles of Shari'ah and as approved by the Shari'ah Supervisory Council.

6. Method of Islamic Insurance (*Takaful*) Accounting

Islamic Insurance (Takaful) manages and maintains three types of fund:

- Family Islamic Insurance (Takaful) Fund.
- General Islamic Insurance (Takaful) Fund.
- Shareholders Fund.

Financial statements for each type are prepared on interim and yearly basis.

Accounting of the Family Islamic Insurance (Takaful) Fund

- Income – there are two types of income generated from the family Islamic Insurance (Takaful)business:
  - o Islamic Insurance (Takaful) installment – income is accounted for an each basis. Therefore, the installment is recognized as income on the following date:
    - Collection date or
    - Effective date.

  All receipts in advance are treated as liabilities in the Balance Sheet.

  - o Investment income – investment income is accounted for on cash basis.
- Expenses – Family Islamic Insurance (Takaful) Expenses consists of following:
  - o Refund contribution.
  - o Re-Takaful.
  - o Depreciation.
  - o Death Claims.
  - o Maturity of Certificate.
  - o Certificate Surrender.
  - o Part Withdrawal.

---

[12] International Accounting Standards

Expenses are accounted for on accrual basis.

- Transaction Entry
  - A business transaction is recorded using the double entry system.
  - All transactions are recorded into general ledger according to the type of business and by a specific account date.
  - Installments paid for family and mortgage are recorded separately as Participants Special Accounts (PSA).
  - The installments collected are also recorded separately under 'New Business' and 'Renewal' in the financial statements.
- Profit Distribution/Insurance Operations Surplus – for family plans, the investment return is distributed in Malaysia in the ratio of 70: 30 between participants and shareholders. While in Saudi Arabia, the surplus is distributed in the ratio of 10:90 between the participants and the shareholders[13].
  - Financial Statements – financial statements for Family Islamic Insurance (Takaful) Fund is prepared according to the financial year. The main types of statements are shown as follows:
  - Trial Balance.
  - Profit and Loss Account/Statement of Insurance Operations and Accumulated Surplus for Family Islamic Insurance (Takaful) Plans.
  - Movement of fund.
  - Profit and Loss Account/ Statement of Insurance Operations and Accumulated Surplus for Group Family.
  - Revenue Account.

Accounting for Islamic General Insurance (General Takaful) Business

- General Ledger – the fund is managed under its own general ledger. This general ledger is supported by subsidiary and related records which includes:
  - Cash book.
  - Daily collection.
  - Re-Islamic Insurance (Takaful) register.
  - Investment listing.
  - Fixed asset register.
  - Bank reconciliation.

---

[13] Executive Regulation to the Law on Supervision of Cooperative Insurance Companies, SAMA, Saudi Arabia, 2005

- Income – there are two types of income generated from General Islamic Insurance (Takaful) Fund
    - Islamic Insurance (Takaful) contribution – income is accounted for on cash basis. Therefore, the contribution is recognized as income on the following date:
        - Collection date.
        - Effective date.

    Advance contribution is treated as liabilities in the balance Sheet. Refund contribution is accounted for on cash basis. Refund contribution is shown separately in the financial statement.

    - Investment income – investment income is accounted for on cash basis
- Expenses – *General Islamic Insurance (Takaful) expenses consists of the following:*
    - Refund contribution.
    - Re-Islamic Insurance (Takaful) outwards.
    - Claims admitted and paid.
    - Levy.
- Transaction entry – all business transactions are recorded into general ledger using double entry system. Transaction is recorded into general ledger by type of business and by account code. The Islamic Insurance (Takaful) contribution is also recorded by class of business such as fire, motor, miscellaneous, engineering, marine and aviation.
- Profit – profit/surplus from General Islamic Insurance (Takaful) business is derived from underwriting surplus and returns on investments of its Islamic Insurance (Takaful) fund.
- Financial statements – the financial statements for General Islamic Insurance (Takaful) fund is prepared according to the financial year-end. The types of statements in Malaysia are stated below:
    - Trial balance
    - Profit and Loss account
    - Revenue account

While in Saudi Arabia, the statements are prepared according to the International Accounting Standards as follows:

- Statement of Financial Position
- Statement of Insurance Operations and Accumulated Surplus
- Statement of Insurance Operations’ Cash Flows

Accounting for Shareholders' Fund

- General ledger – the accounting for shareholders' fund is maintained separately from the respective Islamic Insurance (Takaful) funds. All general ledgers are supported by the subsidiary ledgers and schedules. These includes:
    - Cash book.
    - Register of shareholders' fund.
    - Fixed asset register.
    - Investment schedule.
    - Financing schedule.
    - Bank reconciliation statement.

Income from shareholder's fund is derived from:

- Investment return – profit from family Islamic Insurance (Takaful) fund is accounted for in general ledger every month.
- Share of profit from Family Islamic Insurance (Takaful) Fund – it is accounted for in general ledger every month.

- Expenses – operating expenses for shareholders' fund are categorized into three main classes
    - Staff cost.
    - Establishment cost.
    - Administrative cost.

The above-mentioned expenses are accounted on accrual basis

- Transaction entry – all business transactions are recorded into account using double entry system. Transactions of businesses are recorded into general ledger by type of business and by account code.
- Financial statements – financial statements for the shareholders' fund is prepared as at financial year end and consists of the following reports:
    - Trial balance.
    - Profit and Loss Account.

While in Saudi Arabia, the statements are prepared according to the International Accounting Standards as follows:

- Statement of Financial Position.
- Statement of Shareholders' Operations.
- Statement of Shareholders' Comprehensive Income.
- Statement of Changes in Shareholders' Equity.
- Statement of Shareholders Operations' Cash Flows.

7. Accounting System

Islamic Insurance (Takaful) vs Conventional Insurance

Islamic Insurance (Takaful) business is run in accordance with Shari'ah principles. The benefits and responsibilities of participants and the operator are clearly stated in the contract. The most significant benefit stated in the agreement is the sharing of profit, according to agreed ratio between the participants and the Islamic Insurance (Takaful) operator. Therefore, accuracy in calculating the profit is most imperative so that the deal is fair to both sides of the contract. Islamic Insurance (Takaful) has taken extra precaution in its accounting and financial management over and above of practicing the existing conventional insurance accounting procedures. The accounting aspects considered are:

Cash basis

Under the conventional accounting system practice, accrued insurance premium is considered as income at the date of enforcement of the policy cover. Investment returns and other income are also treated as income. This means the profit supposed to be reported/calculated are actually 'on paper or unrealized profit' because there is no actual receipt of cash. Under the Islamic Insurance (Takaful) accounting practice, all Islamic Insurance (Takaful) installments/contributions as well as returns on investment and other income are treated as income only after actual cash has been received by the operator. This is marked by the issuance of the appropriate receipt. This practice is crucial for the meaningful implementation of the al-Mudharabah principle which forms the basis of the "aqad', where profits are shared between the participants and the Islamic Insurance (Takaful) operator. The sharing of profit for both parties are made monthly after the account is closed. However actual payment of such profit to eligible participants is made upon expiry or maturity of the period of Takaful. Profit can only be shared and distributed based on the actual receipt.

Technical reserve

Technical reserve is the unearned portion of Islamic Insurance (Takaful) contribution also known as Unearned Premium reserve. In Islamic Insurance (Takaful) accounting system, this reserve is calculated by using the 1/365th method. Under this concept, the Islamic Insurance (Takaful) contribution is treated as income after considering the actual number of days effected during the Islamic Insurance (Takaful) cover against the accounting period; the remaining unexpired number of days of cover is considered as reserve. The calculation of reserve using the 1/365 method is more accurate and equitable compared to 1/24 method used by the conventional insurance. This is because the 1/24 method is calculated by assuming the effective date is at the middle of the month. Whereas, the reserve using 1/365 as calculated according to the real effective date. Based on cash basis recognition, the technical reserve is calculated upon after collection received.

Cost of re-Takaful

Under the conventional insurance practice, reinsurance cost for the period of cover is recognized in the original policy cover. This practice complies with the matching accounting principle that match the receipt (income) with cost incurred during the same period. Under the Islamic Insurance (Takaful) accounting system, re-Islamic Insurance (Takaful) cost is considered as liability until the corresponding installment/contribution of the Islamic Insurance (Takaful) Plan or Schemes paid by the participant. But the cost charged to the income/revenue in installment, brings throughout the period of Islamic

Insurance (Takaful) cover when the contribution is fully paid by the participant whichever is earlier. By adopting this method, the expenditure account is monitored and projected in accordance with the amount received while the liability is recognized at once.

Surplus from family Takaful

Only the profit from the Family Islamic Insurance (Takaful) Investment Fund is shared accordingly between the participant and the operator. After deducting a portion of the investment profit for the company, the balance is credited into the individual participant's account on yearly basis. The yearly statement is forwarded to every participant. This method adopted by Islamic Insurance (Takaful) is obviously in contrast with the conventional insurance method. The latter treats the profits as the sole profit sum for the operator. The individual ledger is not credited with the profit. Under the conventional insurance method, the surplus of investment is transferred to the shareholders' fund as revenue but in Takaful, the operator has no right to take the surplus as the operator's revenue.

Surplus from general Takaful

Profit from General Islamic Insurance (Takaful) is shared according to a ratio, as agreed earlier between the participant and the operator. This profit is paid only to the entitled participants according to the Islamic Insurance (Takaful) contract. Should a loss occur in the business of General Takaful, the loss is borne by the participants. This is in accordance to the al-Mudharabah principles when losses should be borne only by Sahib-ul-mal or the provider of capital.

8. Accounting Treatments as Practiced in Different Models of Islamic Insurance (*Takaful*)

Ta'awuni Model (Co-operative Insurance)

The concept of *ta'awuni* was originated in Sudan and Saudi Arabia. It was first established in 1979 when the scholars realized that there is need for cooperation in insurance. Thus, came the idea that members should donate or give their contribution to the fund. Both the operators and contributors should acknowledge their rights and responsibilities to the fund. The profit surplus will be distributed to the participant. According to the rules in Saudi Arabia, 10% of surplus from insurance operations is distributed to the policyholders.

They are practicing the concept of pure *Mudharabah* in their daily transaction where it encourages Islamic values such as brotherhood, unity, solidarity and mutual co-operation. In pure *Mudharabah* concept, both the *Takaful* company and the participant will only share the direct investment income, in which the participant is entitled to a 100% of the surplus with no deduction made prior to the distribution. This model is applicable to life family *Takaful* as the fund is entirely distributed to the participants.

Let's consider the following example to illustrate how the Islamic concept of brotherhood, solidarity and mutual co-operation in pure *Mudharabah* concept is applied. **A** (a party) lends his money to **B** (operator) and **B** manages the fund sincerely with no intention for profit making or benefit.

The participant is also regarded as policyholder and thus, they have power of control and management. Islam always promotes us to help one another as long as it does not violate the rulings of *Shari`ah*.

> *"….And co-operate ye one another in righteousness and piety…."*[14]

It is very important to acknowledge that the contribution paid is actually based on the principles of *Tabarru` (ta'awun).* A *tabarru` (ta'awun)* concept is rather a one-way transaction in which once the contribution is made, the contributor has no right to take any benefits out of it. The fund is used for any participant who faces difficulties within the time period as agreed on insurance policy. When the participant contributes to the fund, he is indirectly applying the golden principle of 'bear ye one another's burden'.

However, not all companies comply with the recommendation to accept *ta'awun* as a basis for Islamic insurance. The constraint is due to poor fund for the initial capital, as nowadays nobody wants to invest something for free. When they contribute their money, they are actually expecting something for return i.e. financial reward or profit sharing.

Qardawi mentioned that none of those who buy insurance are conscious that the premium is for mutual help. Quote:

> *'As far as insurance companies-especially life insurance are concerned, they do not satisfy these conditions in any respect because:*
>
> *"The insured individuals do not pay the premium as donations; such a thought never occurs to them…"*[15]

Besides, Afzalur Rahman in his book, has described that it is incorrect to imply the principles of 'mutuality' in all insurances. He asks:

> *"How can all forms of insurance be mutual when this mutual character is actually unknown to the insurer and insured? What is the value of an economic interdependence between all the insured and between the insured and the insurer, of which neither of them is aware?"*[16]

Such question urges us to think more critically regarding the issue of true mutual co-operation.

Each contributor in *ta'awun* practice will share the profit and surplus and parties in the same group will receive equal benefit and advantages. For instance, A is a member of *Takaful* fund. Unintentionally, he met with an accident and claimed for indemnity to repair his car that cost him $1000. So, in this case, he will be entitled to receive his compensation and inculcate the profit sharing at the end of the year, in the case that policyholders fund achieved surplus from insurance operations. The existence of the *Takaful* company is just to help and assist the participants in reducing the losses due to the unexpected misfortune, disaster and all sorts of troubles.

The chart below shows the accounting flow in *ta'awuni* concept.

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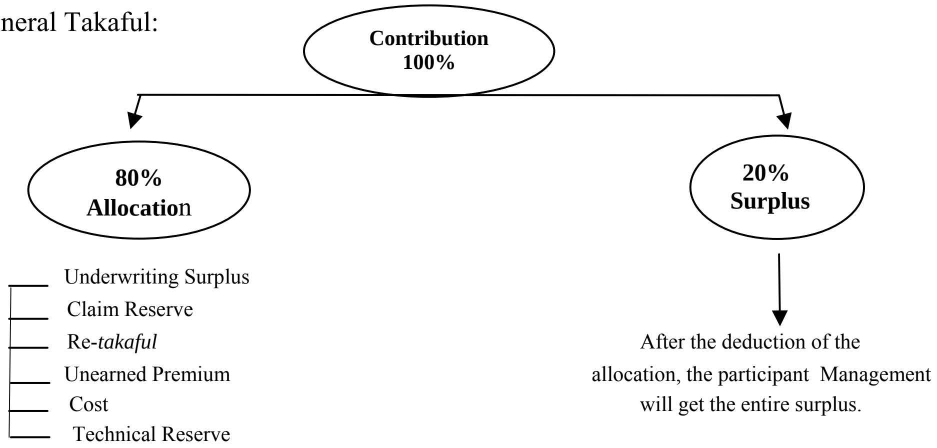
[14] Al-Qur'an 5:2

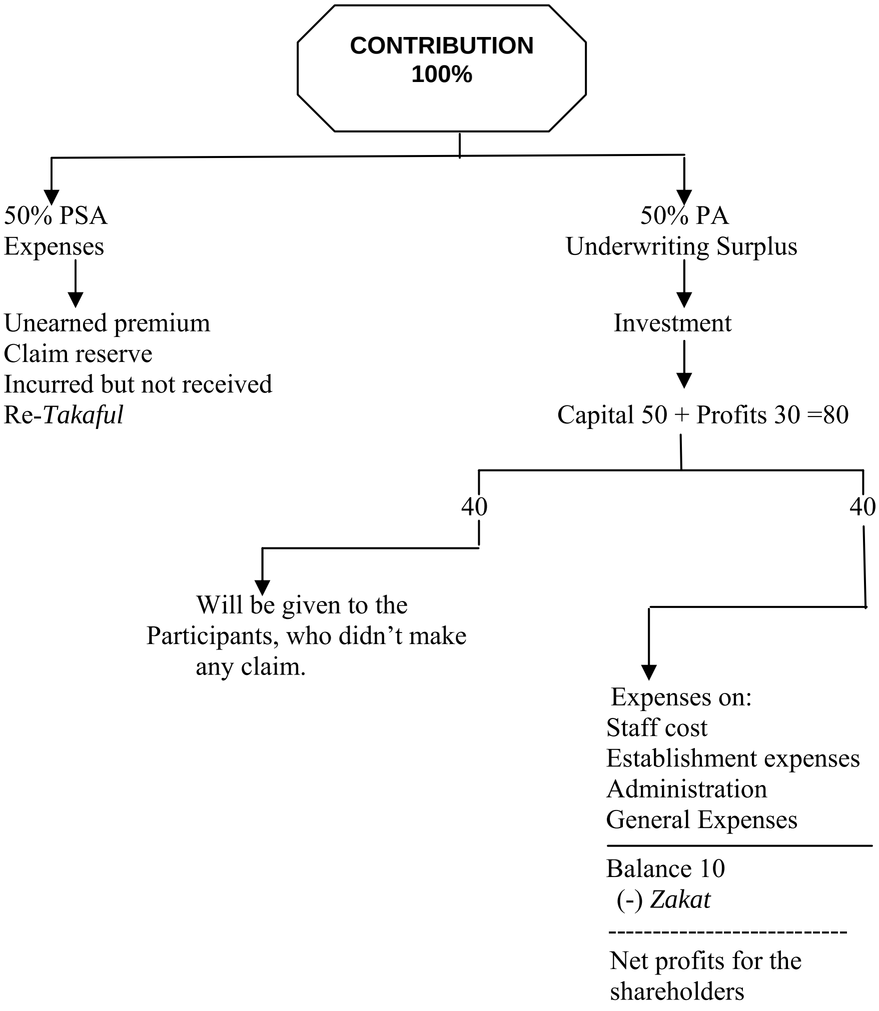
[15] The Lawful and The Prohibited in Islam (English Translation) P.27

[16] *Economic Doctrine of Islam* (Vol. 4 p. 224)

General Takaful:


Contribution
100%
80%
Allocation
20%
Surplus
Underwriting Surplus
Claim Reserve
Re-*takaful*
Unearned Premium
Cost
Technical Reserve
After the deduction of the
allocation, the participant Management
will get the entire surplus.

Family *Takaful* :


CONTRIBUTION
100%
50% PSA
Expenses
Unearned premium
Claim reserve
Incurred but not received
Re-*Takaful*
50% PA
Underwriting Surplus
Investment
Capital 50 + Profits 30 =80
40
40
Will be given to the
Participants, who didn't make
any claim.
Expenses on:
Staff cost
Establishment expenses
Administration
General Expenses
Balance 10
(-) *Zakat*

Net profits for the
shareholders

Ta'awuni model produces no issue pertaining the Participant Account (PA) and Participant Special Account (PSA), because the proportion is equally divided i.e. 50:50. The fund in PA will be used for long-term investment and profit gained from the investment will be shared within the family member. Meanwhile, in PSA, the fund is viewed as donation or *sadaqah* with intention to help the needy and the suffering people. Let's examine the chart discussed previously. The premium paid by the participant is $200; will be divided into two, PSA and PA respectively.

For PSA, the $100 collected will be deducted to the expenses i.e. unearned premium, claim reserve, incurred but not receive (IBNR) and re-*Takaful* cost. On the other hand, for PA, the amount of $100 will be used for the underwriting surplus. Underwriting is best described as the selection of the profitable insured. The role of underwriter is to decide whether to accept or reject the application for insurance. This is important in order to maintain a safe and profitable distribution of business for the company. The money will be invested in the project in conformity with Shari'ah and the gains will be distributed between the participant and the *Takaful* operator in equal ratio i.e. 50:50.

The $40 in participant's part, the money is reserved to those participants who did not make any claim during the period of confinement. While for the operator's part, the $40 will be subtracted for management expenses; for example, staff cost, maintenance, establishment expenses and administration and general expenses. The remaining will then be subtracted from *Zakat* family fund. At the end, the balance is actually the net profit for the operator or the shareholder.

Wakalah Model (Agency)

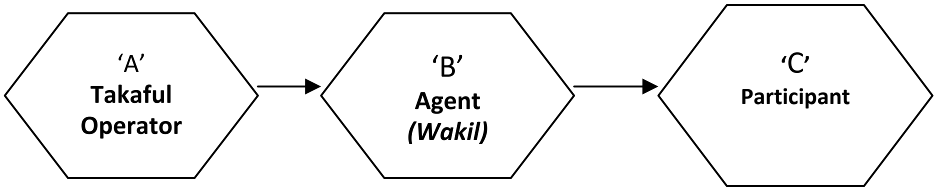
Al- Wakalah is a contract of agency. According to this principle, a person (A) will delegate his right or business to other people (B) to act as his representative. B is known as the agent or *Wakil*. The agent is responsible to contribute his/her knowledge, skills and ability in performing the task assigned because both A and B have a contractual relationship. In *Takaful* operation, a *Takaful* company as the insurer/operator has the right to employ the agent either on a full-time or part-time basis. The agent is presenting his/her company in which these selected people have to promote and develop the products offered by their company as they are bound to the contract of *al-Wakalah.*

An agent may also assist the *Takaful* company by collecting the fund. Since they are representing their company, it is very important for them to produce good image and build strong relationship in an effort to maintain good credibility and integrity of *Takaful* business.

In modern days, an increasing number of companies have embarked on implementing the concept of *Al Wakalah* in their *Takaful* operation. Most of the companies are operating in Bahrain, for example the Bahrain Islamic Insurance Co., Sharikat Takaful Al-Islamiyah, Global Islamic Insurance Co. and Takaful Islamic Insurance Co. Bahrain.

If we compare the modes of payment applied between both the Islamic and conventional insurance, we can see that they are basically different in several ways. In conventional insurance system, the agent will receive their commission by deducting some percentage contributed by the participants. For instance, Mr. X is appointed as an agent by one of the insurance company. In the agreement, it has been confined that Mr. X would get his commission of 20% from each participant. Let us say the contribution paid for each participant is $300, thus, he will receive a commission of $60 per participant.

However, Islamic insurance system believes that the above transaction is rather unfair. An agent is representing and working for the company. Therefore, he should be treated as an employee and the *Takaful* operator as the employer, who is obliged to pay amount of money in terms of salary to the appointed agent.



The above diagram explains how the *al-Wakalah* model is applied in *Takaful* fund i.e. General *Takaful* and Family *Takaful*. For example, **A** is the *Takaful* operator, **B** works as an agent or *Wakil* and represents **A** and **C** are the participants or policyholders of the *Takaful* business. Take note that **C** is obliged to pay his contribution (premium) to **A**. However, **C** could give his contribution to **B** as **B** has been authorized to collect the contributions not only from **C** as well as other participants. The contribution collected will then be pooled into the *Takaful* fund. The fund will be managed by **A** based on the principles of *Mudharabah* and *tabarru`*. Thus, it can be concluded that all participants are actual owner of the fund.

General *Takaful* Fund

Before A wants to start managing the fund, A will first deduct some amount out of the PSA account on the basis of *tabarru`* for management and services expenses. The remaining balance will be deducted to allocate costs i.e. unearned contributions, claim reserves, technical reserves, re-*Takaful* cost and Incurred But Not Reported (IBNR) costs. The balance is called underwriting surplus. This surplus will be used for investment that is not violating the rulings of *Shari'ah.* Profits obtained will be distributed between the shareholder and participants who have not made any claim during the policy time period. Normally, it will be allocated equally 50: 50.

Example of Calculation

Premium Paid	$ 200
(-) Management costs	$ 100
	$ 100
(-) Allocation Costs	$50
Underwriting Surplus	$ 50

→ Profit from investment
Are divided into 2:

50% (Shareholders)	50% Participants (*Who do not claim yet*)

Life / Family *Takaful*

Two types of accounts involve in this fund, which are the Participant's Account (PA) and Participant's Special Account (PSA). It is upon the operator, A, to manage both accounts according to the principles of *al-Mudharabah* and *Tabarru`* respectively. The fund pooled from the contributors will then be deducted to the management costs. Balance from this amount is separated into PA and PSA.

For PA, when no claim is made by B, then he/she is entitled to get an accumulated contribution paid together with profits. However, for PSA, participants are not entitled to get the benefits as it is for allocation costs i.e. IBNR, unearned premium and etc.

Example of Calculation

Contribution Paid	$ 200	
(-) Management costs	$ 100	
	$ 60	→ **PA account - 95%** (if no claim yet, accumulated contribution + Profit)
		→ PSA account - 5% (for allocation costs)

Tijari Model (Business / Commercial)

The practice of *Takaful* operation in Malaysia is actually based on Malaysian *Tijari* Model**.** This model is divided into two different parts. Where one is general *Takaful* and the other is life or family *Takaful*.

Modified *Mudharabah* model is the second model. It includes the investment income that is put back into the *Takaful* fund. The surplus that is developed from the *Takaful* fund is shared upon the *Takaful* companies and its participants. This second model is applicable to the General *Takaful* business in which deduction of expenses is taken into consideration. The rationale is due to a short-term contract and the risk inherent. The second model is very competitive, but by using the first model, it would lessen the competition. The *Takaful* Company would have to charge more premiums and higher contributions just to cover its expenses. The operational expenses can always be deducted, but the whole contribution charge will remain at a high rate.

There are issues regarding reasons of deducting operational expenses. Some people claim that this is not parallel with the *Shari'ah*'s rulings due to disagreement among scholars that are in different schools of thoughts. There are suggestions to solve this issue by adopting the principles of *'Talfiq'*. One suggestion is that the principles of *Talfiq* should not stick to a school of thought without understanding the rationale behind new orders.

Claim

Briefly, two steps are involved in the settlement of a claim. First step is either payable or not payable, but it is divided into four different parts. The first part is where the policy and certificate is enforced, either expired or not. Obviously, knowing that the certificate is expired, the participant cannot whatsoever claim it. The second part includes if the risk is covered or not covered. The third party is involved in this particular situation. This person who is chosen as a trustee would be the one to distribute the claimed benefits among the legal heirs of the deceased participants. This event would be in accordance with the principles of *Faraidh* (inheritance). The cause of death, being natural, accidental, or even lawful is not important because it is the will of *Allah s.w.t.*, Who is the only one that determines the death of all His creatures. The following verse from the Holy Qur'an provides proof of such statement.

> *"Nor can a soul die except by Allah's leave, the term being fixed as by writing"*[19]

The third part is warranty, which means that there are limitations on claims that are based on *Takaful* companies regulation. The last part is excess. The objective of excess is to avoid the small claims that are made by the participants. Here is one example, the amount of excess is fixed at $200, if there is an accident and the participant lost $ 1000, the company will only pay $800.

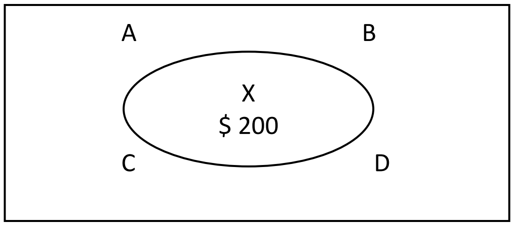
The second step is known as Quantum. It is divided into two. One is either adequate or not and other conditions such as self-insurance condition, but the main purpose is to actually avoid excess in claims.

Accounting Treatment

The *Takaful* industry is relatively newer than plain insurance policy. The insurance industry has its own standards, at least in individual countries. An example is in the accounting standards area. In Malaysia, income has been acknowledged on accrual bases. However, for *Takaful* operators in Malaysia, namely Syarikat *Takaful* and MNI *Takaful*, income is accounted and recognized on cash basis.

Syarikat *Takaful* and Bank Islam Malaysia Berhad (BIMB) will only accept shares and distribute profits if the income is actually realized. MNI *Takaful* argues that accrual basis could also be used. This is based on the Hadith regarding estimates on the quantum i.e. Zakat on dates.

Operational Sketch



The *Tijari* model explains about the *Takaful* company and policy, where **X** is the main operator of the company and it acts as an entrepreneur, or *Dharib*. A, B, C, and D are the participants for the *Takaful* policy called *Shahibul Maal*. Participants that have hold of the *Takaful* policy would have to pay on a certain agreed amount of contribution (maal), which should be declared in their contract to X. The Dharib, or X, has the authority to manage this *Maal* according to Shari’ah rules.

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[19] Al-Qur'an 3:145

General *Takaful* Fund

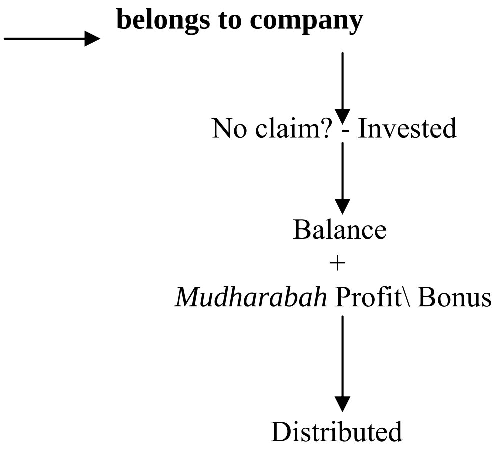
The contribution paid are regarded as al- tabarru’. Therefore, the participant has no right to claim the fund since it is already treated as donation. However, the participants are eligible to claim for their rights if it is upon the defined risk on a subject matter. The deduction made is for allocation costs i.e. re-*Takaful*, claim reserves, technical reserves, IBNR costs and unearned contributions. Take note that Tijari model is based on business instead of service charge.

All contributions paid by participants are directly deducted for allocation. The balance left is under the operators’ responsibility and the term given is the amount of underwriting surplus. The underwriting surplus will be invested in lawful investment project if there is no claim made by donors under the principles of Mudharabah financing technique. The profit from the investment will then be distributed accordingly between the *Dharib* (*Takaful* operator) and the *Sahibul maal* (donor).

Example of Calculation

Contribution Paid	$ 200	
(-) Management costs	$ 100	- Re-*Takaful* - Unearned Contribution - Technical Reserved - Incurred but not Reported - Claim Reserved

Underwriting Surplus **$ 100**



Life / Family *Takaful* Fund

There are two different accounts involved. The first one is known as the Participant's Account (PA) while the other is called Participant's Special Account (PSA).

The PA is managed according to the principles of *al-Mudharabah* financing or profit and loss sharing technique. It means that any profit gained from the lawful investment will be shared according to an agreed ratio between the shareholder and the participant. The scenario will be slightly different in terms of loss in which only the participants bear the incurred losses and the shareholders will receive nothing from the services rendered.

Whereas for PSA account, the *tabarru`* principles have been applied and for that reason also, the participants are not allowed to make any claim if there is no loss incurred within the maturity period of the *Takaful* policy. After deducting the allocation costs, the remaining (underwriting surplus) will be invested in business in conformity with the *Shari`ah*. The amount left is allocated for the shareholder and *tabarru'* fund.

Example of Calculation

Contribution Paid → $ 200 95% (PA)

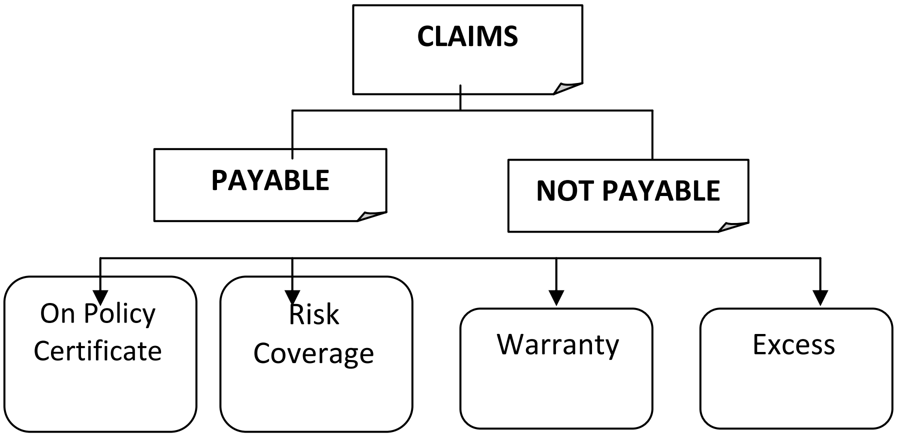
- Shared by shareholder and participants

Who not make claim

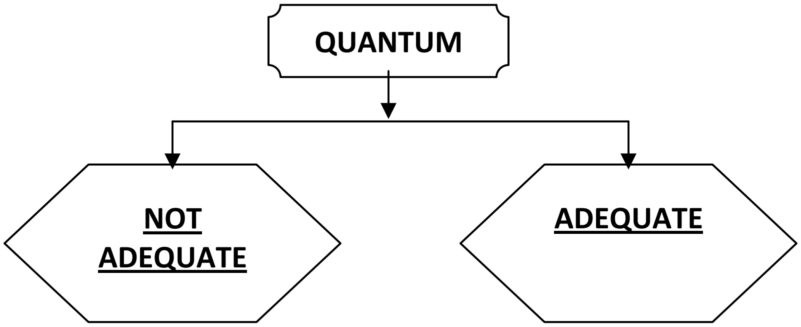
→ 5% (PSA)

- (-) Allocation costs
- Underwriting surplus
- Balance shared by - Shareholder
- Tabarru' Fund

1st Step



2nd Step



Waiver of Confusion as to Different Models

There are three different operational models of *takaful* namely : *Tijari, Ta'awuni* and *Wakalah*, which are adapted in the global economy, and each of these models have their own strong and weak points. There is no exact basis on which any of these models can be considered distinctive from others, because all of these function on many factors which are suitable to the country where they are being practiced.

Conclusion

The basic concept of Islamic Insurance (Takaful) is the provision of insurance as a form of business in conformity with Shari'ah and is based on the Islamic principles of al-Islamic Insurance (Takaful) and al-Mudharabah. Al-Islamic Insurance (Takaful) means the act of a group of people reciprocally guaranteeing each other, while al-Mudharabah is the commercial profit sharing contract between the provider of fund for a business venture and the entrepreneur. Under the Family Islamic Insurance (Takaful) Business, there are various plans designed for the participation of both individuals and corporate bodies. These plans are essentially long-term al-Mudharabah contracts which encompass saving as well as cover of mutual financial aid and assistance in the event of the untimely demise of a participant. The General Islamic Insurance (Takaful) Business, on the other hand provides various general Islamic Insurance (Takaful) schemes as a form of cover or protection against material loss or damage arising from catastrophes, disasters or misfortunes inflicted upon properties or assets such as buildings, houses, motor-vehicles, and stock-in-trade belonging to the participants.

Takaful system is an alternative to the existing conventional insurance. However, these understandings about the system are very important because it may help the people to appreciate the existence of the system. The discussion about the models applied in countries like Malaysia (*Tijari*), Saudi Arabia (*Ta'awun*) and Bahrain (*Wakalah*) hopefully will give more knowledge to the communities in the world. Practicing *Takaful* from all these models plays the same goals and functions, which are getting the pleasure of Allah (s.w.t). In short, these three models bring the principles of co-operation, solidarity, and brotherhood. Let us say, the *Ta'awun* model which is being practiced by Saudi Arabia and Sudan applies the concept or principles of assigning funds to the operator and the operator will manage their funds without seeking or looking for any benefit. Furthermore, the *Wakalah* model, which is being practiced by Bahrain, contributes to the same principles. By building up a good relationship between the company and the participants, the agent or representative may help in strengthening the brotherhood among them. Islam as the perfect religion encourages all Muslims to build the relationship among them and strengthen it. The mutual co-operation concept can best be explained by the *Tijari* model which is being practiced by Malaysian *Takaful* companies. Malaysia is practicing the concept of *Mudharabah* (profit and loss sharing) accounting technique.

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Sensitivity of Interbank Overnight Lending Rates and the impact on Banks' Returns: An Asymmetric GARCH Approach

By
Muhammad Asghar Khan[*]

Abstract

This study employs an asymmetric GARCH model to investigate the relative sensitivities of lending rates and their impact of bank stock return distribution. Bank returns are instruments of money market which are affected by lending rates. This study analyzed the instability of lending rates and their impact on the bank returns. Asymmetric approach of GARCH is used to analyze the data. Two portfolios are formed representing the conventional and Islamic banks. Both conventional and Islamic banks have been taken from banks in Pakistan. The sample includes weekly, monthly, quarterly and semi-annual data over the 2012-2013 period. 3 banks (HBL, MCB and Allied) are selected for conventional portfolio and 3 banks selected for Islamic portfolio are Askari Islamic, Meezan and Bank Islami. The findings indicate that short term and long-term interest rates and their volatilities do exert significant and differential impacts on the return of bank portfolios. These findings have implications on bank hedging strategies against the interest rate risk, regulatory decisions concerning risk-based capital requirement, and investor's choice of a portfolio mix.

Keywords: GARCH, OLS**,** E. views software**,** Bank return volatility, Lending rate instability**,** Islamic and conventional Bank's portfolio of Pakistan.

Chapter 1

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Introduction:

Interest rate risk is one of the most significant risks which are faced by the banks and life insurance companies due to mismatch between the maturity of assets and liabilities and interest rate volatility. (Lloyed and shick 1977; Flanner and james 1884).

Borrowing Interest of banks is an important indicator for the financial stability and is also an important economic indicator. Different financial institutions (Banks, governmental agencies and other multinational companies) are influenced by the changes in interest rates (Cociub, 2011). Large Asian banks with higher market concentration extract higher interest margin through differentiated loan and depository products (Perera, 2010). Return generation Process is effected by Short term and long term interest rate volatility. These interest rate volatilities highlight bank hedging strategies against interest rate risk and investors choice of portfolio mix (Elyas Elyasiani, 2000).

Tugba Dayioglu researched on Forecasting Overnight Interest Rates Volatility with Asymmetric GARCH, model. Findings of the research indicated that short term and long term interest rate and their volatilities do exert the differential impact on returns of banks. (Dayioglu, 2012). Research sensitivity of US bank stock returns to interest rates and exchange rate changes elaborated that market index return cause variation in stock return at individual bank level and portfolio level (Joseph, 2006). Deqinj Diane Li and Kenneth Yung research on REIT between two areas, Pacific and Atlantic. Their Research found the volatility transmission between Pacific and Atlantic regimes. REIT return volatility transmission arises between two regions (Diane Li, 2007).

(Emma M.Iglesian and Garry D.A.Phillips in 2012) worked on “another look about the evolution of the risk premium by using VAR-GARCH-M model”, risk premium as IV and VAR-GARCH-M model as DV in Spanish and German market. The result indicated that in Spain, there existed a time-varying risk premium which is dependent on volatility. The evolution of Spanish interest rates in the period leading up to the European monetary union has been more influenced by uncertainty in the German economy than in the Spanish one.

Short term and long term interest rate and their volatilities do exert the differential impact on returns of banks (Dayioglu, 2012). Sensitivity of US bank stock returns to interest rates and exchange rate changes showed that market index returns causes variation in stock return at individual level and portfolio level (Joseph, 2006).

Diebold and Sharpe (1990) and Hutchison (1995) highlighted that when policymakers announce an adjustment to the interest rate, banks may actually adjust their lending rates by applying Garch model to help determine what stocks will potentially provide higher returns, as well as to forecast the returns of current investments to help in the budgeting process. There may be a tendency for them to raise their lending rates much more rapidly when market interest rates are rising, as compared to the speed at which they are prepared to lower their lending rates when the market rate is declining.

A comparison of the trends in the lending rate shows that a much greater range is invariably found for increases in the lending rate than for reductions. One exception is the examination of lending and deposit rates undertaken by Thompson (2006), who indicated that it was only the prime lending rate which was found to adjust to discrepancies in the spread; indeed, banks may well set their lending rate according to a certain “mark-up” relative to the deposit rate. However, if such a mark-up becomes too high or too low, the marketplace will place pressure upon the banking industry to adjust back to some “normal” or equilibrium spread.

Problem statement

“How variations in lending rates affect the sensitivity of bank’s returns and its analysis through GARCH model”.

Scope:

Focusing on lending behavior Established theories indicates that variations in lending rates affect the sensitivity of bank’s returns (Elyas Elyasiani, 2000). This study will focus on “the impact of variation in overnight lending rates on bank’s return GARCH Model (Cociub, 2011) because in Pakistan bank’s returns are very sensitive and volatile (Khan, 2008) This study is taking overnight lending rate data as compared to previous studies on the lending rates that have been studied in US and Romania (Cociub, 2011) while in Pakistan mostly studies have been done on quarterly rates. This research will analyse overnight lending rates and daily bank’s returns.

Objectives:

The Objectives of the study are to:

- Find out the volatility of overnight lending rate.
- Study the volatility of Bank’s returns.
- Find out the impact of overnight lending rates on banks’ returns.
- Identify the time series analysis along with the behavior of Interest rate and volatility in Banks’ return.

Chapter 2

Literature review:

Lending rate is rate of interest paid while borrowing money from bank or financial institutions. Deposit rate is amount of money paid by bank or financial institutions on cash deposits. GARCH model is the generalized auto regressive hetero skedastic model. It is the model used by banks or other financial institutions to estimate the volatility of stock returns. This information is used by banks to help in determining what stocks will potentially provide higher return as well as to forecast the returns of current investments to help in the budgeting process.

Lending rates:

Research has been done in studying lending activities of various banks. Some opinions deliberated on the factor responsible for banks willingness to extend much credit to some sector of the economy, while some discussed effect of such extension of credits on productivity and output.

Felicia (2011) used regression analysis to investigate the determinants of commercial banks lending behavior in Nigeria. The study discovered that commercial banks deposits have the greatest impacts on their lending behavior by using GARCH model.

(Dayioglu, 2012) worked on overnight interest rate volatility using asymmetric GARCH models. Monthly data from 2000 to 2011 for Turkey and USA. Interest rate as IV and leverage effect as DV. The findings highlighted that interest rate volatility increased and maximized till 2008, and stabilized later on.

(Cociub, 2011) studied the overnight interest rates in Romania, Hungry and Euro Zones. GARCH Model was applied to analyze the difference in the money market and volatility. Monthly data from 2005 to 2011 was used. Co integration of three interest rates was checked. It had been observed that market experience high volatility in 2007 than usual.

(Ashima Goyal, 2010) researched on GARCH analysis of exchange volatilities and the effectiveness of central bank actions. Dependent variable is GARCH Analysis and independent variable is exchange rate volatility and the effectiveness of central bank actions. ARCH and GARCH Models have been used in this regard. This research was applied on Indian market and secondary data was used. Result was deduced that the quantitative interventions have reverse effects over long period. Interventions increase volatility while changes in reserve requirements decrease volatility in the short period but raised it over time.

The Deposit interest rate (%) in Pakistan was last reported at 8.15 in 2010, according to a World Bank report published in 2012. Deposit interest rate is the rate paid by commercial or similar banks for demand, time, or savings deposits. The Lending interest rate (%) in Pakistan was last reported at 14.42 in 2011, according to a World Bank report published in 2012. Lending interest rate is the rate charged by banks on loans to prime customers.

The Interest rate spread in Pakistan was last reported at 5.90 in 2010, according to a World Bank report published in 2012. Interest rate spread is the interest rate charged by banks on loans to prime customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits. The Real interest rate (%) in Pakistan was last reported at -3.80 in 2011, according to a World Bank report published in 2012. Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator.

Stock return:

(Kaufmann, Teresa, Valderrama, 2003) researched on The Role of Bank Lending in Market-Based and Bank-Based Financial Systems. They used Theoretical models with Role of Bank Lending Market-Based as independent variable and Market-Based Financial Systems as dependent variable. Their research finds out that Bank-Based Financial Systems credit markets acting as shock propagators and having non-linear effects on the real economy. In bank-based systems the effects of shocks are smoothed, while in market-based systems we observe an amplifying effect during favorable economic conditions.

(Leanart F.Hoogerheide,David Ardia and Nienke Corre in 2011) did research on density prediction of stock index returns using Garch model: frequentist or bayesian estimation?. Dependent variable is Garch model and independent variable is density prediction of stock index returns. Garch model have been used in this regard. The result showed that no significance difference is found between qualities of whole density forecasts, whereas the Bayesian approach exhibits significantly better left-tail forecast accuracy.

Relationship between stock return and lending rates:

(Elyasiani, 2004) analyzed the bank stock return volatilities to the long and short term interest rates. They used Multivariate GARCH model for research. Interest rate and stock return are selected as independent and dependent variable respectively. Daily data from 1988-2000 is used for analysis purpose. Market selected was Philadelphia. Three categories of banks that are central, small and large banks are observed. Result shows that return is negatively sensitive to interest rate and is portfolio specific.

(Chu-Sheng Tai in 2000) observed the time-varying market, interest rates and exchange rate risk premia in the US commercial bank stock returns. Independent variable is time-varying market, interest rates and exchange rate risk premia whereas dependent variable is commercial bank Stock returns. They applied three factor model and multivariate GARCH approach. Results indicated that volatility of exchange rates after the advent of the flexible exchange rate system in the 1970's and the increasing globalization of the international markets have created an additional source of uncertainty and risk for firms operating in an international environment.

GARCH Model:

(Debasish, 2009) used GARCH model to analyze the volatility in National Stock Exchange before and after the trading. The GARCH analysis assured that no structural changes occur after the introduction of future trading on Nifty.

Elyasiani worked on bivariate GARCH model in 2003 (Elyasiani, 2003). Banks stock return is compared with the interest rate, exchange rate and spillover effect for U.S, Japan and Germany. The research proved that the first moment is effected by the exchange rate while the second moment is effected by the interest rate. ARCH and GARCH models specify the conditional variance as a function of the past shocks allowing volatility to evolve over time and permitting volatility shocks to persist.

(Adrian Pagan ,1996) analyze the “econometrics of financial markets”. Their research applied univariate and multivariate GARCH approach taking econometrics as IV and financial market as DV. The result showed that statistical modeling approach is dominant in the analysis of financial data particularly when focus is a univariate one. The situation with multivariate modeling differs in that theoretical models have informed decisions about how to link the mean behavior of variables, although the explanation of co-movements in volatility is still the province of statistical models.

In this research paper, we investigate that the time-varying risk premium can explain a substantial share of UIP deviations in both economies based on ARCH/GARCH-M analysis. Finally, to analyze the source of deviations from the UIP condition, we measure the contribution of the 19 shocks on the historical decomposition of excess currency returns and find that risk premium shocks are the main determinant of the deviations from the UIP condition in the U.S./Brazil model while they have a negligible effect on the deviations in U.S./Euro area model. We find that the results are consistent with the idea that the risk premiums are to be more pronounced in inherently riskier emerging market economies. Comparing with the earlier results based on monthly data however, we find that this conclusion can only be drawn if a quarterly dataset is used. While time-varying risk premium explains excess currency returns in advanced economies only at the monthly frequency, it can explain excess currency returns in emerging market economies at both the monthly and the quarterly frequency**. (Uluc Aysun, Sanglim Lee)**

Chapter 3

Methodology:

This study is based on asymmetric (Dayioglu, 2012) GARCH, an acronym meaning generalized auto regressive conditional hetero skedasticity model to find out time series overnight lending rate volatility and volatility of daily banks return. Annual time lags were used for time series analysis (Elyasiani, 2004).

This empirical study is based on secondary source of data (SBP, KSE and overnight from IMF) and this research is quantitative in nature.

(Dayioglu, 2012) observed the data on monthly basis from 2000-2011 in Turkey and USA market. (Ashima Goyal, 2010) observed the data on daily and monthly basis from 2005-2008 in Indian market. (Elyas Elyasiani, 2000) observed data on daily basis from 1988-2000 in Philadelphia.

- **Hypothesis:**

$H_1 =$ Rate of change of overnight lending instability ≠ zero

$H_1 = \beta \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5$

$H_2 =$ rate of change of bank returns instability ≠ zero

$H_2 = \alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq \alpha_5$

$H_3 = \gamma_1 \neq 0$

- **Model:**

GARCH Model Equation:

$$\sigma_t = \sqrt{\omega + \sum_{i=1}^{p} \alpha_i a_{t-i}^2 + \sum_{i=1}^{q} \beta_i \sigma_{t-i}^2}$$

Abbreviation of variables:

ώ̣ = conditional mean
□ = rate of change
έ = stochastic error

Banks stock return volatility (BSRV) = $\alpha + \Upsilon$ *(overnight lending rate volatility) + error EP

$$R_\beta = \alpha_o + \Upsilon_1 (LRV) + e$$

This is used to check volatility and the impact. OLS estimation method is used. Prior studies have used OLS estimation methods with results that presence of GARCH effects will affect estimation efficiency (Joseph, 2006).

Models of Conditional Hetero skedasticity time series analysis have a very important role in today's financial risk management and its attempt to make financial decisions on the basis of observed historical data and fluctuations and variability of bank returns can be predicted and pre-determined model to check the market return and volatility on stocks. It is used to characterize and model observed time series. It was given by (Bollerslev, 1986).

- **Data:**

Lending rates and bank returns are used as variables. Two types of portfolio are selected for this study (Baum, 2004) consisting on Islamic and conventional banks.

Judgmental sampling is used as exercised in base paper. Within the judgmental sampling, banks are selected based up convenient sampling. Banks are selected based on total exposure in overnight interbank transactions. (Joseph, 2006).

This papers used 1 annual time lag for time series analysis (Okoye, March, 2013), (Elyas Elyasiani, 2004).

Data Analysis:

SPSS is used to check the normality of our data. We have not utilized E.view because our data limit is two years consisting of 490 daily values and it becomes difficult to measure the exact value of normal distribution of 490 values of each variable in IView so we have used SPSS to make a better analysis. After checking whether the data is normally distributed or not we will apply the GARCH model to check the volatility of one variable from previous year's data. The table of descriptive statistics shows the values of statistic and standardd error at Skewness and Kurtosis.

Descriptive Statistics

	Range	Std. Deviation	Variance	Skewness		Kurtosis		Z-score
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
WeeklyLR	4.92	1.24952	1.561	0.294	0.11	-1.165	0.22	-5.295
MonthlyLR	881.64	39.55037	1564.232	22.08	0.11	488.03	0.22	2218.318
QuarterlyLR	920.36	41.57587	1728.553	22.086	0.11	488.207	0.22	2219.122
SemianuallyLR	3.04	1.18419	1.402	0.608	0.11	-1.465	0.22	-6.659
Valid N (list wise)								

Distribution of Lending rates:

This figure of negative -5.295 shows that the data for weekly lending rate is not normally distributed as it does not fall between the standard range for kurtosis that is -1.968 to 1.968. The figure of 2218.318 shows that the data for monthly lending rate is not normally distributed as it does not lie between the standard range for kurtosis that is -1.968 to 1.968. So, we will take the log of this data and then take the derivative that will further proceed towards applying the GARCH model. The figure of 2219.122 shows that the data for quarterly lending rate is not normally distributed as it does not fall between the standard Range for kurtosis that is -1.968 to 1.968. It lies outside this range so firstly the log of this data would be taken and then the derivative will be calculated before applying GARCH model to check the volatility. The figure of negative 6.659 shows that the data for semiannually lending rate is not normally distributed as it does not lie between the standard Range for kurtosis that is -1.968 to 1.968.

Application of GARCH model:

Method: ML - ARCH (Marquardt) - Normal distribution

Sample: 1/02/2012 12/31/2013

Included observations: 490

GARCH = C(1) + C(2)*RESID(-1)^2 + C(3)*GARCH(-1)

Weekly lending rate:

Dependent Variable: WEEKLY

Variable	Coefficient	Std. Error	z-Statistic	Prob.
		Variance Equation		
C	5.008934	403.7609	0.012406	0.9901
RESID(-1)^2	1.111596	4.614763	0.240878	0.8096
GARCH(-1)	-0.164946	5.421953	-0.030422	0.9757

R-squared	-60.579898	Mean dependent var	9.715490
Adjusted R-squared	-60.454225	S.D. dependent var	1.249522
S.E. of regression	9.795349	Akaike info criterion	7.384039
Sum squared resid	47014.94	Schwarz criterion	7.409719
Log likelihood	-1806.090	Hannan-Quinn criter.	7.394124
Durbin-Watson stat	0.001082		

In GARCH model, adding the constant, residual and GARCH value obtained from the table should give a value near to 1.0. But the value of the analysis of weekly data is 5.955584 which show a strong deviation from the standard value of 1. This means that weekly lending rates have high volatility and instability in data and observations. Durbin Watson test value should be nearest to 3.0 while the value of the above analysis is 0.001082 which is far away from the standard value. This value shows that our data has instability and variation in it.

Quarterly lending rate:

Dependent Variable: LOG (QUARTERLY)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
		Variance Equation		
C	0.006041	1.663067	0.003633	0.9971
RESID(-1)^2	0.002238	0.021189	0.105598	0.9159
GARCH(-1)	0.996132	0.292966	3.400156	0.0007

R-squared	-17.572650	Mean dependent var	2.326820
Adjusted R-squared	-17.534747	S.D. dependent var	0.555633
S.E. of regression	2.392109	Akaike info criterion	4.589148
Sum squared resid	2803.872	Schwarz criterion	4.614828
Log likelihood	-1121.341	Hannan-Quinn criter.	4.599234
Durbin-Watson stat	0.101322		

In GARCH model, adding the constant, residual and GARCH value obtained from the table should give a value near to 1.0. But the value of the analysis of quarterly data is 1.004411 which shows a weak deviation from the standard value of 1. This means that quarterly lending rates have low volatility and instability in data and observations. Durbin Watson test value should be nearest to 3.0 while the value of the above analysis is 0.10132 which is far away from the standard value. This value shows that our data has instability and variation in it.

Semi annually lending rate:

Dependent Variable: SEMI_ANNUAL

Variable	Coefficient	Std. Error	z-Statistic	Prob.
		Variance Equation		
C	1.503326	4138.054	0.000363	0.9997
RESID(-1)^2	1.186790	141.0219	0.008416	0.9933
GARCH(-1)	-0.212327	140.4669	-0.001512	0.9988

R-squared	-72.097886	Mean dependent var	10.04471
Adjusted R-squared	-71.948707	S.D. dependent var	1.184186
S.E. of regression	10.11413	Akaike info criterion	7.450964
Sum squared resid	50124.90	Schwarz criterion	7.476644
Log likelihood	-1822.486	Hannan-Quinn criter.	7.461050
Durbin-Watson stat	3.47E-05		

In GARCH model, adding the constant, residual and GARCH value obtained from the table should give a value near to 1.0. But the value of the analysis of semiannually data is 2.477789 which show a weak deviation from the standard value of 1. This means that semiannually lending rates have high volatility and instability in data and observations. Durbin Watson test value should be nearest to 3.0 while the value of the above analysis is 3.47E-05 which is far away from the standard value. This value shows that our data has instability and variation in it.

Impact of Instability of lending rates on Bank returns of Meezan bank:

Method: ML - ARCH (Marquardt) - Normal distribution

Sample: 1/02/2012 12/31/2013

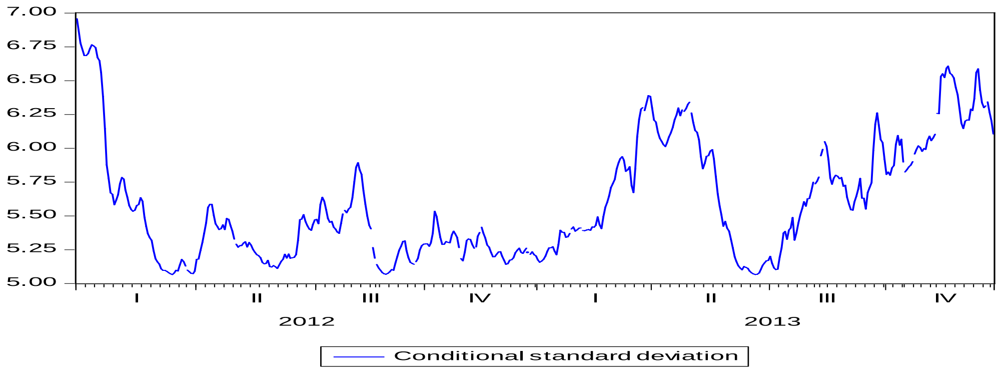
Included observations: 490

Dependent Variable: Meezan bank return

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	54.72646	3.138822	17.43535	0.0000
WEEKLY	0.600348	0.709637	0.845993	0.3976
QUARTERLY	2.27E-06	0.047170	4.81E-05	1.0000
SEMI_ANNUAL	-3.069707	0.763029	-4.023052	0.0001

Variance Equation				
C	10.22146	50.60023	0.202004	0.8399
RESID(-1)^2	0.150000	0.792876	0.189185	0.8499
GARCH(-1)	0.600000	1.958530	0.306352	0.7593

R-squared	0.356694	Mean dependent var	29.72804
Adjusted R-squared	0.352723	S.D. dependent var	4.949197
S.E. of regression	3.981803	Akaike info criterion	5.756169
Sum squared resid	7705.410	Schwarz criterion	5.816089
Log likelihood	-1403.261	Hannan-Quinn criter.	5.779701
Durbin-Watson stat	0.023740		



From the above analysis, C is showing the instability in the bank returns by the impact of instability of these variables. We conclude that the probability of weekly instability is greater than 5% which means that the data in insignificant and it has no impact on the bank returns of MEBL. Probability of quarterly instability is greater than 5% which means that the data is insignificant and it has no impact on the bank returns of MEBL. Probability of semiannually instability is less than 5% which means that data is significant and it has an impact on the bank returns of MEBL.

As the value of variance equation is deviating from 1 which is 2.441 so we conclude from the analysis that variance equation is creating an impact on the returns of MEBL. If the number of values in a sample increases than there will be a less difference between R-square and adjusted r square which shows that it has less impact on the bank returns. As we have the number of values is 490 it means it has the less impact on the return of MEBL. The data is significant at semiannually instability.

The value of Durban Watson test should be equal to 3.In this the value is 2.37 which is approximately equal to 3 so we conclude that the data is significant.

Bank Islami

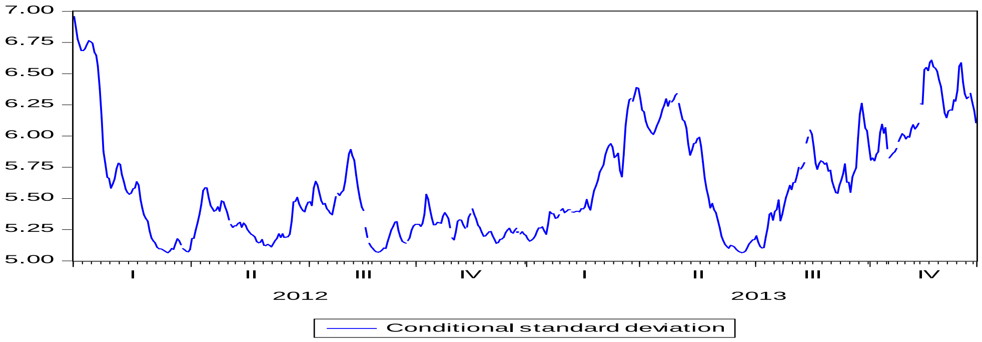
Dependent Variable: Bank Islami

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	6.585322	0.261792	25.15479	0.0000
WEEKLY	1.427706	0.032073	44.51494	0.0000
SEMI_ANNUAL	-1.144068	0.048987	-23.35446	0.0000
QUARTERLY	2.57E-07	1.96E-06	0.131039	0.8957
Variance Equation				
C	0.148153	0.023698	6.251604	0.0000
RESID(-1)^2	1.672888	0.060178	27.79899	0.0000
GARCH(-1)	-0.012434	0.006129	-2.028825	0.0425

R-squared	-0.058446	Mean dependent var	15.35208
Adjusted R-squared	-0.064979	S.D. dependent var	23.72559
S.E. of regression	24.48429	Akaike info criterion	4.747680
Sum squared resid	291347.6	Schwarz criterion	4.807600
Log likelihood	-1156.182	Hannan-Quinn criter.	4.771213
Durbin-Watson stat	0.019116		

From the above analysis, C is showing the instability in the bank returns by the impact of instability of these variables. We conclude that the probability of weekly instability is less than 5% which means that the data is significant and it has an impact on the bank returns of BANK ISLAMI. Probability of quarterly instability is greater than 5% which means that the data is insignificant and it has no impact on the bank returns of BANK ISLAMI. Probability of semiannually instability is less than 5% which means that data is significant and it has an impact on the bank returns of BANK ISLAMI. As the value of variance equation is deviating from 1 which is 1.80 so we conclude from the analysis that variance equation is creating an impact on the returns of BANK ISLAMI. If the number of values in a sample increases than there will be a less difference between R-square and adjusted r square which shows that it has less impact on the bank returns. As we have the number of values is 490, it means that it has the less impact on the return of BANK ISAMI. The data is significant at semiannually instability.

The value of Durban Watson test should be equal to 3.In this the value is 2.11 which is approximately equal to 3 so we conclude that the data is significant.

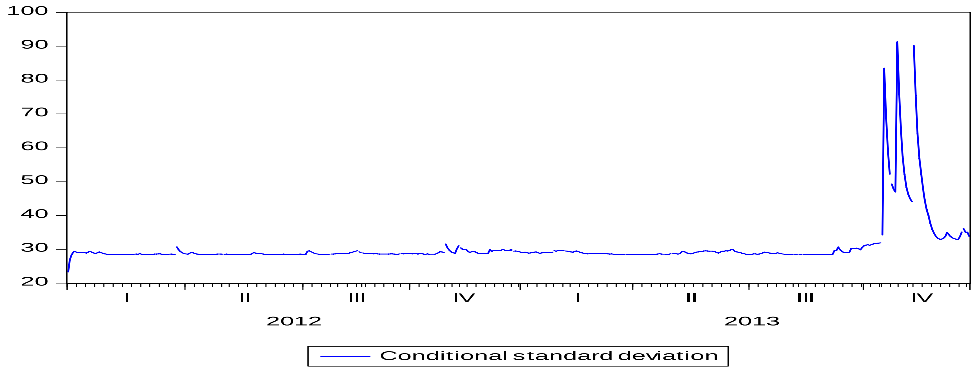


Impact of Instability of lending rates on Bank returns of Allied bank:

Dependent Variable: Allied bank return

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	53.93818	32.29726	1.670054	0.0949
WEEKLY	-17.88842	4.512416	-3.964268	0.0001
QUARTERLY	1.03E-06	0.019941	5.16E-05	1.0000
SEMI_ANNUAL	18.35471	4.535519	4.046882	0.0001
		Variance Equation		
C	323.4095	119.4938	2.706496	0.0068
RESID(-1)^2	0.150000	0.083945	1.786888	0.0740
GARCH(-1)	0.600000	0.164819	3.640365	0.0003

R-squared	0.135399	Mean dependent var	64.51263
Adjusted R-squared	0.130062	S.D. dependent var	24.01349
S.E. of regression	22.39750	Akaike info criterion	8.997878
Sum squared resid	243801.0	Schwarz criterion	9.057798
Log likelihood	-2197.480	Hannan-Quinn criter.	9.021410
Durbin-Watson stat	2.152563		



From the above analysis, C is showing the instability in the bank returns by the impact of instability of these variables. We conclude that the probability of weekly instability is less than 5% which means that the data in significant and it has an impact on the bank returns of ALLIED BANK. Probability of quarterly instability is greater than 5% which means that the data is insignificant and it has no impact on the bank returns of MEBL. Probability of semiannually instability is less than 5% which means that data is significant and it has an impact on the bank returns of ALLIED BANK.

As the value of variance equation is deviating from 1 which is 0.0811 so we conclude from the analysis that variance equation is creating an impact on the returns of ALLIEND BANK. If the number of values in a sample increases than there will be a less difference between R-square and adjusted r square which shows that it has less impact on the bank returns. As we have the number of values is 490 it means it has the less impact on the return of ALLIED BANK. The data is significant at weekly and semiannually instability.

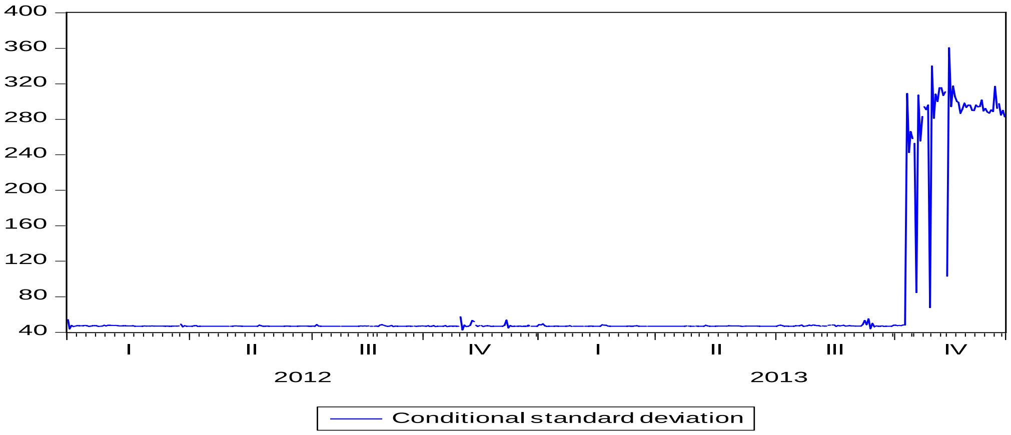
The value of Durban Watson test should be equal to 3.In this the value is 2.15 which is equal to 3 so we conclude that the data is significant.

Impact of Instability of lending rates on Bank returns of Askari Bank:

Dependent Variable: Return of Askari Bank

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	21.15775	64.75873	0.326717	0.7439
WEEKLY	11.85309	5.958571	1.989250	0.0467
QUARTERLY	-4.25E-06	0.000902	-0.004714	0.9962
SEMI_ANNUAL	-11.99420	8.041372	-1.491562	0.1358
		Variance Equation		
C	2905.001	299.6434	9.694862	0.0000
RESID(-1)^2	1.689318	0.699577	2.414771	0.0157
GARCH(-1)	-0.337118	0.029397	-11.46784	0.0000

R-squared	-0.055530	Mean dependent var	43.25231
Adjusted R-squared	-0.062046	S.D. dependent var	80.77338
S.E. of regression	83.24151	Akaike info criterion	10.13208
Sum squared resid	3367566.	Schwarz criterion	10.19200
Log likelihood	-2475.361	Hannan-Quinn criter.	10.15562
Durbin-Watson stat	0.044609		



From the above analysis, C is showing the instability in the bank returns by the impact of instability of these variables. We conclude that the probability of weekly instability is less than 5% which means that the data is significant and it has an impact on the bank returns of ASKARI BANK. Probability of quarterly instability is greater than 5% which means that the data is insignificant and it has no impact on the bank returns of ASKARI BANK. Probability of semiannually instability is greater than 5% which means that data is insignificant and it has no impact on the bank returns of ASKARI BANK.

As the value of variance equation is deviating from 1 which is 0.0157 so we conclude from the analysis that variance equation is creating an impact on the returns of ASKARI BANK.

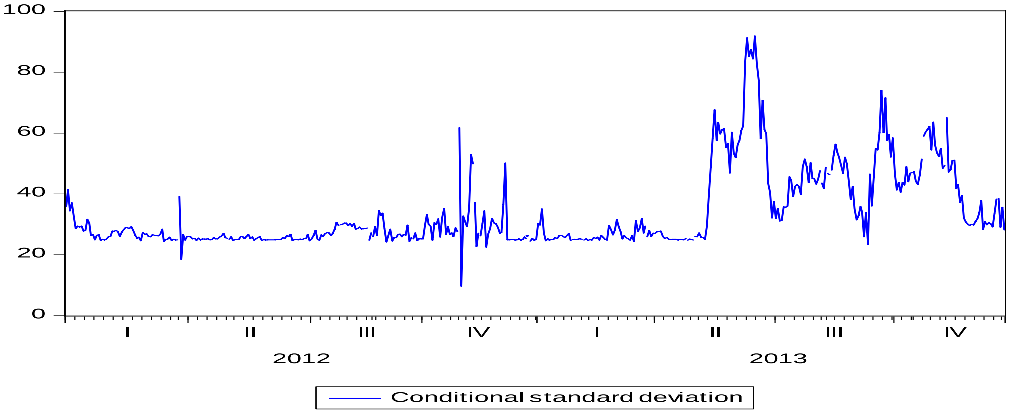
If the number of values in a sample increases than there will be a less difference between R-square and adjusted r square which shows that it has less impact on the bank returns. As we have the number of values is 490 it means it has the less impact on the return of ASKARI BANK. The data is significant at weekly instability.

The value of Durban Watson test should be equal to 3.In this case, the value is approximately 4 so we conclude that the data is significant.

Impact of Instability of lending rates on Bank returns of MCB:

Dependent Variable: Return of MCB

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	355.6837	17.92618	19.84158	0.0000
WEEKLY	-22.43845	2.934898	-7.645391	0.0000
QUARTERLY	7.72E-06	0.002232	0.003460	0.9972
SEMI_ANNUAL	5.818333	3.408993	1.706760	0.0879
		Variance Equation		
C	807.8264	152.2012	5.307621	0.0000
RESID(-1)^2	0.696036	0.230779	3.016028	0.0026
GARCH(-1)	-0.305366	0.086485	-3.530875	0.0004
R-squared	0.288754	Mean dependent var		201.5139
Adjusted R-squared	0.284363	S.D. dependent var		42.58460
S.E. of regression	36.02458	Akaike info criterion		9.410854
Sum squared resid	630716.3	Schwarz criterion		9.470774
Log likelihood	-2298.659	Hannan-Quinn criter.		9.434387
Durbin-Watson stat	0.069772			



From the above analysis, C is showing the instability in the bank returns by the impact of instability of these variables. We conclude that the probability of weekly instability is less than 5% which means that the data is significant and it has an impact on the bank returns of MCB. Probability of quarterly instability is greater than 5% which means that the data is insignificant and it has no impact on the bank returns of MEBL. Probability of semiannually instability is greater than 5% which means that data is insignificant and it has no impact on the bank returns of MCB.

As the value of variance equation is deviating from 1 which is 0.003 so we conclude from the analysis that variance equation is creating an impact on the returns of MCB.

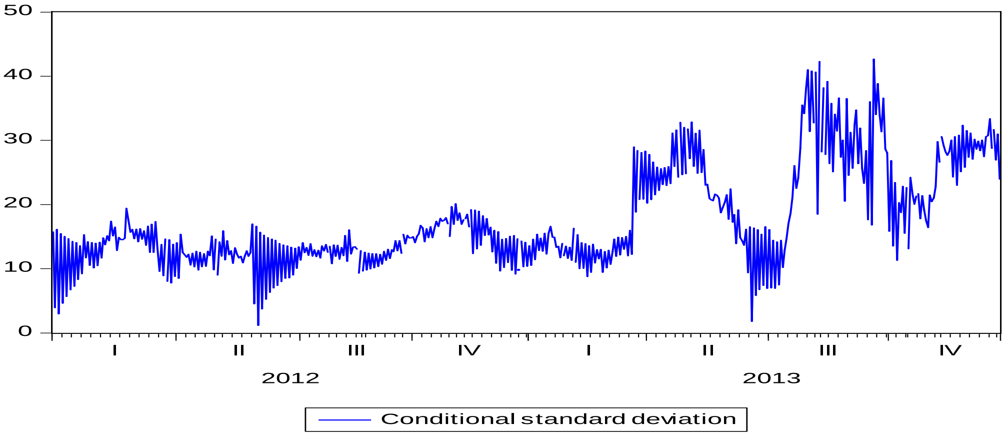
If the number of values in a sample increases than there will be a less difference between R-square and adjusted r square which shows that it has less impact on the bank returns. As we have the number of values is 490 it means it has the less impact on the return of MCB. The data is significant at weekly instability.

The value of Durban Watson test should be equal to 3.In this case, the value is 6 which is approximately equal to 3 so we conclude that the data is significant.

Impact of Instability of lending rates on Bank returns of HBL:

Dependent Variable: HBL bank return

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	189.1315	6.334772	29.85608	0.0000
WEEKLY	1.288525	0.810694	1.589410	0.1120
QUARTERLY	2.68E-05	2.32E-06	11.57157	0.0000
SEMI_ANNUAL	-8.296524	0.938280	-8.842272	0.0000
		Variance Equation		
C	244.8019	45.25117	5.409847	0.0000
RESID(-1)^2	1.200718	0.217223	5.527595	0.0000
GARCH(-1)	-0.943040	0.022170	-42.53749	0.0000
R-squared	0.126671	Mean dependent var		121.3942
Adjusted R-squared	0.121280	S.D. dependent var		21.19179
S.E. of regression	19.86520	Akaike info criterion		8.189701
Sum squared resid	191788.3	Schwarz criterion		8.249621
Log likelihood	-1999.477	Hannan-Quinn criter.		8.213234
Durbin-Watson stat	0.017194			



From the above analysis, C is showing the instability in the bank returns by the impact of instability of these variables. We conclude that the probability of weekly instability is greater than 5% which means that the data in insignificant and it has no impact on the bank returns of HBL. Probability of quarterly instability is less than 5% which means that the data is significant and it has an impact on the bank returns of HBL. Probability of semiannually instability is less than 5% which means that data is significant and it has an impact on the bank returns of HBL.

As the value of variance equation is deviating from 1 which is 0.0000 so we conclude from the analysis that variance equation is creating an impact on the returns of HBL.

If the number of values in a sample increases than there will be a less difference between R-square and adjusted r square which shows that it has less impact on the bank returns. As we have the number of values is 490 it means it has the less impact on the return of HBL. The data is significant at semiannually instability.

The value of Durban Watson test should be equal to 3.In this the value is 2 which is approximately equal to 3 so we conclude that the data is significant.

Conclusion:

This study investigated the instability of lending rates and its impact on volatility of bank returns by using Generalized Autoregressive Conditional Hetero skedasticity (GARCH) model. Augmented Dicky Fuller test was applied that showed that weekly and semiannual data have stationary data at first difference and intercept while monthly and quarterly data have valid and stationary data at level and intercept.

Secondly, we examined the normal distribution of our data through SPSS. By dividing the Statistic value with the standard error of Kurtosis, we obtained the value that showed the normal distribution if it lied between the ranges of -1.986 to 1.986. Weekly, quarterly, monthly and semiannual all data have abnormal distribution and variation in their data.

The results showed that instability in semiannual lending rates has impact on MEBL, Bank Islami, Allied and HBL stock return. Weekly LR has a significant impact on volatility of bank returns of Bank Islami, Allied, Askari and MCB. Instability in quarterly LR will only affect the bank return of HBL.

Findings

Augmented Dickey Fuller test deduced the results that weekly and semiannual overnight lending rates have stationary data on first difference and intercept. Monthly and quarterly lending rates have stationary data at level and intercept. It means it has got no unit root and null hypothesis is rejected. Significance is 0.000 in all the four lending rates.

While checking the normality of Lending rates, it came to light that all the four LR have abnormal distribution in their data. Weekly lending rates have -5.295 deviations from the standard. Monthly lending rates have an abnormal distribution of 2218.318. Quarterly and semiannual lending rates have a value of 2219.122 and -6.659 respectively. As all these values are not lying in the range of -1.968 to 1.968 so these are abnormally distributed. Impact of lending rate instability on bank return volatility is analyzed through GARCH model. Semiannual lending rate instability showed a significant impact on MEBL, Bank Islami, Allied bank and HBL return. Weekly LR has a note worthy impact on bank Islami, Allied, Askari and MCB return. Only HBL return is affected by quarterly lending rate. This proves that investors should focus on long term lending rates as they have more significant impact on bank returns. Ordinary least square method proved that simple impact of lending rates on bank returns is insignificant. This shows that apparently there seems to be no impact of lending rates on bank returns but when we checked the impact of instability of lending rates on volatility of bank returns it proved to be significant. Instability affects the return and not the lending rates value. Nathan Lael Joseph's research on the sensitivity of US banks stock returns to interest rate and Exchange rate changes showed that bank returns are affected by interest rates and exchange rates. (Nathan Lael Joseph, The sensitivity of US banks' stock returns to interest rate and exchange rate changes, 2006) (Nathan Lael Joseph, The sensitivity of US banks' stock returns to interest rate and exchange rate changes, 2006).

Recommendations

When the conditions are encouraging and conducive, performance of banks is accelerated which guarantees a good lending behavior. But where the environment is unstable and cruel, the bank's performance depreciates. Deposit money banks should take certain initiatives in order to ensure maximum profitability and good lending behavior even where a good measure of macroeconomic stability is achieved. This is due to the positive and noteworthy relationship found between bank lending rate and bank performance which is measured by stock returns in both short and long run with the help of GARCH model.

Investors should focus on long term lending rates while selecting bank stocks because bank long term lending rates have significant impact on majority of bank returns. They should try to invest in long term stocks as they would bring the maximum return to them. Central bank should try to control fluctuations in the weekly lending rates. Weekly lending rates are showing reverse relation with the lending rates. Central bank should take initiatives to control this negative impact of weekly lending rates as money market securities are more in amount as compared to capital market securities.

There were very few fluctuations in monthly lending rate data and its data proved to be invalid and insignificant which were not detected by soft ware. So, it is recommended to carry forward our work and apply GARCH model on monthly data for future monthly lending rates because values for monthly lending rates in future may show variation and fluctuations which meet the standards of model and may be detected by the software so that its impact can be measured.

Limitations

One limitation of our study deserves consideration. We have not related the significant lending rate coefficients to the accounting variables of the banks. This is because we wanted to focus on the volatility of the bank returns only. Such an approach would still require some caution when interpreting the results due to the strong variation in lending rate sensitivity of the financial sector of the banks. The restrictions in the progress of our work are the use of secondary data that has some percentile of error in it. Other constraint was time. We had short time to analyze this data due to our studies along with this project. Monthly data was used for analysis but its analysis did not get completed due to limited variations in the data. Data has very low variability which was not detected by software.

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Is Islamic Banking More Sustainable than Conventional Banking? An Empirical Study on Selected Banks of Bangladesh[ψ]

By

Mohammed Syedul Islam[*], *Md. Rafiqul Islam Rafiq*[*]

Abstract

Bangladesh Bank adopted various green banking initiatives to respond with global warming and ecosystem changes; particularly it circulated the green banking guidelines to all commercial banks of Bangladesh in 2011. Based on green banking practices, this paper aims to compare the performance of Islamic banks over the conventional banks in Bangladesh for the period of 2011-2014. In addition to secondary data, this study uses primary data collected by a questionnaire survey which was conducting among green banking officials of sample banks. Different ratio such as green budget, environmentally safe finance, energy efficiency, climate risk reduction and employees' awareness toward green banking have been done on the sample banks. This study reveals that Islamic banks are more sustainable than conventional counterpart except employees' awareness on green banking. This paper finally recommends that the Bangladesh Bank should provide Shari'ah complaint re-finance scheme facilities to Islamic banks, Islamic banks may introduce some Shari'ah-based investment products to facilitate low cost green technology among the clients, and Islamic banks should follow uniform annual disclosure in publishing green banking practices and cover necessary information to avoid uncertainty (gharar) from the Islamic banking industry.

Keywords: Sustainable Banking, Conventional Banks, Islamic Banks, Social Welfare, Bangladesh.

[ψ] The draft version of this manuscript has been presented at the 6th Islamic Economic System Conference (29-30 September 2015), Krabi, Thailand. However, the authors has revised and improved this paper with more rigorous methodology.

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1. Background

Are we moving to the edge-point of global collapse? The ecological balance is deteriorating rapidly and significantly in the world. For instance, environmental degradation is very noticeable all around the world particularly in the poor and developing countries. Pollution of air and water are significant, consumption of non-renewable energy is fast, and industrial pollution is beyond control. Waste disposal from households and industries are ill-managed. Deforestation, loss of open space and loss of bio-diversity are also alarming. Even the global warming has been increasing on an average of 0.6 degree Celsius in the last century that helped to melt ices in the polar area (IPCC, 2002). Scientists are forecasting that most of low lying countries of the world would be submerged due to sea level rise by 2050. Evidence shows that these climatic changes have occurred mainly due to green house gases (GHG) emissions by human activities (NAS, 2010). Collective and integrated actions by the global community are needed to combat this vulnerable situation. United Nations (UN) identified the following thematic areas of sustainable development such as poverty, governance, health, education, demographics, natural hazards, atmosphere, land, ocean, seas and coasts, fresh water, bio-diversity, economic development, global economic partnership, consumption and production patterns etc (UN, 2007). There are eight principles that guide the sustainability as enshrined in the Holy Qur'an. Firstly, justice (*Adl*) means that humankind must accept its role as a custodian of the planet and should protect the Earth in a just and fair manner. Any environmental pollution and degradation is the result of unbridled greed of mankind. Secondly, balance (*Mizan*) means that everything in creation is made to exist in a perfect and harmonious balance (Holy Qur'an, 55: 3-10). Any natural disaster may have destroyed this natural balance. Thirdly, over-consumption of natural resources is not consonant with the principle of middleness (*Wasat*) as Allah (SWT) does not love wasters (Holy Qur'an, 7:31). Fourthly, mercy (*Rahmah*) means the benevolent governing of all aspects of human relationships and treatment of all living animals, plants and insects. In this regard, good and ethical governance is the cornerstone for attaining and sustaining progress and thus good life (*Hayat Tayebah).* Fifthly, Allah (SWT) is the true owner of the Earth and we have trustworthiness and custodianship (*Amanah*) on this Earth. All creations including men have the right to inhabit the Earth (Holy Qur'an, 2: 30). Prophet Mohammad (SAW) said, "When doomsday comes, if someone has a palm shoot in his hand he should plant it" (Al-Albani). Thus, Islam believes in mutual existence of all living creatures in the world until it is collapsed by Allah (SWT). Islamic belief and faith is based on spiritual purity and physical cleanliness (*Taharah*). Purification is the prerequisite of good life. For instance, pure water is useful to our sustenance and existence (Holy Qur'an, 2:22; 21: 30). Apart from these, truthfulness and rights (*Haq*), and usefulness of knowledge and science (*Ilm Nafi'*) also promote the sustainable development (*Tayebah Development).* Zaidi (1981) argues that the ecological crisis is actually a moral crisis and this ecological crisis warrants an ethical ground with divine principles.

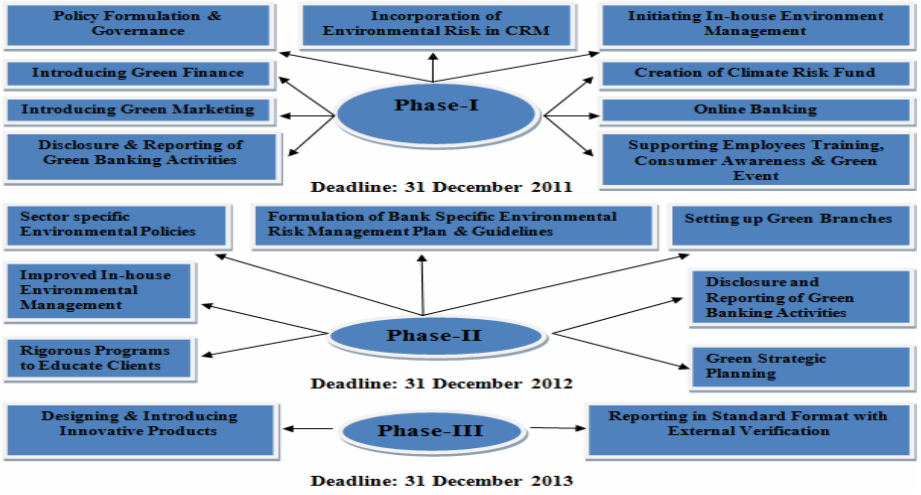
Bangladesh is one of the most climate change vulnerable countries in the world (WB, 2009). In line with global development and response to the environmental degradation, financial sector in Bangladesh should play important roles as it is one of the key stakeholders of sustainable development initiatives. Banking industry is a great part of the whole financial sector under which both conventional and Islamic banks are working in Bangladesh. Currently, fifty six scheduled banks in Bangladesh are operating under full control and supervision of Bangladesh Bank. More specifically, 5 State-owned Commercial Banks (SOCBs), 3 Specialized Banks (SDBs), 39 Private Commercial Banks (PCBs), 31 conventional PCBs, 8 Islamic *Shari'ah* based PCBs, 9 Foreign Commercial

Banks (FCBs) and 4 non-scheduled banks are operating in Bangladesh (BB, March 2015). It is mention worthy that conventional banks imply the banks that perform the banking functions in conventional fashion i.e. interest based operations, while the Islamic banks execute banking activities according to Islamic *Shari'ah* based principles particularly on profit-loss sharing (PLS) mode. In other words, conventional banks run behind maximizing their own profit, while the Islamic counterpart aims to attain socioeconomic objectives along with achieving self profit (Hassan, 2003, p. 76). This paper aims to evaluate Islamic banks in practicing sustainable banking in Bangladesh as compared to traditional banking.

2. Sustainable Banking Initiatives in Bangladesh

Sustainable Banking though evolved in western countries, is now practiced in other parts of the world. The sustainable banking is such a banking practice which incorporates environmental and social factors into banking business. Instead of making only profit, this newly introduced banking system is committed to attain the goals of future sustainability of our planet earth. This banking system is therefore called as environment friendly banking or green banking. Sometimes this banking system is termed as socially responsible banking or ethical banking. In recent past, Bangladesh Bank (BB), the central bank of Bangladesh, undertook various measures of sustainable banking throughout the banking industry of Bangladesh. Primarily, BB installed an 8-kilowatt solar power system on its rooftop in March 2010, which has been providing necessary energy supply for the executive floor along with emergency security lights in the BB premises (BB, 2012). This is now being extended to cover more areas. A recent initiative has been taken to convert the 30-storied building of the bank into a 'Green Building' with the modern facilities of rain water harvesting, waste water recycling and motion sensor energy efficient bulbs supported by window based solar panels. Under the said program, this bank then extended its hand to financial institutions, particularly to other commercial banks. Finally, BB has issued a three phased policy guidelines for green banking in 2011 as depicted in Figure 1 (BRPD Circular No. 02). Bangladesh Bank "is probably the only central bank, which has issued such an indicative guideline for green banking" (Rahman, 2013).

Figure 1: GB Guideline Formulated by Bangladesh Bank.


Policy Formulation & Governance
Incorporation of Environmental Risk in CRM
Initiating In-house Environment Management
Introducing Green Finance
Creation of Climate Risk Fund
Introducing Green Marketing
Phase-I
Online Banking
Disclosure & Reporting of Green Banking Activities
Supporting Employees Training, Consumer Awareness & Green Event
Deadline: 31 December 2011
Sector specific Environmental Policies
Formulation of Bank Specific Environmental Risk Management Plan & Guidelines
Setting up Green Branches
Improved In-house Environmental Management
Disclosure and Reporting of Green Banking Activities
Phase-II
Rigorous Programs to Educate Clients
Green Strategic Planning
Deadline: 31 December 2012
Designing & Introducing Innovative Products
Phase-III
Reporting in Standard Format with External Verification
Deadline: 31 December 2013

As shown in Figure 1, Banks are to develop green banking policies and show general commitment on environment through in-house performance in phase-I of sustainable banking. Under phase-II, banks need to formulate sector-specific environmental policies for different environmental sensitive sectors. In phase-III, banks are expected to address the whole eco-system through environment friendly initiatives and introducing innovative products, and publish independent green annual report targeting their stakeholders that will be verified by an independent agency or acceptable third party.

Banks shall keep their annual report and websites updated with the disclosures on GB activities. The preferential treatments for compliant banks practicing Green Banking are: Green Banking practices impacts positively on CAMELS rating of a bank; BB declares the names of the Top Ten Green Banks in the BB websites; BB will actively consider green banking activities of a bank to give permission for opening new bank branch etc.

In line with the GB policy developed by Bangladesh Bank, both Islamic and conventional commercial banks of Bangladesh have undertaken initiatives to implement this policy. Banks and other financial institutions are now submitting a quarterly report on prescribed format regularly to BB on their performance of GB activities.

3. Literature Review

As one of the least developed countries, Bangladesh is the worst sufferer of global pollution through industrialization of the western countries. Under such extreme environmental threat, the financial sector of Bangladesh is playing a key role as one of the important stakeholders of the economy enforcing the businessmen and industrialists of the country to design their various action plans keeping in mind the crucial environmental issues (Ullah, 2013). Using secondary data from commercial bank's annual reports and BB's publications, Islam and Das (2013) highlighted on fund allocation to green banking, green finance, mobile banking, online banking etc. As they reported that GB practice is a new way of conducting banking business which will be a part of hygienic environmental issue and corporate social responsibility. And the concept of green banking is relatively new in Bangladesh and yet to gain momentum, but in the developed countries it is passing through a mature stage. The study concludes that green banking practices in Bangladesh are not satisfactory at all. Choudhury, et al. (2013) identified a set of stakeholders to calculate their ability to influence in developing green banking products. The findings suggest that banks should go green and play a pro-active role to take environmental aspects for functional improvements and changing client habits in banking business. Use of appropriate environmental technologies and management systems will not only be useful for environment, but also provide benefits as greater operational efficiencies. After using both descriptive and inferential statistics, this study also advocates for the necessity of stakeholder's influences in green banking practice and recommend some indication for Government, the whole banking sector and for the business community. Rahman, et al. (2013) focused on the green banking prospects in Bangladesh in their paper. Banks can be green through bringing changes in six main spheres of banking activities. Those are Change in Investment Management, Change in Deposit Management, Change in House Keeping, Change in the Process of

Recruitment and Development of Human Capital, CSR, and creating Consciousness Among Clients and General Mass. Such an initiation can ensure a safe residence for upcoming generation. Authors reemphasized on supporting BB's initiatives by raising our voice, keeping hand over hands, thinking in positive way and working in collective manner to make our life green. Based on probability stratified sampling technique, Ahmed, Zayed and Harun (2013) selected employees as respondents from ten sample banks and found that economic factor, policy guideline, loan demand, stakeholder pressure, environmental interest and legal factor are responsible for adopting of green banking by commercial banks in Bangladesh to ensure sustainable economic development. Although the banking industry of Bangladesh has already experienced three phases of BBs guidelines, no single study has so far been done based on primary data. Finally, Islam (2014) found that low cost technology is matter for sustainable banking in current situation. Because most of clients are not interested to adopt eco-friendly technology mainly due to high cost of installation and maintenance. This study however used secondary data and applied simple technique to evaluate performance in green banking practices among sample banks. The current paper used both primary and secondary sources of data and applied better tools to evaluate green banking performance of Islamic banks over conventional counterparts.

4. Methodology

This empirical research has been conducted by following BB green banking guidelines (Kothari, 2008). Population of this study covers the whole banking industry of Bangladesh. Since 45 banks formulated GB policies and 46 banks established GBU in Bangladesh (BB, 2012), a specific sampling technique has been chosen in this paper.

4.1 Survey, Sample and Sampling

At the beginning stage, we conducted a pilot survey at the branch level to know green banking activities of the industry. Based on this pilot survey, we presumed to choose the sample banks for this study. Afterwards, we carried out a sampling survey under this study during the period May 01, 2015 - May 30, 2015. During this survey, we observed a heterogeneous scenario in the banking industry of Bangladesh in practicing green banking policy formulated by BB. However, primarily four scheduled commercial banks have been chosen from population as sample banks purposively. All sample banks are now classified into two groups of banks, such as Islamic banks and conventional banks. Two banks have again been chosen purposively from each group. Islamic banks under this study are Export Import Bank of Bangladesh Limited (EXIM), and Islami Bank Bangladesh Limited (IBBL). On the other hand, two conventional banks are Bank Asia Limited (BAL) and BASIC Bank Limited (BASIC). Reason behind choosing those banks are the green banking activities of selected banks and limited access to primary data on other banks.

4.2 Collection of Data

Data were collected from both primary and secondary sources. Primary data have been collected for the period of 2011-2014. For collecting primary data, a formal interview was arranged with head of green banking unit and delivered an open-ended questionnaire to each of the sample bank. But secondary data have been retrieved from several sources, such as different publications of Bangladesh Bank on GB, annual reports of sample banks for the year 2011, 2012, 2013, 2014 and related articles. Data has also been collected through company's corporate profile, daily newspaper, different academic journals, websites of sample banks and BB.

4.3 Performance Measurement

Environmental performance not only depends on the environmental variables, but also it depends on financial variables. Perhaps, a bank with greater capital size may spend more funds for green banking. Similarly, it is possible to spend more funds to reduce climate-related risks as a part of CSR activities. We therefore measured the green banking performance in relative term; not in absolute term. Furthermore, we brought a number of issues into our mind such as, green budget, green finance, efficiency in natural resource use, climate risk reduction, and awareness etc. We could not focus on other aspects of sustainable banking due to data insufficiency.

4.3.1 Ratio Analysis

The term 'ratio' refers to the mathematical relationship between any two inter-related variables. In other words, it establishes relationship between two items expressed in quantitative form. Though it is very familiar in financial management, it is also useful in measuring environmental performance (Brigham and Houston, 2014). In order to measure green banking performance of sample banks, nine ratios for Islamic and conventional commercial banks are used.

Ratio-1: Green Budget to Total Asset Ratio (GAR) = $\frac{\text{Budget Utilization for Green Banking}}{\text{Total Asset}}$

Ratio-2: Green Budget to Total Equity Ratio (GER) = $\frac{\text{Budget Utilization for Green banking}}{\text{Total Equity}}$

Ratio-3: Environmentally Safe Finance Ratio (EFR) = $\frac{\text{Environmental Risk Rated Finance}}{\text{Total Investment}}$

Ratio-4

Total Investment

Ratio-5: Depleting Resource Efficiency Ratio (DER) = $\frac{\text{Expenditure on Natural Resource Use}}{\text{Total Expenditure}}$

Ratio-6: Renewable Resource Efficiency Ratio (RER) = $\frac{\text{Number of Solar} - \text{powered Branches}}{\text{Total Branches}}$

Ratio-7: Bank Automation Ratio (BAR) = $\frac{\text{Number of Online Branches}}{\text{Total Branches}}$

Ratio-8: Climate Risk Reduction Ratio (CRR) = $\frac{\text{Utilization of Climate Risk Fund}}{\text{Total CSR Expenditure}}$

Ratio-9: Employees' Awareness Ratio (EAR) = $\frac{\text{Number of Staffs Trained with green banking}}{\text{Total Employees}}$

In ratio 1 and 2, total asset and total shareholders' equity represents the bank size. In ratio 3 and 4, we used total loan instead of total investment for conventional banks and this investment or loan excluded the investment in shares and securities. Natural resources include water, gas and electricity all of those generate from depleting resources as shown in ratio 5. According to ratio 6, it is assumed that the dependence on depleting resources will fall as the number of solar-powered branches increases. From ratio 7, we can claim that as customers enjoy more on-line banking facilities, banks will use less of its papers for providing service. Moreover, extensive on-line banking facilities will save time of employees.

4.3.2 Green Banking Score

To compute green banking score, we took into consideration several issues of environment. We also assume equal weight to each ratio while we compute this score, *i.e.*

Green Banking Score= *f* (Share of Green Budget in Total Asset and Total Equity, Importance of Environmental Risk in Investment, Green Finance over Total Finance, Efficiency in Natural Resource used through Expenditure and Automation, Contribution in Climate Risk Reduction, Building Awareness among Employees and Clients)

Symbolically,

$$(\mathrm{GB})_i = \frac{(GAR)_i + (GER)_i + (EFR)_i + (GFR)_i + (DER)_i + (RER)_i + (BAR)_i + (CRR)_i + (EAR)_i}{N}$$

Where, GB stands for green banking score, N stands for total number of ratios considered and the subscript *i* is for Islamic banking or conventional banking. This green banking score ranges lies in between 0 to 1.

5. Results and Discussion

From even number of sample banks, let us discuss the green banking practices of Islamic and conventional banks below.

5.1 Green Budget

Environmental governance is an important factor of sustainable banking which require green budget. For environmental governance, each of the sample banks formulated the green banking policy approved by board of directors and formed green banking unit headed by a senior executive. During the study period, sample banks allocated fund for Green Banking in their annual budget, which included environmental risk management and core risk management, green finance, climate risk fund, marketing & capacity building for green banking, on-line banking etc. However, utilization of fund differed from allocation by each sample bank during this period.

Table 1: Green Budget to Total Asset Ratio (Percentage)

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	0.001	0.073	0.002	0.00002
2012	0.056	0.165	0.078	0.079
2013	0.080	0.076	0.003	0.160
2014	0.084	0.088	0.001	0.112
Mean	0.055	0.100	0.021	0.087

During the study period, IBBL utilized the fund for green banking which is 5.5 percent of its total asset, while EXIM spent for green banking by 10 percent. On the contrary, BASIC and BAL utilized 2.1 and 8.7 percent of total asset during the same period respectively. Overtime, no specific trend was found in utilizing green budget for EXIM, BASIC and BAL, but IBBL has been spending more money out of its total asset for green banking.

Table 2: Green Budget to Total Equity Ratio (Percentage)

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	0.021	0.656	0.037	0.0002
2012	0.686	1.665	1.340	0.853
2013	1.019	0.720	0.097	1.793
2014	1.177	0.890	0.014	1.215
Mean	0.726	0.983	0.372	0.965

From the Table 2, the highest ratio was found for EXIM Bank, while the lowest one was found for BASIC Bank Ltd. A moderate ratio indicates that shareholders contributed moderately to green banking initiatives in IBBL.

5.2 Green Finance

Green finance is essential to reduce carbon footprint from the banking industry. Traditionally, banks used to consider credit risk rating (CRR) in sanctioning a loan or fund. But the CRR cannot always check the fund from environmentally harmful projects. In order to reduce environmental risk from investment, BB incorporated environmental risk into the core risk management by the bank. According to BB's direction, a strong CRR graded project or business deal may be weakened by a high environmental risk rating (EnvRR) because of high environmental risk therein.

Table 3: Environmental Risk Rated Finance Ratio (Percentage)

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	0.0004	4.241	N/A	0.380
2012	0.641	15.552	0.118	2.362
2013	1.048	0.226	0.114	2.050
2014	0.278	0.838	0.123	1.587
Mean	0.492	5.214	0.118	1.595

N/A= data is not available.

As per the environmental due diligence checklist of environmental risk management (ERM) guideline, EXIM Bank sanctioned highest amount of fund with

EnvRR rating during the study period. In 2012, this bank assessed highest amount of fund with EnvRR during four year period which was excessively high than other years. Amount of EnvRR rated finance was steadily rising in case of BASIC Bank, while trend in two other banks' (IBBL and BAL) assessment were fluctuating during the period.

According to BBs guidelines, banks should give preference to eco-friendly business activities and energy efficient industries in financing. Both Islamic and conventional banks should encourage and finance on environmental infrastructure such as renewable energy project, clean water supply project, waste water treatment plant, solid and hazardous waste disposal plant, bio-gas plant, bio-fertilizer plant and environment friendly brick kiln etc. In this endeavor, they can promote these environmental practices among client by applying consumer credit programs.

Table 4: Green Finance Ratio **(Percentage)**

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	0.086	1.412	0.015	N/A
2012	0.072	2.668	0.100	0.443
2013	0.110	1.317	0.005	0.772
2014	0.118	1.339	0.006	0.529
Mean	0.097	1.684	0.031	0.582

From Table 4, on an average, EXIM Bank made the highest contribution in giving green finance out of its total finance; on the other hand, BASIC Bank did least contribution among sample banks. Performance of IBBL was increasing overtime, although EXIM's contribution to green banking was unparallel to other banks in each year. Noticeably, Bank Asia Ltd utilized no fund for green finance in 2011.

5.3 Efficiency in Natural Resource Use

Each bank is supposed to follow the green office guidebook and keep record the consumption of inventories at its offices where inventory includes water, electricity, gas and energy etc. During our study period, banks reduced the consumption of water, gas and electricity and contributed to less carbon emission by following eco-friendly office management in all aspects.

Table 5: Depleting Resource Efficiency Ratio **(Percentage)**

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	0.026	0.048	0.133	0.006
2012	0.083	0.111	0.048	0.005
2013	0.101	0.125	0.088	0.005
2014	0.115	0.126	N/A	0.006
Mean	0.081	0.102	0.089	0.005

Here, depleting resources mean water, gas and electricity. N/A= data is not available.

As the Table 3 shows that the expenditure on natural resource consumption of Islamic banks are steadily rising while that of conventional banks shows no specific trend. Even the expenditure on inventory compared to its total expenditure was meager. Further, BB green banking initiatives encouraged banks to establish slower power plant at the branch level. IBBL though set up highest number of solar powered branch, in relative term; it is favored to EXIM Bank. In this regard, all sample banks performed almost equally as shown in Table 6.

Table 6: Renewable Resource Efficiency Ratio (Percentage)

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	0.026	0.048	0.133	0.031
2012	0.083	0.111	0.048	0.095
2013	0.101	0.125	0.088	0.081
2014	0.115	0.126	N/A	0.120
Mean	0.081	0.102	0.089	0.082

Here, renewable resource means solar energy. N/A= data is not available

Introducing on-line banking service at the branch level can reduce paper usage by printing less; therefore, it saves forest resources. Now-a-days, most of bank provide e-statement rather than printed statement to their customers. Table 7 shows that all of the sample banks have opened on-line branches from the beginning of green banking initiatives in Bangladesh, only Bank Asia Ltd was not fully automated in 2013 as the bank introduced on-line banking at 84 branches out of 86 branches in total.

Table 7: Bank Automation Ratio (Percentage)

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	1	1	1	1
2012	1	1	1	1
2013	1	1	1	0.976
2014	1	1	1	1
Mean	1	1	1	0.994

5.4 Climate Risk Reduction

BB stated that banks may reduce climate risks of community by creating and utilizing climate risk fund (CRF) as part of corporate social responsibility (CSR) of the bank. This CRF would cover climate-vulnerable areas, namely flood, cyclone and draught prone areas in Bangladesh. Areas may also include, but not be limited to, post-disaster rehabilitation; skills development and alternative livelihood; climate adaptability; climate resilient housing facilities etc.

Table 8: Climate Risk Reduction Ratio (Percentage)

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	-	-	-	N/A
2012	0.297	-	0	0.003
2013	0.205	0.0008	0	N/A
2014	0.234	0.003	0	N/A
Mean	0.245	0.002	0	0.001

N/A= data is not available.

Sample banks allocated and utilized from CSR expenditure for climate resilience during the period 2011-2014. In Table 8, it has shown that IBBL spent fund for climate risk reduction, whereas BASIC Bank did not use any fund for this purpose. EXIM and BAL utilized some money for climate resilience in few years.

5.5 Awareness among Employees

Banks should develop employees' awareness on environment and social risks through training and workshops. Building awareness among staff may facilitate to raise awareness among bank's clients.

Table 9: Employees' Awareness Ratio (Percentage)

Year	Islamic Banks		Conventional Banks	
	IBBL	EXIM	BASIC	BAL
2011	0.783	0.014	0.077	1
2012	0.093	0.141	0.098	1
2013	0.380	0.189	0.073	1
2014	0.545	0.084	0.068	1
Mean	0.450	0.107	0.079	1

In Table 9, about 45 percent, 11 percent and 8 percent of staff are trained with green banking in IBBL, EXIM and BASIC, respectively during study period. On the other hand, Bank Asia Ltd arranged training program on green banking for all of its employees.

5.6 Green Banking Score

Based on sustainability indicators of green banking, we analyze the performance of Islamic banks (IBs) and conventional banks (CBs) for the period of 2011-2014.

Table 10: Summary of Results (Percentage)

Sustainability Indicators		IBs	CBs
Green Budget	Green Budget to Total Asset Ratio	0.078	0.054
	Green Budget to Total Equity Ratio	0.854	0.669
Green Finance	Environmental Risk Rated Finance Ratio	2.853	0.857
	Green Finance Ratio	0.890	0.306
Efficiency in Natural Resource Use	Depleting Resource Efficiency Ratio	0.092	0.047
	Renewable Resource Efficiency Ratio	0.092	0.086
	Bank Automation Ratio	0.092	0.086
Climate Risk Reduction	Climate Risk Reduction Ratio	0.124	0.0005
Awareness on Green Banking	Employees' Awareness Ratio	0.279	0.539

Note: IBs represents Islamic Banks and CBs represents Conventional Banks

Table 10 shows that Islamic banks performed better than conventional banks in terms of green budgeting, green finance and environmental risk reduction, natural resources use and climate risk reduction. However, fewer of Islamic banks' staff are trained with sustainable banking than conventional bank as we found in our study. About 54 percent employees of conventional banks are trained, while only 28 percent employees of Islamic banks are trained on similar banking. Mention worthy is that Bank Asia Ltd as a conventional bank provided training for all of its staffs on green banking as we discussed earlier.

Table 11: Sustainable Banking Score of Islamic and Conventional Banks

Type of Banking	Green Banking (%)
Islamic Banking	0.595
Conventional Banking	0.294

Note: The value of Green Banking lies in between 0 to 1.

Finally, from Table 11, we see that Islamic Banking secured higher score (in percentage) than conventional banking. While Islamic banks scored 0.595, conventional banks scored, on an average, 0.294 which is far below than Islamic one.

6. Conclusion

Bangladesh is a Muslim majority country on one side; on the other hand, it is one of the most climate vulnerable countries in the world. Islamic way of life demands that we should lead our worldly life with necessary consumption and least damage of the ecology to the pleasure of Allah (SWT) and succeed in the world hereafter. We should take care of Allah's creatures which is our duty toward nature. In context of Bangladesh, it can be concluded that Islamic banks performed better than conventional banks in practicing green banking except expenditure on climate resilience. It is now clear that Islamic banks not only earn limited profit, but also respond to social and environmental goals like sustainability initiatives. Greater budget for green banking, higher amount of green finance, less expenditure on inventories and more careful evaluation to social and environmental risks also revealed that the Islamic banks are more socially responsible banks. Thus, we can infer that *Shari'ah*-based banking follows the built-in-sustainability principle by its operations. It is mention worthy that sustainability initiatives of IBBL is noticeably extensive than any other sample banks in our study irrespective of Islamic and conventional banking. Finally, we can say that if the Islamic altruism dominates the stakeholders' behavior, then we can move to green banking more effectively.

6.1 Major Findings and Recommendations

Though BB made all out efforts to promote green initiative in the banking industry of Bangladesh, we still observe many challenges and limitations to implement this new banking practice. [1] Lack of mass awareness is a common phenomenon, mass publicity and awareness among stakeholders is therefore required for its successful implementation. Concerned authorities including the Department of Environment (DoE) may encourage mass public to protect environmental degradation via electronic and print media. Government should coordinate with each other to speed-up green banking. [2] Bank owners are not as aware of environment as they are concerned to maximize their own profit. Bank officials therefore are primarily concerned about bank's profit; not about environmental sustainability. Government should take initiatives to make awareness among bank owners. [3] Islamic banks cannot avail the re-finance scheme facilities offered by BB due to interest based procedure. BB should provide *Shari'ah* complaint re-finance scheme to Islamic banks so that those socially responsible banks may enjoy this scheme. [4] Like credit risk grading (CRG), quantifying environmental risk rating and practicing it in different banks is a prime challenge. Clients in many cases try to hide the environmental risks of their projects. All commercial banks should truly integrate credit risk management in the overall credit risk methodology and apply quantitative approach for environmental risk rating. In this case, banks should direct employees to screen the environmental risk strictly while they sanction the fund for projects. [5] Irrespective of Islamic and conventional banks, lack of coordination among stakeholders is a common phenomenon. Study revealed that green banking initiative is still facing challenges by many agencies. For instance, collection of required documents from Department of Environment (DoE) and other concerned authorities are a hassle and time consuming, which often disrupts client's business to run and bank to sanction fund. Government should, therefore, ensure a strong coordination among stakeholders including clients, bankers, entrepreneurs, government and international development agencies etc. [6] It is noteworthy that most of the poor but climate vulnerable community in our country are not aware about climate risk. Demand for CRF is therefore found insufficient. Government should penetrate into international carbon market to get climate fund and people may enjoy more fund for climate risk reduction. Government may also initiate campaigning for climate risk fund in the climate vulnerable areas. [7] Most of the green technology involves high cost of installation and maintenance. On the other hand, this technology is less viable and less profitable compared to traditional technology. This is why; entrepreneurs are not interested to replace the green technology over the traditional one. Islamic banks should introduce *Shari'ah* based contracts to invest into green technology. For instance, Islamic bank can do the *Bai-al-Murabahah* contract (with minimum margin or no margin) or they can provide *Qard-e-hasanah* to entrepreneurs for the greater interest of the society (Dusuki, et al. 2011). In the long-run, more research and development is needed to invent low cost green technology. [8] Preparing sector specific environmental policy guidelines for the banks is a big challenge. Degree and nature environmental risks differ from sector to sector, therefore, uniform sector specific guidelines and their practices should be ensured by the regulatory authority such as Bangladesh Bank. [9] Finally, most of the commercial banks including Islamic banks do not publish necessary information in their annual report. Moreover, different bank follow different format in their annual disclosure. Islamic banks should follow uniform annual disclosure in publishing green banking practices and cover necessary information to avoid uncertainty (*gharar*) from the Islamic banking industry (Dusuki, et al. 2011, pp.181-183). Accordingly, Bangladesh Bank should declare top ten banks regularly based on banks' performance.

6.2 Policy Implication

This study will carry an enormous value to academicians, bankers, policymakers and environmentalists etc. of those countries where environmental preservation and sustainability are a great concern. Audience shall understand about how the Islamic banks are more environment friendly than conventional banks in practice by this study. Readers shall also know the challenges before Islamic banks in practicing green banking in a country where traditional financial framework exists.

6.3 Future Research

Covering the whole banking industry of Bangladesh, future research is necessary for credibility of the findings. Future researchers may examine the correlation between degree of *Shari'ah* compliance and degree of green banking practices of Islamic banks. A strong correlation between them (if found by future researcher) would re-emphasize the built-in-sustainability principle of Islamic banks as the current research claims. Since the current study suffered from data insufficiencies on green banking practices, future researchers may regress green banking on various determinants by fitting a suitable econometric model.

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Exploring the Impact of Real Sector Shocks on Islamic Banking in Pakistan: A VECM Approach

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Abstract

A distinguishing feature of Islamic banking is the use of real assets in financing operations. The requirement to use real assets makes manufacturing sector an important market for Islamic banking financing operations. Manufacturing sector in Pakistan has had to cope up with surge in oil prices due to slack in domestic oil production and rise in imported oil prices. In this study, we use quarterly data for the period 2006-2016 and apply Vector Error Correction Model (VECM). We want to find how external shocks to the economy and shocks to international crude oil price and manufacturing output affects financing, non-performing loans and profitability of the Islamic banking industry. Our results indicate that a shock in large scale manufacturing index has an increasing effect on financing and investments, while a shock in exchange rate has a declining effect. Moreover, our findings reveal that a shock in large scale manufacturing index has an amplifying effect on non-performing loans, but a shock in exchange rate does not affect non-performing loans by much. We also show that a shock in oil price has a dampening effect on non-performing loans. Finally, for profitability, our analysis highlights that a shock in exchange rate and international oil price has a declining effect on ROE, whereas a shock in LSM index enhances profitability.

Keywords Islamic Banking, Real Sector Shocks, Financial Intermediation, VECM

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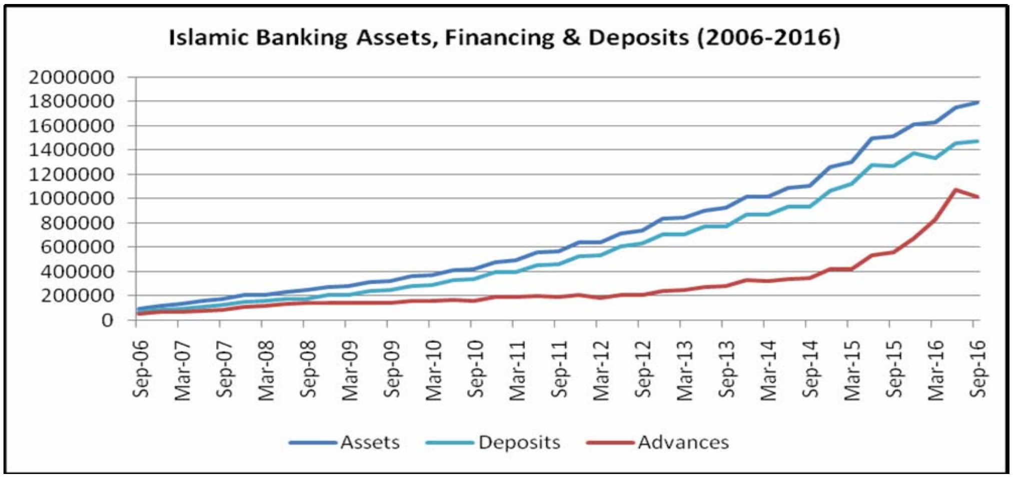
1. Introduction

The first phase of Islamic banking in Pakistan during the 1980s under the patronage of ex-President Mr. Zia-ul-Haq was met with little success in terms of major expansion. However, with increased participation of Shari'ah scholars in the policy making, product design, audit and supervision, the second phase of Islamic banking since 2002 has seen impressive and consistent growth. Now, Islamic banking in Pakistan is an established industry with 12% market share achieved in just over a decade. By year-end 2015, total Islamic banking assets in Pakistan stood at Rs 1.3 trillion while total Islamic banking deposits stood at Rs 1.1 trillion.

Figure 1 presents the trend in total assets, total deposits and total financing in Islamic banking in Pakistan based on quarterly data for the period 2006-2016. It can be seen that the growth is uninterrupted and more pronounced since 3QCY10. However, the gap between deposits and finance has widened since 2009. Slow growth in manufacturing sector due to security and energy crisis has partly contributed to this. On the other hand, stronger relative growth in deposits as compared to financing has contributed to the lower finance to deposit ratio.

Figure 1: Progress in Islamic Banking in Pakistan

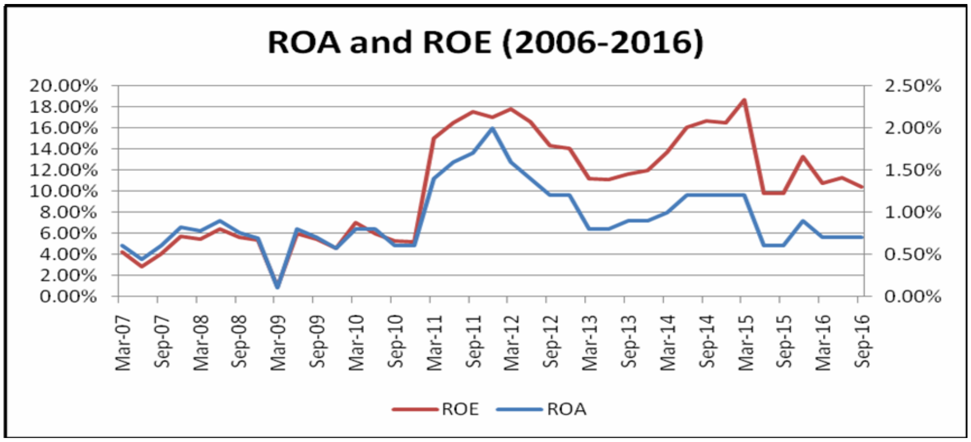


Source: State Bank of Pakistan, Islamic Banking Bulletin Various Issues

The compound annual growth rate (CAGR) for total assets has remained at 33.67% during 2006-15. During the sub-periods, CAGR for total assets has remained at 41.74% during 2006-10 and 25.89% during 2011-15. The CAGR for total financing has remained at 29.68% during 2006-15. During the sub-periods, CAGR for total financing has remained at 30.72% during 2006-10 and 33.64% during 2011-15. Finally, the CAGR for total deposits has remained at 36.47% during 2006-15. During the sub-periods, CAGR for total deposits has remained at 46.90% during 2006-10 and 27.46% during 2011-15.

In Figure 2, we present the time series of return on equity (ROE) and return on assets (ROA). The y-axis on the left measures the magnitude of ROE, while the y-axis on the right measures the magnitude of ROA. We can see that both profitability measures have moved in tandem. During the early periods, most of the full-fledge Islamic banks were not earning positive net profits. Thus, the ROE and ROA have remained lower until about 2010. Thereafter, during 2011-2014, the industry has witnessed high profitability. Lately, since 2015, the profitability has gone down despite decrease in policy rate, inflation as well as oil prices.

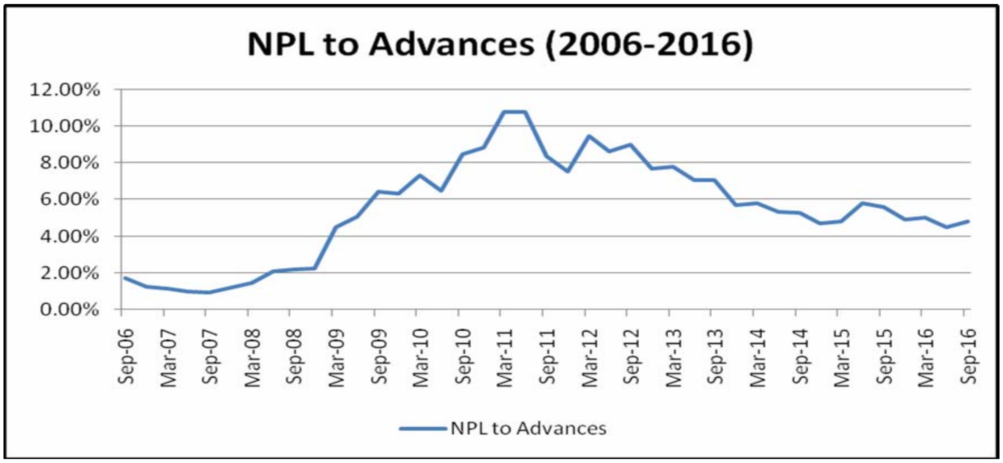
Figure 2: Profitability in Islamic Banking in Pakistan



Source: *State Bank of Pakistan, Islamic Banking Bulletin Various Issues*

In Figure 3, we see that NPL to advances ratio has remained below 8% throughout 2006-16 except during the two year period from 3Q2010 to 3Q2012. Due to the asset backed operations and products in Islamic banking, the NPLs have remained in control. Since 2013, we observe a declining trend possibly due to low oil prices, increase in real sector growth, lower inflation and stabilization of exchange rate against USD.

Figure 3: NPL to Advances in Islamic Banking in Pakistan

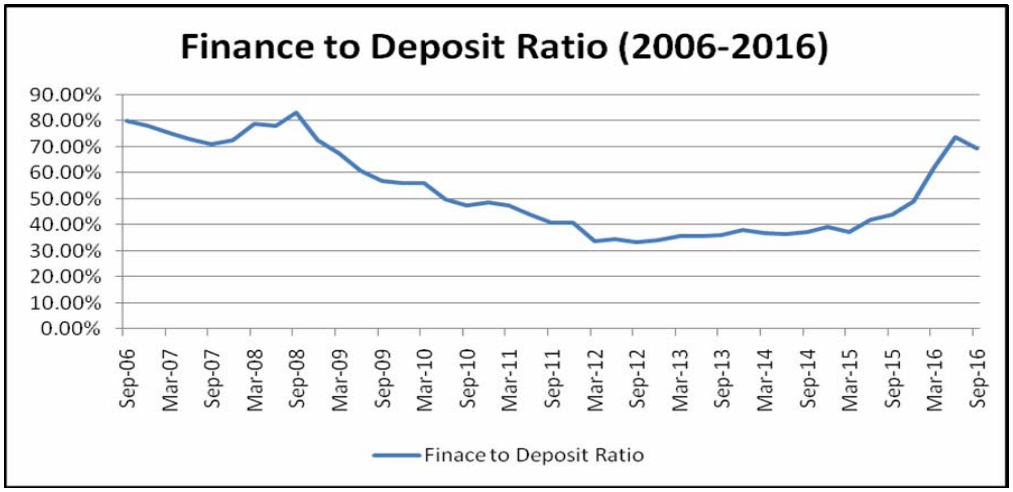


Source: *State Bank of Pakistan, Islamic Banking Bulletin Various Issues*

In Figure 4, we observe the time series of finance to deposit ratio. In Islamic banking, deposits are the first point of contact for most of the customers when they get convinced about using Islamic banking. But, due to the limited product structures and asset backed nature of finance, Islamic banks cannot provide finance for credit cards, personal loans and working capital finance where no asset is involved and the funds are not needed to buy an identified asset. Appreciably, following the principles of Shari'ah as laid down by respected scholars, takes more precedence as compared to commercial concerns. That is why, flexible and commercially viable product structures like Bai-Inah and Tawarruq are not used in Pakistan usually because of their incongruent nature with Shari'ah.

Since the consumer credit crunch in 2008, the finance to deposit ratio has steadily declined to reach 35% by 2012. But, since 2015, the finance to deposit ratio has steadily increased to cross 70% by 3Q2016. The development of new product structures like running Musharakah and positive developments in macroeconomic outlook, especially the lower policy rate, inflation and oil prices have provided impetus to the revival of finance to deposit ratio.

Figure 4: Finance to Deposit Ratio in Islamic Banking in Pakistan



Source: *State Bank of Pakistan, Islamic Banking Bulletin Various Issues*

2. Brief Review of Related Empirical Literature on Islamic Banking

In this section, we give a brief review of the empirical literature which looks at how Islamic banking affects or is affected by real sector and monetary sector shocks. Most of the empirical literature has focused on East Asia, GCC and South Asia. For Indonesia, Ayuniyyah et al. (2013) use VECM framework by employing monthly data of industrial production index, consumer price index, total Islamic deposit and its return, total Islamic financing and its return, money in circulation and Islamic Central Bank Certificate, from January 2004 until December 2009. The findings suggest that all Islamic variables have significant impact on the real sector growth. Pratama (2015) conclude that shocks of macro variables only give little effect on the performance of Islamic banking.

In another study, Yusof & Bahlous (2013) conclude that Islamic banking contributes to economic growth both in the long run and in the short run for both GCC countries and the selected East Asian countries. Nevertheless, in the short run, Islamic banking contributes more to economic growth in Malaysia and Indonesia as compared to the GCC countries. Observing the effect of monetary policy shocks on Islamic banking deposits, Affandi & Tamanni (2010) find that Islamic banking deposits in Indonesia are not sensitive to monetary policy changes. They also conclude that Indonesian Islamic banks are resilient to financial crisis. In a study for Malaysia, Majid & Hasin (2014) employ an autoregressive distributed lag (ARDL) bound testing approach and innovation accounting approach. They use quarterly data spanning from 1991:Q1 to 2010:Q4. The study documents that Islamic financing channel for monetary transmission exists in Malaysia.

For Pakistan, Naveed (2015) show that Islamic banks are not sensitive to monetary policy shocks in Pakistan. He concludes that interest rates did not have much impact on Islamic banks. It could be due to the fact that interest rate benchmarks are used for pricing, but once the price is locked, the realized profits are based upon the price in the contract and intermittent movements in interest rates do not alter the price of the Islamic banking contracts.

3. Research Methodology

In this study, we are interested to see how Islamic banking is affected by real sector shocks. Specifically, we want to find how external shocks to the economy and shocks to international crude oil price and manufacturing output affects financing, non-performing loans and profitability of the Islamic banking industry.

We use exchange rate (USD per PKR) for incorporating external shocks to the economy. We also take international crude oil prices and domestic large scale manufacturing sector (LSM) output index value. For the Islamic banking, we take financing and investments, non-performing loans as well as return on equity. All the data is based on quarterly frequency. We cover the period from third quarter of 2006 to third quarter of 2016.

4. Data Analysis

First, we check stationarity of the variables at levels using standard tests recommended by Dickey & Fuller (1979), Phillips & Perron (1988) and Elliot et al. (1996). We find that all variables are non-stationary at levels, but they are stationary after taking first difference. All variables are found to be integrated of order one, i.e. I (1). Therefore, we choose vector error-correction model (VECM) approach which is used to model the stationary relationships between multiple time series that contain unit roots.

We use Schwarz's (1978) criteria, known as Schwarz's Bayesian information criterion (SBIC) to decide about lag length. SBIC suggests that we should include one lagged term. Next, we determine the number of co-integrating equations in a VECM based on Johansen's (1995) maximum likelihood estimator of the parameters of a co-integrating VECM. We fail to reject the null hypothesis of two or fewer co-integrating equations at the 1% level of significance. Thus, we estimate the VECM with one lag and two co-integrating equations.

First, we run 6 model equations for each of the variable. In each model equation, there are three parameters including a constant and two error correction terms. All the 6 model equations are jointly significant. The two co-integrating equations are also jointly significant. Adjustment parameters in each of the model equations are also jointly significant. The coefficient of adjustment parameters are shown in Table 1. Most of them are negative and below unity. The variables used are as follows: 1) Log of exchange rate (lexrate), 2) Log of LSM index value (llsm), 3) Log of crude oil price (lprice), 4) Log of financing and investments (lfininv), 5) Log of non-performing loans (lnpl) and 6) Return on equity (roe).

Table 1: Adjustment Parameters

Equation	Parameters	Chi-Square	P-Value	Alpha (Error Correction Term)	
				Equation 1	Equation 2
D_lexrate	2	11.10	0.00	-0.3345*	-0.0574
D_llsm	2	13.56	0.00	-0.4344	-0.6236*
D_lprice	2	7.63	0.02	-1.2959*	0.27609
D_lfininv	2	9.29	0.01	-1.0946*	-0.2847**
D_lnpl	2	19.97	0.00	-0.1101	0.83172*
D_roe	2	8.49	0.01	-0.2803*	-0.0406

*Here, *shows significance at 5% level and ** shows significance at 10% level*

The coefficients from the two co-integrating vectors are given in equation (1) and (2).

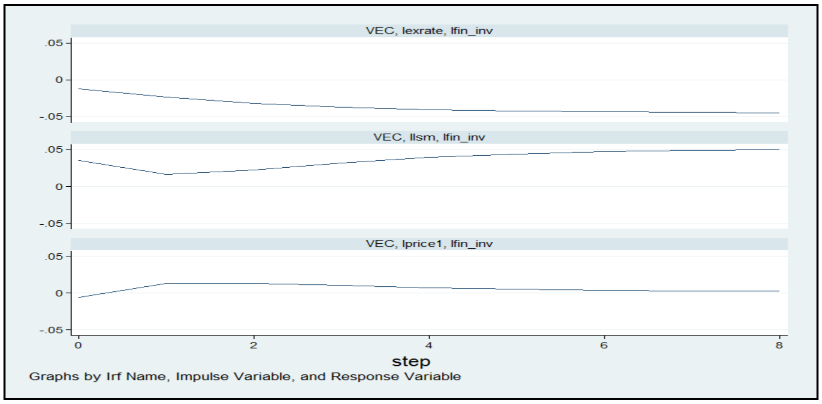
$$\text{lexrate} - 0.0004\,\text{lprice} - 0.1747\,\text{lfininv} - 0.0634\,\text{lnpl} + 1.205\,\text{roe} - 1.793 \quad \text{--- (1)}$$

$$\text{llsm} - 0.1178\,\text{lprice} - 0.1621\,\text{lfininv} - 0.0186\,\text{lnpl} - 0.0864\,\text{roe} - 1.919 \quad \text{--- (2)}$$

To check the model diagnostics, we test the null hypothesis that the disturbances in a VECM are normally distributed based on Jarque-Bera test. Results comfortably point towards normal disturbances. Next, we implement a Lagrange-multiplier (LM) test for autocorrelation in the residuals of VECM. The test confirms that there is no autocorrelation and so that we can infer that there is no evidence of model misspecification. Lastly, we find that the model is exactly identified.

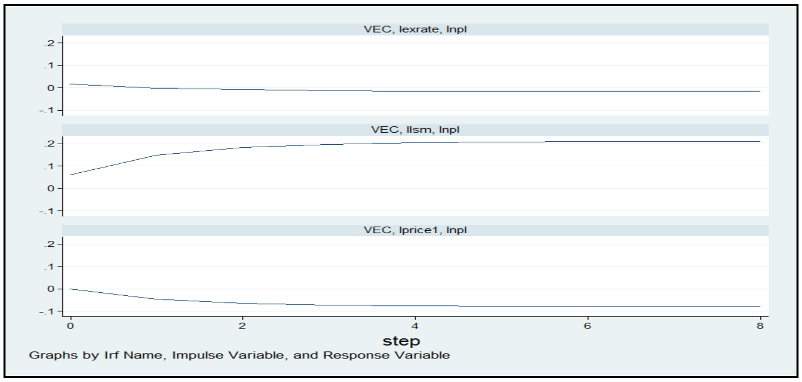
Next, we are interested to look at the impulse response functions (IRF) to observe the effects of shocks to the response variables. IRF essentially maps out the dynamic response path of a variable due to a one-period standard deviation shock to another variable. In Figure 5, we look at the effect of shock in log of exchange rate (lexrate), log of LSM (llsm) and log of oil price (lprice) on log of financing and investments (lfininv). A shock in log of exchange rate has a declining effect on log of financing and investments. It is intuitively appealing since increase in exchange rate makes imports expensive and hence, it can affect the export competitiveness of producers who are depending on capital goods imported in the country. Thus, this decrease in firms' competitiveness will shrink the market for Islamic banks which are looking to provide finance to the real sector. Secondly, we note that a shock in log of LSM index has an amplifying effect on log of financing and investments. Higher manufacturing production will improve the financing portfolio for Islamic banks which prioritize manufacturing sector due to the asset backed nature of their operations and product structures. Finally, we note that a shock in oil price mildly increases log of financing and the increase dampens after one quarter. This is plausible since import related trade finance operations provide short term finance for one to two quarters usually and the effect of oil price is felt more after one quarter. In the period of study, oil prices went up alongside high import growth which in turn boosted trade finance operations, but subsequently, this dampened domestic finance for production due to lower manufacturing sector competitiveness.

Figure 5: Impulse Response Functions for the Response Variable Log of Financing



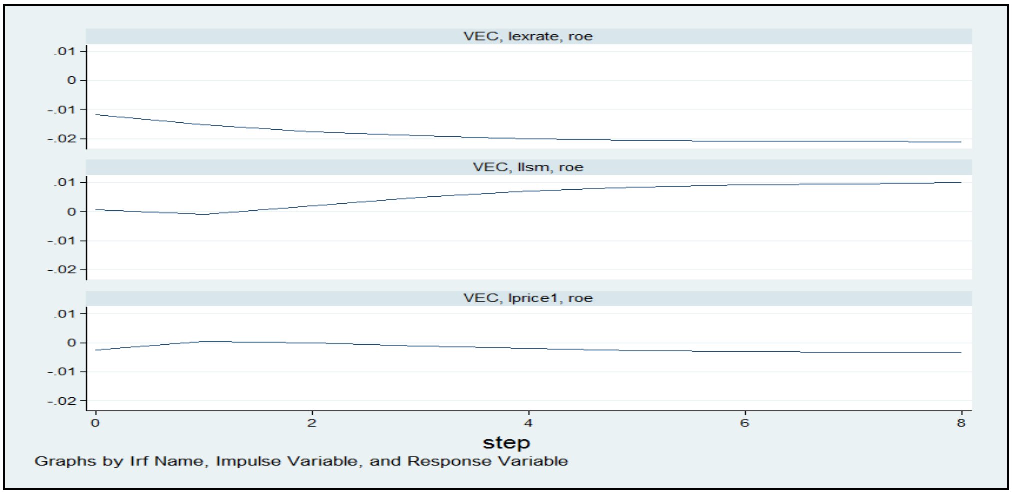
In Figure 6, we look at the effect of shock in log of exchange rate (lexrate), log of LSM (llsm) and log of oil price (lprice1) on log of NPL (lnpl). A shock in log of exchange rate does not affect NPL by much. This is probably due to the ‘Salam’ based currency products used in treasury and trade finance products through which the currency risk is hedged. Secondly, we note that a shock in log of LSM index has an amplifying effect on log of NPL. As we saw in Figure 1, a shock in log of LSM increases financing, so, it is plausible that it will also increase NPL. Finally, we see that a shock in oil price has a dampening effect on NPL. It can be explained by the fact that in response to oil shocks, the central bank had adopted tight monetary policy to stabilize cost-push inflation. Thus, the commercial banks had moved for safer avenues to park their liquidity in Sukuk or other investments. Thus, the NPL had remained lower due to the safer approach adopted in providing finance. Nevertheless, the downside of this is that the finance to deposit ratio has remained lower for the Islamic banking industry.

Figure 6: Impulse Response Functions for the Response Variable Log of NPL



In Figure 7, we look at the effect of shock in log of exchange rate (lexrate), log of LSM (llsm) and log of oil price (lprice1) on return on equity (ROE). A shock in log of exchange rate has a slightly dampening effect on ROE which increases with time. It is intuitively plausible since exchange rate volatility affects the contracts where price of the asset cannot be altered once it is agreed upon in the sale contract. Thus, fluctuation can lead to change in the final profit earned on the fixed price sale contracts. Secondly, we note that a shock in log of LSM index has an amplifying effect on ROE. This is plausible since higher production in manufacturing index will lead to higher chances of repayment and more financing offered to the clients. Finally, we observe that a shock in log of oil price has a declining effect on ROE. This is in line with the fact that oil price shocks affect mostly the manufacturing sector. It also affects the chances of repayment as well as fluctuation in final profit on the Murabaha sale since the agreed upon price cannot be altered subsequently.

Figure 7: Impulse Response Functions for the Response Variable ROE



Conclusion

In this study, we wanted to find how external shocks to the economy and shocks to international crude oil price and manufacturing output affects financing, non-performing loans and profitability of the Islamic banking industry. Our results highlighted that a shock in large scale manufacturing index has an increasing effect on financing and investments, while a shock in exchange rate has a declining effect. In addition to that, we showed that a shock in log of LSM index has an amplifying effect on log of NPL, while a shock in exchange rate does not affect NPL by much. We also showed that a shock in oil price has a dampening effect on NPL. Finally, we presented evidence showing that a shock in exchange rate and international oil price has a dampening effect on ROE, whereas a shock in LSM index amplifies ROE. The policy implication of our results is that there is a need to focus on resolving energy crisis which can improve competitiveness of manufacturing sector. The recent decline in international oil prices and cut in policy rate by the central bank due to significant decline in inflation bodes well for Islamic banking financing operations in the future.

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Maqasid-al-Shari'ah and Debt Financing Contracts: Some Observations

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Abstract

According to advocates of Islamic banking, the Shari'ah compliant debt contracts are the right call in addressing both the issue of asymmetric information and 'fairness and justice in contrast to the standard debt contract used in the conventional banking. In this paper, we discuss the Shari'ah principles that are used in the product management with respect to Shari'ah compliant and controversial contracts. In addition to it, we assess the debt financing contracts in terms of consequences, including financialization and risk-sharing. The controversial contracts are not good at resolving the issue of risk-sharing and may lead to adverse macroeconomic effects similar to the standard debt contract. The Shari'ah principles agreed by all schools of thoughts may be best in ensuring limitation on the financialization and as well as enhancing risk-sharing.

Keywords: Debt Contract, Shari'ah Compliant Debt Contracts, Controversial Contracts, Risk-Sharing

Introduction

The appearance and growth of Islamic finance as an alternative system to the conventional financial system made everyone curious. According to (Dar & Azami,

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2016), the volume of Islamic finance is over USD 2.143 Trillion and yet the Islamic financial system requires more than 25 years to catch up with the industry demands. As shown in figure1, the global leader in the Islamic Banking and Finance are Malaysia, Iran, Saudi Arabia, Pakistan, Kuwait, Jordon, Egypt, Turkey, Indonesia, Qatar, Bahrain, and Bangladesh. The Islamic finance industry is largely concentrated in banks, particularly full-fledged Islamic. There is high potential and scope for the Islamic finance to grow, particularly for the key players, including Malaysia, Saudi Arabia, and Malaysia, according GIFR report 2016. However, according to opponents, the Islamic banking is given undue gratitude for the Islamic banking heavily rely on the debt-looking contracts and is yet to show success in adopting classical equity contracts (Aggarwal & Yousef, 2000; Chong & Liu, 2009; Khan, 2010). Currently, more than 90% of the Islamic banking assets are in terms of debt-like instruments, such as Murabahah, Ijara, Istisna, Salam, Sukuk and Tawarruq, whereas the equity instruments hold a little space on the balance sheets (Chong & Liu, 2009; Khan, 2010; Kuran, 1995; Lewis, 2008; Visser, 2013). One of the main reasons is that in the presence of asymmetric information problem, the standard debt contract becomes inevitable and the Islamic banks have no choice but to trust in debt-looking contracts (Aggarwal & Yousef, 2000; Beck, Demirgüç-Kunt, & Merrouche, 2013; Visser, 2013).

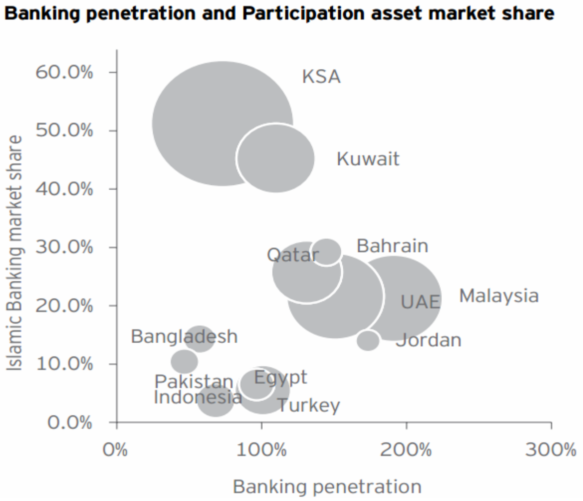

FIGURE 1 Islamic Banking Concentration in Countries, Source: World Islamic Competitive Report 2016

According to advocates of Islamic banking, the problem of asymmetric information together with the market structure and legal constraints might have induced practitioners towards accepting debt-like instruments, but these instruments are Shari'ah compliant (El-Gamal, 2000; Engku Rabiah; Uusmani, 2002). Moreover, the securities filtered by Shari'ah are not only distinct in terms of fairness and justice, but are also different from an economic perspective (Iqbal & Mirakhor, 2011).

Thus, in this paper, we aim to address the issues of assessing the role of Shari'ah compliant and controversial debt contracts in achieving the goal of 'fairness and justice' and financialization. The concept of fairness and justice can be interpreted as a fair distribution of risk on all the parties involved in the contract. This condition is violated if the contract is identical to standard debt contract in distribution of profits. Whereas, the concept of financialization, according (Krippner, 2004) is the "*Pattern of accumulation in which profit making occurs increasingly through financial channels rather than through trade & commodity production".*The profit making through financial channels instead of trade and commodity production increases threats to financial stability particularly in the time of recessions. The Shari'ah principles—as it explained at length in this text—restricts the financial channels by introducing a real asset in the contract. The standard debt contract violates both the concepts of 'fairness and justice' and financialization by obliging borrower for fixed returns and through facilitating the multiple debt creation process.

The rest of the paper is organized as follows. Section 2 contains a discussion of the basic sources and legal maxims that are used in the Islamic financial product development. It also explains the reasons for variation according to the four schools of thought in Shari'ah. Section 3 explains the Shari'ah compliant and controversial products and their respective effectiveness in resolving asymmetric information problem. The economic consequences of the Shari'ah compliant and controversial products are explained in section 4. Finally, section 5 concludes the paper.

Basic Sources, Differences and Legal Maxims

Islamic banking as a financial institution, like any individual Muslim, has to obey some covenants of do's and Don'ts by the Shari'ah. For instance, the prohibition of Riba (usury), Gharar (excessive risk) and Mayser (illegal or prohibited activities). However, consistent with the objective of this paper, we only focus on the Riba or usury. The Riba is explicitly prohibited, as revealed in the Quran and explained by the last Messenger (peace be upon him). The scholars have identified the prohibition of Riba in Quran as "Riba al-Nasiah", and the Riba explained by the Messenger (peace be upon him) as "Riba al Fadhl". In the Riba al-Nasiah contract (Riba al-jahiliyyah—pre-Islamic) the lender at the maturity of debt gives the option to the borrower by saying that whether the lender likes to return the debt orwould like to swap it for another larger debt of longer maturity period. As explained by (Obaidullah, 2005), the difference between the value of debt at the time of issuing loan and maturity is the amount of Riba. This is evident in the time-based operations of conventional banking when the debt is compounded after the maturity. The prohibition of Riba al-Nasiah and other social norms that existed in the time of jahilliyya were prohibited gradually. The Riba al-Fadhl (i.e. Riba in Exchange) explained by the Messenger (peace be upon him) in a famous Hadith of six commodities as:

> *"Sell gold for gold, silver for silver, wheat for wheat, barley for barley, date for date, salt for salt, in the same quantities on the spot; and when the commodities are different, sell as it suits you, but on the spot" (Muslim).*

Among the six commodities, gold and silver represent money since they were used as a medium of exchange, a unit of account and store of value. Thus, the gold and silver can be grouped together because they share the same attributes, likewise, the rest of the four commodities could be grouped. According to (Engku Rabiah) the Muslim jurists have deduced the following rules of promptness of delivery and equivalence, from the above Hadith that should be observed while trading the commodities. Firstly, in a trade of commodities from the same group and kind, the exchange should involve exact equivalence and the prompt delivery, such as gold for gold or wheat for wheat. Secondly, commodities within the same group, but of a different kind only need to fulfill the condition of prompt delivery only the quantity could vary, such as gold for silver, or wheat for barley. Finally, commodities from different groups and kind could be traded freely with no conditions fulfilling, such as gold for wheat, or silver for barley.

1.1 Sources and Differences

The basic principles of Islamic banking are derived from a branch of Shari'ah the *Fiqh al Mu'amalaat,*(Ahmad, Osmani, Shahed, & Karim, 2010) by way of *usulal fiqh* (i.e. Methodology in Islamic jurisprudence). A financial contract must pass through the process of *usulal Fiqh*in order to be legitimate according to the Shari'ah. The sources of Shari'ah, according to (Kamali, 1996) are two kinds, the revealed and non-revealed. The clear injunction and the general principle are that the revealed sources have permanent verdicts. Whereas the non-revealed sources, namely the *Ijma* (general consensus) and *Qiyas* (analogical reasoning) were developed later. (Lahsasna, Hassan, Hassan, & Mahlknecht, 2011) have categorized the four sources, the Quran, Sunnah, Ijma and Qiyas as primary sources. The inclusion of Ijma and Qiyas in the primary sources is just because of their importance and because they have been accepted as a major source by way of consensus.

The secondary sources, according to (Lahsasna et al., 2011) are also known as disputed sources, support the primary sources in making decisions in case the first category is not applicable. This is because the Quran and Sunnah, according to (Kamali, 1996), contain specific injunctions and general guidelines on law and religion, and these guidelines, unlike substantive law, are not so much concerned with the methodology; therefore, these guidelines can be used as raw material in the development of the law. This is the flexibility that jurists enjoy within the boundary of Shari'ah while approving or disapproving the financial contract. The secondary sources are subject to different interpretations and they include, *Istihsan* (juristic preference), *Muslahah Murslah* (public interest), *Urf* (custom), *Qawl al Sahabi*(the opinion of the companion), *Sad al darai*(blocking the law full), *and Istishab* (presumption of continuity). The *usulal Fiqh*, according to (Kamali, 1996), is about the sources of Islamic law, their order of priority and methods involved in deducing laws from the sources. The secondary sources, as mentioned before are disputed because the four imams and their followers deduce the rules using these sources in different order. Therefore, for any Shari'ah rule, the order of priority may result in differences and a financial contract that is considered legitimate according to one school of thought may very well be declared as prohibited according to another school of thought. (Philips, 1988) has explained the methodology of the Imams in deducing rules of Shari'ah, the summary of which is given in table 1.

The primary sources for all the Imams remain same, as it is the consensus that the Quran and Sunnah are revealed and independent sources. The differences in the secondary sources are, however, of the following two types, a) the order of priority, b)

Increased or decreased a number of sources. The 'order of priority' varies among Imams (RA), for instance, the '*Ijma of Sahaabah'* is the principal source for Imam Abu Hanifah, Imam Shafi'i, and Imam Ahmad (RA) whereas, according to Imam Malik (RA) the '*Amal* (practice) *of Madeenites*' is the principal source. Likewise, regarding a set of sources, the Imams have a differenceinopinion, for instance, Imam Abu Hanifah and Imam Malik considers the *Urf*(local custom in a given region), as a secondary source while Imam Shafi'i and Imam Ahmed do not consider the source of law. Thus, it can be realized that the difference in opinion is based on the sources among Imams.

Table 1 Order of Priority of Secondary Sources of Fiqh al Usul

Priority	**Imam Abu Hanifah**	**Imam Malik**	**Imam Shafi'i**	**Imam Ahmad**
		Primary Sources (Revealed Sources)		
1	The Quran	The Quran	The Quran	The Quran
2	The Sunnah	The Sunnah	The Sunnah	The Sunnah
		Secondary Sources (Disputed Sources)		
3	Ijma of the Sahaabah	Amal (practices) of the Madeenites	Ijma	Ijma of the Sahaabah
4	Individual Opinion of the Sahaabah	Ijma of the Sahaabah	Individual Opinions of the Sahaabah	Individual Opinions of the Sahaabah
5	Qiyas	Individual Opinion of Sahaabah	Qiyas	Hadeeth Da'eef (Week Hadeeth)
6	Istihsaan	Qiyas	Istishaab (linking)	Qiyas
7	Urf	Custom of Madeenites		
		Istislaah (Welfare)		
		Urf (custom)		

Source: Based on the explanation by Bilal Phillips in his book (*the evolution of Fiqh*), *Sahaabah* (plural-*Sahabi*): the companions of the Messenger (peace be upon him).

This is evident in the rulings of current jurists belonging to regions of a different school of Shari'ah as shown in Table 2. For instance, the Islamic finance in Pakistan and Bangladesh is based on the rulings of Imam Abu Hanifah for the jurists of the Pakistan and Bangladesh derive the rulings based on the injunctions of Imam Abu Hanifah. The Islamic finance in Malaysia, Indonesia and Brunei is based on the injunctions of Imam Shafi'i. While the Islamic finance in the Middle East is based on the injunctions of Imam Ahmed (RA). Thus, the rulings could vary across time and space depending on the customs of the region and importantly the legal and economic conditions of the origin (El-Gamal, 2007). For instance, according to El-Gamal, Imam Shafi'i developed two entirely different systems in Iraq and Syria because of the difference in the legal and economic conditions of the two countries.

Table 1 the Four School of Thoughts across Countries

Hanafi School	Maliki School	Shafi'i School	Hanbali School
Afghanistan, Pakistan, Central Asia, India, China, Bangladesh, Turkey	Tunisia, Algeria, Morocco, Spain, Egypt, Mauritania, Nigeria, West Africa, Kuwait	Indonesia, East Africa, Southern, Arabia, South East Asia, Yemen, Malaysia, Singapore, Philippines, Somalia, Djibouti, Tanzania, Kenya	Africa, Egypt, India, Arabian Peninsula

Source: Based on the details provided in Ahmed et al 2010

1.2 Legal Maxims

The objective of Shari'ah (*Maqasid al Shari'ah*) is to ensure the well-being of people. This can be understood from the statement of Imam Al-Ghazali (RA), following (Ahmad et al., 2010) as "The very objective of the Shari'ah is to promote the well-being of the people, which lies in safeguarding their faith '*din',* their self '*nafs'*, their intellect '*aql'*, their posterity *nasl* and their wealth *mal*. Whatever ensures the safeguard of these five serves the public interest and is desirable, and whatever hurts them is against the public interest and its removal is desirable".

The well-being of people can be observed in the Legal Maxims (*al-Qawa'id al-Fiqhiyyah)* of Islamic jurisprudence. The legal maxims are general principles on various themes, that are derived from the intensive reading of the rules of fiqh (Kamali, 1989) p.7 and (Ahmad et al., 2010). Although, the number of legal maxims is in the hundreds, for instance, in the works of al-ashbahwa al-nazair, over 200 legal maxims have been collected, out of which one hundred have been adopted in the introductory section of Ottoman Mujjallah (Kamali, 1989). However, there are some well-known legal maxims, such as i. "Acts are judged by the intention" (*Al-umuru bi-makasidiha*), ii. "Certainty is not being overruled by doubt" (*Al-yaqinu la yuzulubish-shakk*), iii. "Harms must be eliminated" (*Ad-dararuYuzal*), iv. "Hardship begets facility" (*Al-mashaqqatutujlab at-taysir*), and v. "Custom is the basis of judgement" (*Al-adatumuhakkamatun*) vi. "Revenue goes with liability" (*Al-Kharaj bi-al-daman*)(Ahmad et al., 2010; Lahsasna et al., 2011; Obaidullah, 2005).

Kamali states that the legal maxims as part of *usul al-qanun*, are based on the rationalist doctrine that might constitute the secular law such as Roman Law or British Common Law. However, sources of Shari'ah, as shown in Table 1, are permanent in nature and might not be overruled by the rationality or any social condition. Nevertheless, Kamali points towards that fact that, there is much flexibility in the usul al-Fiqh that allows for necessary adjustment in the law to accommodate social change, keeping in view that the sources of Shari'ah can neither be abrogated nor could they be subjected to limitations of time and circumstances.

Debt Financing and Controversial Contracts

1.3 Debt Financing Contracts

Besides, the classical contracts of Musharakah and Mudarabah, there are other financial instruments that are accepted, such as Murabahah, Ijara, Salam, Istisna, and Istijrar etc. However, unlike a partnership-based contracts, the Murabahah, Ijara, Salam, Istisna and Istijrar including others are debt based financial contracts therefore, they are often known as debt financing contracts. Unlike, debt contract used in the conventional banking—wherein the loan is issued directly—the Islamic banking issues the debt via real asset. This injunction is based on the verdict of the Quran in [2:275], that Allah (SWT) has permitted trade and forbidden *riba*. As the trade or sale involves the exchange of properties that include services and property rights, therefore, in Islamic finance the exchange of real asset is required. (El-Gamal, 2006) p. 66, explains the sale contract according to four Imams as, according to Hanafi's and Malikis, the sale is concluded and binding on both the parties on the expression of offer and acceptance. Whereas, according to Shafi'is and Hanbalis the buyer and seller have the option of rescinding the sale contract as long as they have not parted from the contract session (*khiyar al-Majlis)*. El-Gamal, further, asserts the opinion of Shafi'is and Hanbalis by supporting it with an authentic Prophetic tradition: "*The two parties to a sale have the option [to rescind it] as long as they have not parted, and one of them may give the other the option for a longer period. (Bukhari and Muslim)*

The Murabahah contract in the history of Islamic banking is a turning point after which the Islamic banking experience enormous growth (Siddiqi, 2006). The Islamic bank unlike a conventional bank has to be a part of the selling and purchase of goods as prescribed by the Shari'ah(Ayub, 2002).Therefore, in the credit sale [Bai' Mu'ajjal], such as the Musawamah and Murabahah, the Islamic bank plays a role of a trader. For instance, in Musawamah the parties bargain on the price of good and the sale takes place, the goods are handed over, while the payment is deferred (Usmani & Zubairi, 2002). With a little difference in the Murabahah, the financier has to disclose the actual price of good to the buyer. For instance, a bank in the Murabahah contract purchase a commodity on the request of borrower discloses the price at which the bank bought the commodity and the profit margin. The inclusion of real asset in the contract differentiates the credit sale from interest-based debt because trade is Halal. Moreover, in line with legal maxim "revenue goes with liability" and the inadmissibility of "two contracts in one" ensures that the bank assumes the risk of change in price and the possibility of breakage. In addition to it, the restriction avoiding Mayser (illegal or prohibited activities) ensures that the bank is not allowed to finance prohibited things such as pork, wine or other illegal activities.

The Murabahah contract is unanimously considered as Halal in the four schools of thoughts. For instance,(Ayub, 2002) states that Imam Malik mentioned the Murabahah in '*Al-Mu'watta',* the first coded book of Hadeeth by Prophet (PBUH). A well-known, Hanafi jurist Al-Marghinani defines the Murabahah as "the sale of anything for the price at which it was purchased by the seller and an addition of a fixed sum by way of profit". Ayub, carries on stating that, Ibn Qudama, a Hanbali jurist defines Murabahah as "the sale at capital cost plus a known profit; the knowledge of capital cost is a precondition in it. Finally, Imam Shaf'ie in *Kitabul Umm* described Murabahah extended it by including credit transactions. According to Ayub, the Murabahah is explained in similar words as other juristshas described. Thus, the Murabahah contract is permissible beyond all doubt.

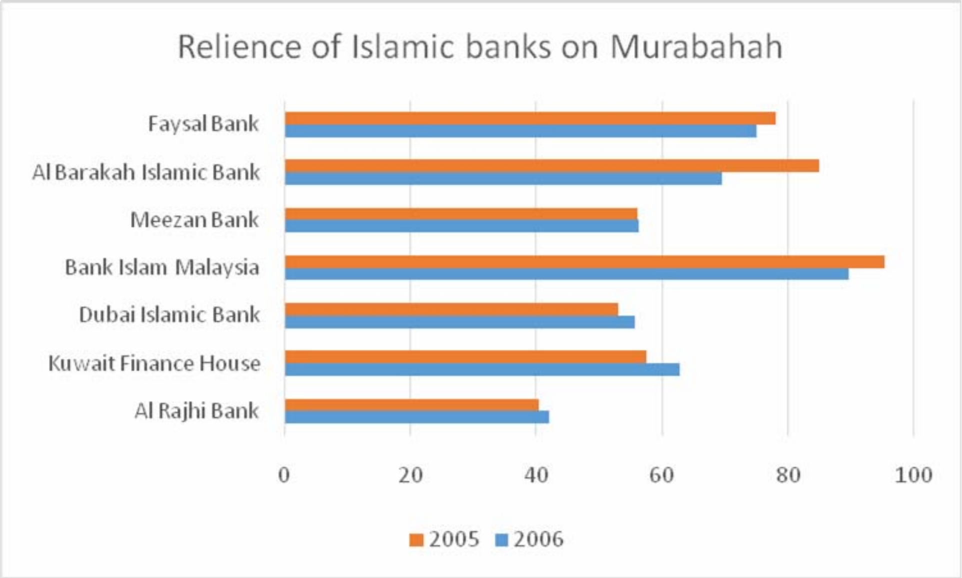

FIGURE 2 Reliance of Islamic Banks on Murabahah

1.4 Controversial Contracts

By controversial contracts, we mean contracts that are not accepted by at least one of the four school of thoughts. The innovations in the Islamic financial products is a continuous process and there are several contracts at hand to be considered. However, in the interest of time and space, we only consider the *bai al-inah* and Tawarruq contracts.

In the bai al-inah contract, a financier sells an asset to the borrower that is followed by an immediate repurchase of the asset by the financier. The bai al-inah contract is accepted by the Shafi'i scholars and is practiced in the south East Asian countries. Clearly, if the intention of both the parties involved in the contract is to fulfil the need for cash the contract becomes void, let alone the issue of combining two contracts of sale and repurchase as discussed in the section 2. The bai al-inah contracts imitate standard debt contract in risk-sharing and financialization as described in the table 3.

Likewise, in a Tawarruq contract the two contracts of sale and purchase are distinct because in Tawarruq contract the borrower cannot sell the asset to financier rather the sale contract is signed by a third party for a discounted price in cash. Therefore, it also known as a tripartite contract that involves three parties, otherwise, the contract would become bai al-inah. Tawarruq if applied in true sense might still stops financialization due to third party in the contract. However, Tawarruq may not help in stopping financialization, if there is a relationship between the financier and the third party, such that the asset again flows to the financier.

TABLE 2Shari’ah Compliant and Controversial Contracts

Contract	Risk Sharing	Financialization	Agreed by
Conventional Products			
Equity	Yes	No	All Schools of Thought
Debt	No	Yes	None
Shari’ah Compliant Debt Contracts			
Musharaka	Yes	No	All
Mudarabah	Partial	No	All
Ijara	Partial	No	All
Murabaha	Partial	No	All
Controversial or Doubtful Contracts			
Bai al-Einah	No	Yes	Shafi’i
Tawarruq	No	No	Shafi’i & Hanbali Jurists

Conclusion and Policy Implication

The Islamic banking in the classical literature seems to be a right call to the asymmetric information problem. The concept of ‘fairness and justice’ explained in the classical literature make the Islamic banking unique. However, in the presence of problems such as asymmetric information, the Islamic banking practitioners, and Shari’ah scholars soon realized that the debt-like instruments are unavoidable. With the introduction of debt-like instruments, particularly Murabahah the Islamic banking experienced enormous growth. What makes the standard debt contract and debt-like contract unavoidable and make them attractive in practice?

This paper may have succeeded in answering this question by explaining that the Shari’ah principles are helpful not only in resolving the risk-sharing problem and financialization but also address the issue of ‘fairness and justice’. However, the controversial contracts might not be a good choice and may lead to adverse effect similar to the standard debt contract. In addition to it, the doubt that makes a contract controversial, particularly the bai al inah contract should be avoided lest there are chances of indulging in doubtful things as explain by the Prophet (PBUH) in the following two narrations.

On the authority of Abu 'Abdullah al-Nu'man bin Bashir, radiyallahu 'anhu, who said: I heard the Messenger of Allah, sallallahu 'alayhiwasallam, say:

> *"Truly, what is lawful is evident, and what is unlawful is evident, and in between the two are matters which are doubtful which many people do not know. He who guards against doubtful things keeps his religion and*

> *honour blameless, and he who indulges in doubtful things indulges in fact in unlawful things, just as a shepherd who pastures his flock round a preserve will soon pasture them in it. Beware, every king has a preserve, and the things Allah has declared unlawful are His preserves. Beware, in the body there is a flesh; if it is sound, the whole body is sound, and if it is corrupt, the whole body is corrupt, and behold, it is the heart."*
>
> *(Al-Bukhari, Muslim; Translation Source: Hadith No. 6:40 Hadith of Imam Nawawi,* www.kalamullah.com)

On the authority of Abu Muhammad al-Hasan bin Ali bin Abi Talib, the Messenger of Allah say: *"Leave that about which you are in doubt for that about which you are in no doubt."*

(Al-Tirmidhi and Al-Nasai)

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Barriers to Service Quality in the Banks of Pakistan: A Comparative Study of Islamic and Conventional Banks in Pakistan with Qatar

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Abstract:

Service quality has become crucial to the banking institutions due to fierce competition. Banks may have their own environment specific barriers in procuring it. This study was the first-ever attempt to compare these barriers between Islamic and conventional banks. Primary data was collected through pretested adopted questionnaire, from the higher ranked banker. Through the technique of Cronbach Alpha, the data validity was ascertained. One sample states that biggest barrier to service quality in banking industry is Human Resources (HR) environment. While independent sample test results that Islamic financial institutions are fortunate to face expressively less barriers than Interest bearing counterparts. Except in the case of personnel hiring, Islamic banks are having less meritocracy conventional banks. It was recommended that Islamic financial institutions must hire the staff with dual intellect of finance and Sharia to serve better quality. In Pakistan the Islamic banks are having an advantage and a disadvantage as compared to those in the Arab world. Advantage is the better empowerment of its employees and the experience sharing culture in the banks while the low level of economic development in Pakistan is responsible to bring about the financial constraints to augment the barriers in their way to deliver quality of service.

Keywords: Service Quality, Islamic Banking, Dual banking.

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1. Introduction

A well-developed economic system is based on the efficient banking system of any country. It works like the heart for overall economic system and bridges the gap between the surplus and deficit parts of an economy. A sound banking system makes a sound economic system at large. IMF reports witness that in Pakistan, this industry has shown great innovations and growth since 2004. Report elucidates that on one side, the banking industry has undergone a rise in the efficiency level, but on the other side, it has clustered competency among the players of this industry (International Monetary Fund, 2004). But this is not only the tale of 2004's surroundings. The industry is still witnessing this cumulative pressure of contested rivalry by the inclusion of modern technology and by the presence of large international banks (Akhtar, Ali, & Sadaqat, 2011; Ahmad & Burki, 2010; Burki & Niazi, 2006).

This scenario had asked the bankers to satisfy their customers (Awan, Bukhari, & Iqbal, 2011), since the customer base is a key to success. Once the customer satisfaction is attained, it not only better retains the existing customers; it also inducts the positive words of mouth in the bank's favor to welcome newer customers. Moreover, the existing customers are better retained with low switching behavior (Wisner, 2001) and once their confidence is achieved, cross selling strategy can be added as a plus (Bennett & Higgins, 1988). Off course these all factors can be contributive to heighten the revenue making in the banks (Bennett & Higgins, 1988).

The need to study the issues relating to service quality has taken an even more prominence after the recent crisis of credit crunch. Due to these facts, the studies to investigate the service quality issues had been up in the past. A number of researchers have taken their own stances to view the service quality with different angles and in different environments (Karatepea, Yavasb, & Babakus, 2005; Zhou, Zhang, & Xu, 2002; zlex's Lam, 2002). Many of these studies also had their prime reseach objectives to gauge the service quality in Islamic financial institutions (Awan, Bukhari, & Iqbal, 2011; Sangeetha & Mahalingam, 2011; Taap, Chong, Kumar, & Fong, 2011). At many times, the studies have pointed out that the customers are unable to get as much in service quality as much as they expected (Taap, Chong, Kumar, & Fong, 2011). Question arises that why is it so?

What impediments render the banks unable to procure the services with the quality to meet their customers' expectations? To answer this question, the existing body of literature is silent to give a study to compare such issues in the comparison of Islamic and conventional banks. Chake & Jabnoun (2010) have studied this fact under the specific scenario of Islamic banks merely and have pointed out some issues as well as the barriers to serivce quality (Chaker & Jabnoun, Barriers to service quality in Islamic banks in Qatar, 2010). Keeping in mind that Islamic and conventional banks are the players of the same market, yet their differences are factual to give the importance to the studies making the comparison of them. Hence the Chaker & Jabnoun's (2010) study well raises the issue in the vacant literature, develops the measurment issues, but at the same time, it is stagnant to give the comparative resluts. This study takes this objective of comparing the barriers to the service quality within Islamic and conventional banking system.

This study is not only significant in filling this gap, but it also has practical significance too. As stated above, the competition has made it mandatory for the banks to advance their quality of service and this study is in the wake to highlight these barriers so that, by working on these barriers, the banks can upgrade their service quality. This practical significance takes a bigger importance under the glim impacts of crisis. This study, since addresses both the Islamic and convestional banks, hence its significance is also double fold for the both types of banks.

2. Literature Review

Chaka and Jabnoun (2010) identify the different barriers in Islamic Banks towards service quality and highlight the demographical influences on the sensitivities of these barriers. The questionnaire, which consists of 33 items were distributed in 6 Islamic Banks of Qatar among their 150 employees. However, 116 questionnaires were received with 77% response rate. The dimensions of questionnaire were resolute through factor analysis. For this purpose, t-test of one sample was used to identify scopes of service quality. Demographical variables were determined through one way ANOVA. Three proportions, lack of transformation leadership, lack of empowerment and centralization out of four were found significant towards the service quality in Islamic Banks. While in service quality, culture was found insignificant barrier through factor analysis.

Hayat et al. (2011) identified the relationship between satisfaction of customers and quality of services in dual banking system of Pakistan. This study measured different opinions and behavior of customers after receiving services of dual banking system in Pakistan. They adopted services quality model (SERVQUAL) to measure the services quality in both conventional and Islamic banking system. The data was collected from 3 conventional and Islamic banks' customers through 200 questionnaires. Analytical hierarchy process was used for the analysis of data in order to identify the interlinked relationships which exist in services quality and customers satisfaction. The results show that multidimensional services quality toward customer's satisfaction is endorsed and it has also prominence for behavior intention of customers for both banking system.

Imran et al. (2011) noted that customers feel barriers for adoption of Islamic banking system in order to get services of banks. This study made two categories of customers, non-users (customers of interest bearing banks only), users (customers of non-interest bearing banks only) and customers of both banking system. They collected the data through interview from managers of Islamic banks and also designed questionnaires for their target customers. They used factor analysis and cluster analysis for the measurement of the data. The results indicate that Islamic banks have inconvenient location of branches, small network branch system and Shari'ah principles are not completely implement in Islamic banks.

Ashfaq et al. (2010) describe a relationship regarding customers towards services quality in Islamic and conventional banking system of Pakistan. However, purpose of study was to investigate the effects of those conventional banks branches, which merge with Islamic financial institutions and started practice according to Shari'ah compliance. For this purpose, they distributed 720 questionnaires among their customers to examine this association in the customers of both financial institutions. They used stratified random sampling for data analysis. The results express that perception of customers regarding services quality from Islamic banks are relatively high as compared to conventional banks. There is substantial modification found in Islamic banks on gender (males and females) but in conventional banks, such kinds of practices do not exist.

Amin and Isa (2008) investigate the relationship through structural equation modeling (SEM) approach between customer satisfaction and perception of services quality in the Islamic banks of Malaysia. In order to investigate the services quality in banks of Malaysia, they used the structure of 6 dimensions of services qualities (SERVQUAL) scales, which consist of several variables, such as, reliability, compliance, assurance, tangibles, empathy and responsiveness. Their target customers belong to both communities (Muslims and non-Muslims), but some of the customers have dual banking accounts. The Muslim customers are highly satisfied, well aware about Islamic banking and are trying to promote this Islamic financial system as relatively compared to non-Muslim customers. However, results show a significant relationship between customers' satisfaction towards services qualities.

Kumar and Dash (2013) identified a causal relationship between customers satisfaction toward the performance of services attributes in Indian banks in terms of services quality. An index was constructed to measure the quantification of services qualities and this index was used in American Customer Satisfaction Index (ACSI) and structural equation modeling (SEM). The data was collected from the banks of Delhi-NCR through questionnaires. However, 350 survey questionnaires were circulated in the target people and response rate was 57.14%. There is positive significant relationship found between attributes of services quality and customer satisfaction and retention and it was also identified that customers satisfaction were dependent on different services quality variables.

3. Methodology

This study had the objective to explore the hindrances faced by the banks in procuring the service quality to its customers, moreover comparing these barriers between the conventional and Islamic banks. Since the study was relating to the inside issues of bank management, hence it was off course required to reach the bankers and collect primary data. It was taken as the precaution that the respondent-bankers must be of good ranks, so that they would have sufficient knowledge about inner mechanism of bank and prudently respond to the questionnaire. The study to take the high rank banking officials poses a difficulty in data collection; hence the questionnaire was used upon its features of multi- dimensional use with minimum of its cost in order to get our desire objectives (Gorrell, Ford, Madden, Holdridge, & Eaglestone, 2011), instead of going to other options like game theory.

Questionnaire used by this research was adopted from a prior study focusing on the barriers in the way of service quality to Islamic banks of Qatar (Chaker & Jabnoun, 2010). Banks were selected from both financial institutions of Pakistan. Since the service quality policies are the matter of core management of bank head offices, it was unnecessary to collect the data from a number of bankers from a single bank. The 20 respondents' data was managed from conventional banks and 23 from Islamic banks. A total of 43 officials were the respondents on aggregate. Since only high rank officials, with an attempt to not meeting more than one banker from a single bank, this sample size in this wake is not a weak or small figure.

After the data collection, it was analyzed via the techniques of one sample T-test and the independent sample T-test. One sample was run to measure the quantum of barrier to the overall banking industry of Pakistan while the independent test details the significant difference between the means of both type of banks under focus and states the means differences too. It is also worth mentioning that the factor analysis was intentionally avoided because the instrument used was a pre-tested one and secondly, we wanted to retain the constructs underlying structures as those of Chaker & Jabnoun (2010) to ensure the comparison of the Pakistani banking industry with that of Qatar. All the factors of coefficients' Cronbach alpha is more than 0.6, whereas the values of these four factors were 0.652, 0.787, 0.713, and 0.817 (Table I).

4. Results and Discussion

Table 1: Reliability and overall Mean

Variables	**Cronbach Alpha**	**Mean**	**Sig**
Empowerment	0.652	3.246	0.000
Lack of management support		2.81	0.000
Lack of financial incentives		3.95	0.000
Lack of empowerment and delegation of authority		3.05	0.000
Lack of cooperation between departments		3.65	0.000
Lack of employee's control over his/her job		2.77	0.000
"No" culture	0.787	3.341	0.000
The habit of rejecting requests		3.00	0.000
Lack of responsibility among employees		3.35	0.000
The assumption that saying no will keep the employee out of trouble		3.67	0.000
Centralization	0.713	3.476	0.000
High centralization levels		3.95	0.000

Lack of trust among colleagues		2.77	0.000
The tendency to over promise to customers		3.70	0.000
Lack of upward communication		3.49	0.000
Leadership	0.817	3.550	0.000
Lack of charismatic leadership		3.88	0.000
Lack of empathetic leadership		3.21	0.000
Lack of meritocracy (fairness) in recruitment		3.56	0.000

Table 1 summarizes all the reliability tests and means values too. It takes the data from all the sampled banks and means were collected via one sample t-test, while the Cronbach Alpha was employed to confirm the reliability of the measures. Cronbach Alpha coefficients, being bigger than 0.6 in all cases, are representing that the measures are reliable and can be subjected to further tests, results and discussion.

For overall banks, the highest mean values occur at lack of financial incentives and high centralization levels, with the magnitude of 3.95 for both of these variables. As per the questionnaire which was used to collect this data, the value 1 was representing highly disagree response and the 5 is for highly agree response. Hence, mean vale of 3.95 shows that most of the bankers agree in both of these cases. It shows that the biggest hurdles to ensuring the service quality in the banking industry of Pakistan are the Lack of financial incentives and High centralization levels.

Lack of financial incentives means that the employees in the banking sectors are not well paid for giving an extra-effort towards procuring the service quality to their customers; this lack of economic motivation leads them to be sluggish in tailoring the service quality. Off course, the financial and economic motivation factors do a lot to encourage the workers for better performance? Existing literature also establishes a relation of service quality to financial gains in hotel management, where the workers' service quality is readily appreciated by the tips from the customers (Bodvarsson & Gibson, 1999).

It can be logically built that these tips being an economic motivation factor will make the workers up and tidy to maintain their services in better quality and similar can be said about the banking sector too. Another highest hurdle in paving the service quality was observed in the variable of high centralization level. Past researchers have identified that once the employees are bestowed with discretionary powers to deal with customers, they become better to handle the customers' issues and can hence render a better solution for them, especially in the case of some emergent needs of the customers. A study tested that in more than hundred US companies, where the employees were better empowered, the service quality was better delivered (Zemke & Schaaf, 1989; Tsaur, Chang, & Wu, 2004). As a matter of fact, once the management makes the employees better empowered, they make them creative and at freedom to take decisions and actions according to the novel situation they are faced with (Cook, Sue, Toby, & Peter, 1981; Tsaur, Chang, & Wu, 2004) and same has been concluded for the banking industry by the past empirical research (Alabar & Abubakar, 2013). Hence in Pakistan, where the bankers are less empowered, it is understood they are less efficient in synthesizing the quality of banking services.

Table 2.1: Comparison of Conventional & Islamic Banks

Variable	**Bank type**	**Mean**	**Mean Difference**	**Sig.**
Empowerment	Conventional	3.42	0.32435	0.150
	Islamic	3.09		
lack of management support	Conventional	3.65	1.563	0.001
	Islamic	2.09		
lack of financial incentives	Conventional	4.20	0.461	0.329
	Islamic	3.74		
lack of empowerment and delegation of authority	Conventional	3.00	-0.087	0.794
	Islamic	3.09		
lack of cooperation between departments	Conventional	3.70	0.091	0.779
	Islamic	3.61		
lack of employee control over his job	Conventional	2.55	-0.407	0.253
	Islamic	2.96		

Table 2.2: Comparison of Conventional & Islamic Banks

Variable	**Bank type**	**Mean**	**Mean Difference**	**Sig.**
No culture	Conventional	3.46	0.234	0.272
	Islamic	3.23		
the habit of rejecting request	Conventional	3.00	0.000	1.000
	Islamic	3.00		
lack of responsibility among employees	Conventional	3.75	0.750	0.035
	Islamic	3.00		
the assumption that saying no will keep the employee out of trouble	Conventional	3.65	-0.046	0.758
	Islamic	3.70		

Table 2.3: Comparison of Conventional & Islamic Banks

Variable	**Bank type**	**Mean**	**Mean Difference**	**Sig.**
Centralization	Conventional	3.36	-.21359	0.339
	Islamic	3.57		
high centralization level	Conventional	4.00	0.087	0.830
	Islamic	3.91		
lack of trust among colleagues	Conventional	2.60	-0.313	0.321
	Islamic	2.91		
the tendency to over promise to customers	Conventional	3.55	-0.276	0.400
	Islamic	3.83		
lack of upward communication	Conventional	3.30	-0.352	0.319
	Islamic	3.65		

Table 2.4: Comparison of Conventional & Islamic Banks

Variable	**Bank type**	**Mean**	**Mean Difference**	**Sig.**
Leadership	Conventional	3.41	-0.250	0.077
	Islamic	3.66		
lack of charismatic leadership	Conventional	4.35	0.872	0.000
	Islamic	3.48		
lack of empathetic leadership	Conventional	3.00	-0.391	0.176
	Islamic	3.39		
lack of meritocracy in recruitment	Conventional	2.90	-1.230	0.000
	Islamic	4.13		

The comparison of the conventional and Islamic banks is crucial, basing upon the argument that owing to the specificity of these banks, they are expected to have the differences (Hanif, Tariq, Tahir, & Wajeeh-ul-Momeneen, 2012; Awan, Bukhari, & Iqbal, 2011) in the barriers to deliver quality of services (Taap, Chong, Kumar, & Fong, 2011). Table 2 divulges the results generated by the independent sample T-test. The data was processed under this test with the aim for comparative analysis of challenges in the way of delivering service quality between the Islamic and conventional banks. The significant differences between the banks were observed at the variables of lack of management support, lack of responsibility among employees, lack of charismatic leadership and the lack of meritocracy in recruitment.

The significant value shows that these banks observe statistically different results under the variables of lack of management support, lack of responsibility among employees, lack of charismatic leadership and lack of meritocracy in recruitment. While among these variables, the biggest mean difference occurs at the lack of management support with the mean difference of 1.563. Positive mean difference is the evidence to state that this problem is present in the conventional banks at a bigger level than their Islamic counterparts. It means that the conventional banks' management in Pakistan is not as much concerned with the service quality as the Islamic bank management. This issue is due to the new entry of Islamic banks in the financial industry. Conventional banks are the old market players with rich history and the customer base, while Islamic banks entered the market as new players. Naturally, they are under the stress to attract the customers.

Hence, their management makes it necessary to procure service quality to ensure the established customer base. The conventional banks with no such hassle made their management to bother less about service quality. Once the service quality is not among the priorities of the conventional bank management, it took the phenomenon to the dearth of charismatic and captivating leadership and to the absence of responsibility for service quality among employees in these banks with the significant mean difference of 0.872 and 0.750 respectively. An obvious result of these factors is the low level of customer satisfaction and the service quality in these banks. Literature witnesses that the customer of Islamic banks rate their satisfaction with service quality they enjoy with their banks at a better level than the conventional market players (Ahmad, Rehman, Saif, & Safwan, 2010), while researchers have already determined that supportive management has a great role in implementing the service quality (Longo, 2000).

In fact, the charismatic features of management are significantly less in conventional banks by the mean difference of 0.872 which renders the subordinate employees also less responsible towards procuring the service quality in conventional banks, by the mean difference of 0.750. Hence for all these three significant variables, the Islamic banking management and employees can be seen to do better for catering the quality of service to their customers. In short, that is the very reason behind the fact that in Pakistan, the customers of Islamic banks are a better more satisfied from the service quality of their banks than those of conventional counterparts (Ahmad, Rehman, Saif, & Safwan, 2010). Hence these finding at first confirm the findings of previous literature and secondly, they also explain the causes of the fact that Islamic banks are better service quality providers.

Another interesting finding occurs in the stats of want of meritocracy in the bank staff employment. It's the only variable with highly significant negative mean difference of 1.230. The large magnitude with highly significant p-value strengthens the view that the Islamic banks in Pakistan lag behind the conventional banks only under a single phenomenon of hiring the bank staff at proper meritocracy. Islamic banking being a new phenomenon has the biggest hurdle in its way of progress, the lack of specifically trained personnel. The negative mean difference, at the variable of lack of meritocracy in recruitment shows that the mean under Islamic banks is higher than the conventional bank. Interestingly, this is the only negative and significant mean difference. The issue of non-meritocracy is higher in Islamic banks which leads to improper selection of Islamic bankers and makes them unable to satisfy the customers up to the mark which lowers the service quality of these banks.

5. Islamic Banks in Pakistan in Comparison to Qatar

Barriers observed by Arab Islamic banks were proxies by Qatar. Comparing the results to those of the study done in the Qatar by Chaker & Jabnoun (2010), the barriers to the Islamic banks are greater in Pakistan than the Qatar. The variable Empowerment had the mean of 3.1741, No culture 3.1236, Centralization 3.1595 and while the Leadership was at the mean of 3.1523. Hence all variables were ranging from 3.12 to 3.17. While in the case of Pakistan, these variables were at the mean of 3.09, 3.23, 3.57 and 3.66 respectively. Three inferences can be drawn out of this comparison of the stats. Firstly, the Pakistani Islamic banks are having a bigger level of hurdles to their service quality and secondly, these hurdles are showing a greater variation than those in the case of Qatar. Moreover the biggest barrier in the Qatar to the service quality was empowerment and the least was the no culture. While in Pakistan, the biggest mean was clustered around the variable of the leadership and the least was in the case of empowerment.

This difference is out of the specific socio-economic culture of these countries. The Qatar having the Arab culture has the corporate environment of power distance with the main discretions only in the few hands (Hofstede, 1997). This situation leads to the low empowerment of the employees to cater the situational decision making for the purpose of delivering service quality (Kramer, 1989). This situation augments upward with the presence of mutli-ethnicity in the Arab world, where the nationals are given the higher authorities while the expatriates have lesser of them (Chaker &Jabnoun, 2010). While in the case of Pakistan the bank employees are most probably always Pakistani and the cultural environment is also of sharing instead of power distances, hence the banks in Pakistan are less prone to face the empowerment issues in their own hurdles to service quality. Economic development level in Pakistan is off course at the lesser level than the Qatar, this scenario leads to the financial strains in delivering the service quality and triggers up the hurdles to be at a bigger level than the Qatar. Hence to conclude, in Pakistan the Islamic banks are having an advantage and a disadvantage as compared to those of the Arab world. Advantage is the better empowerment of its employees and the experience sharing culture in the banks while the low level of economic development in Pakistan is responsible to bring about the financial constraints to augment the barriers in their way to deliver quality of service.

Conclusion

It shows that the biggest hurdles to ensuring the service quality in the banking industry of Pakistan are the lack of financial incentives and high centralization levels. In turn, it can be logically built that these tips being an economic motivation factor will make the workers up and tidy to maintain their services in better quality and similar can be said about the banking sector too. Another highest hurdle in paving the service quality was observed in the variable of high centralization level. This issue elaborates that the employees in the Pakistani banking industry are not much with their exercisable powers to give the service quality. While on the other, the comparison of the conventional and Islamic banks is crucial, basing upon the argument that owing to the specificity of these banks, they are expected to have the differences (Hanif, Tariq, Tahir, & Wajeeh-ul-Momeneen, 2012; Awan, Bukhari, & Iqbal, 2011) in the barriers to delivering quality of services (Taap, Chong, Kumar, & Fong, 2011). Shari'ah driven customers are not convinced by the employees regarding the Shari'ah compliance nature of these banks and the customers feel down in the terms of service quality of Islamic banks. Currently, the Islamic banks usually prefer to hire their employees with prior experience in the industry of conventional banking (Zainol, Shaari, & Ali, 2008), undermining the fact that Islamic banking is unique and specific and needs the employees to have that specific knowledge.

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Book Review [*]

Sukuk Securities – New Ways of Debt Contracting

Meysam Safari, Mohamed Ariff and Shamsher Mohamad

Publisher: Wiley

This book is a comprehensive guide to Sukuk securities and is useful for both academics as well as practitioners. The book introduces the basic concepts, types of Sukuk and their practical use in structuring marketable contracts. The book provides theoretical, operational, economic and regulatory distinctions of Sukuk securities vis-à-vis conventional bonds. Conventional bond issues are general - purpose funding contracts. In contrast, Sukuk funding is targeted funding for specific aspects of the producer's funding needs.

Sukuk securities always require asset backing. This places quantity limits on excessive borrowing. The book argues that heavy reliance on borrowed funds has been associated with financial fragility in the economic policy literature, which concludes that excessive debt has been the root cause of many bankruptcies over the centuries as well as during crisis periods and business downturns. This makes Islamic funding arrangements a lot safer and prevents borrowers from borrowing without assets to back the funding. The authors discuss that since economic payoffs are based on profit sharing in Sukuk, the aggregate economic activities are relieved somewhat by producers and financiers sharing in the risk.

Participatory debt through Sukuk offers an automatic end to profligate borrowing by firms, governments, and individuals. The authors contend that the optimal debt cannot be over the value of the assets of the borrowers—a historical marker that, when breached, often leads to financial crisis. The authors also cite the example of New Zealand where the central bank pioneered a new regulation in 2013 under which a bank will lose its license if more than 10 percent of its loans exceed 80 percent loan to asset backing. This rule is meant to slowly bring down the debt overload of governments, firms, and households.

The authors caution that due to inherent differences in Sukuk securities and conventional bonds, it is incorrect to treat the rewards promised as fixed and apply a fixed - coupon - paying bond valuation model to value a Sukuk security unless it is meant only as an approximate indicator of theoretical value.

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In valuation for the Sukuk securities, the authors suggest that Sukuk securities which have identical cash - flow patterns as conventional bonds, they can be priced with the same existing models. For instance, one form of Ijarah Sukuk (a lease contract) is identical to coupon - bearing collateralized bonds, so its price should be computed the same way. On the other hand, Musharakah Sukuk (profit sharing) is like no other bond security because its payoff is tied to the performance of the underlying firm. Thus, the cash flows are not predetermined, and modelling the security would be much more challenging in ways similar to the modelling of equity shares.

The book also addresses the regulatory challenges faced by the industry during the great financial crisis when innovative products appeared in non-Muslim majority markets where there is potentially higher risk of Shari'ah non-compliance. The book cites the reservations put forward by Shaikh Taqi Usmani of Pakistan who addressed the issue of the ownership rights of Sukuk holders. The respected scholar argued that the payment of any surplus to the originating partner is a form of fixing the return to the investors and limits the profit and loss sharing between them. Furthermore, the respected scholar contested that through purchase undertakings, the originating party guarantees the principal amount of the Sukuk holders, and this too is not in line with the concept of profit and loss sharing. The authors argue how the timely notice of these valuable insights of Shaikh Taqi Usmani by AAOIFI prevented the hiccup and regulatory uncertainty for the industry.

The authors argue that Muzarah (farmland leasing), Musaqah (orchard leasing) and Muqarasah (tree leasing) structures have the attractive feature of avoiding the indebtedness of farming communities to a bank by cutting out the middleman. In the opinion of authors, this is an attractive feature for economic activities that depend on seasonal features, such as rain and sunshine. In the view of authors, rural indebtedness can be avoided if such instruments are used to allow tenant farmers to share the profits and the risk with the owners of the land.

The authors also note that the bulk of the Sukuk issuance is still in institutions, whereas one - third of the issues are traded in exchanges. More issuance of traded Sukuk in exchanges will deepen the money market and expand the investor base of these securities.

In discussing the future for the Sukuk market, the authors state that there seems to be a strong competition among the major financial centres to attract the huge Middle Eastern clientele to this new niche growth market. Countries such as Malaysia, the UAE, and Bahrain, which currently enjoy the benefits of first - mover advantage in the Sukuk market, will soon face new entrants with hundreds of years of experience in bond trading.

Overall, the book is a valuable read for both academicians and practitioners. It provides theoretical understanding as well as applications of the product structures of different types of Sukuk in the financial marketplace. It also includes sufficient descriptive data on Sukuk from various markets and regions. The only slight shortcoming is the little attention that is given to the need for according tax neutrality to Islamic instruments in transactions where the economic substance is similar. This is a crucial factor for future expansion, especially in non-Muslim majority regions.

Human Development in the Muslim World
Top 25 OIC Countries by Human Development Index 2015

Country	HDI Value	World Rank	OIC Rank
Brunei Darussalam	0.8556	31	1
Qatar	0.8498	33	2
Saudi Arabia	0.8373	39	3
United Arab Emirates	0.8355	41	4
Kuwait	0.8163	48	5
Oman	0.7930	52	6
Kazakhstan	0.7880	56	7
Malaysia	0.7792	62	8
Lebanon	0.7689	68	9
Iran	0.7656	70	10
Turkey	0.7611	72	11
Azerbaijan	0.7511	78	12
Jordan	0.7483	80	13
Algeria	0.7356	83	14
Albania	0.7328	85	15
Bosnia and Herzegovina	0.7325	87	16
Libya	0.7245	95	17
Tunisia	0.7212	96	18
Suriname	0.7143	103	19
Maldives	0.7064	104	20
Egypt	0.6899	108	21
Turkmenistan	0.6875	109	22
Indonesia	0.6838	111	23
Palestine	0.6775	113	24
Uzbekistan	0.6755	114	25

Source: World Bank Database, 2015

Note to contributors

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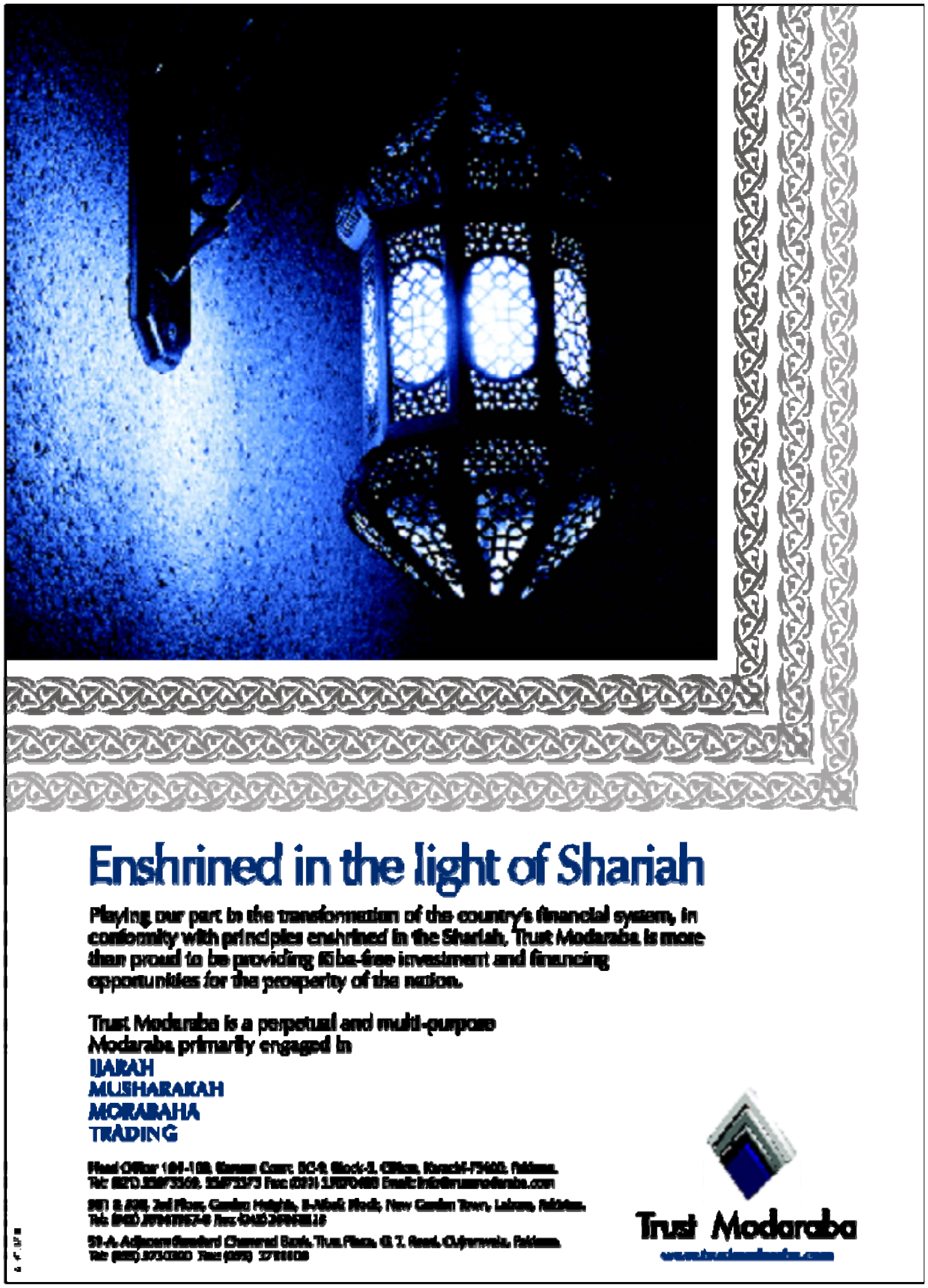

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