

Factors Persuading the Investment Decision in Sukuk; the Mediating Role of Financial Literacy: A case from Pakistan

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ABSTRACT

Background:

Islamic banking has gained considerable momentum since the last decade and still product development is underway to replace the conventional banking products. Sukuk is one of the innovative product designed for equity creation likewise its counterpart Conventional Bonds. Literature review and capital market statistics shows that there is little level of understanding amongst investors while taking the investment decision in Sukuk. This study explores the factors that persuade the investors to prefer investment in Sukuk over Conventional bonds.

Purpose:

This study is being conducted to identify the persuasion factors impacting the investment decision of investors whether to invest in Sukuk taking into account the mediating role of Financial Literacy.

Design/methodology/approach: A questionnaire has been adapted in this study for investors enabling them to answer the research questions and subsequently on the basis of results the developed hypothesis(s) were tested. The survey was carried out on selected sample of investors from PSX, Financial Institutions & key management of commercial banks. Data analysis techniques used in this study is Structural Equation Modeling.

Findings:

This study results indicate that majority of the Sukuk investors are financial institutions and corporates with very low participation of individual investor. Research finding's empirical results supports the proposed hypothesis(s) and mediating role of Financial Literacy was evident from results.

Originality/value: This study is considered as the one of its kind conducted with

reference to Pakistan. Literature review yet haven't revealed any study that focus particularly on socio-economic factors which influence the tendency of the investors to invest or trade Sukuk with the mediating effect of Financial Literacy.

Keywords:

Islamic Banking, Sukuk, Capital Market, Investment decision, Persuasion, Investor

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Introduction

Sukuk market has posed a positive trajectory in the recent years due to the unique characteristics of Sukuk contrary to conventional bonds. Investor react differently when we talk about Sukuk as it is Shariah compliant instrument and present the ownership of investor in the real asset hence created a high demand in Muslim countries as well as non-Muslim countries such as Singapore, UK, Hong Kong and China. Moreover, listing of Sukuk in most of the capital markets and inclusion in major indexes has not only increased its popularity but made it more preferred capital market instrument.

This study has a purpose to identify the factors that persuade the investors for taking investment decision, whether to invest in Sukuk and how existing and prospect Sukuk investors respond to Sukuk issuance.

There are very limited studies available discussing the factors that influence the investor decision towards investment in Sukuk. Abdullah Mohammad Awn and S.M Ferdous Azam's research conducted in Libya suggests that "attitudes toward investment have a significant positive influenced on intention and perceived control over investment, while subjective pressure from 'Ulamaa' have a signifi-

cant positive influence on both attitude towards investment and perceived control over investment. Correspondingly, perceived control over investment impacted positively on intention and investment in Islamic Sukuk. However, Subjective pressure from Ulamaa has a negative impact on intention while intention failed to influence investment in Islamic Sukuk”.

Another study conducted in Indonesia used Theory of Planned Behavior Approach to identify the investor’s intention for investment in Sukuk.

Duqi & Al-Tamimi suggests in their study that “The Sukuk features or characteristics strongly influence the UAE investors to willingly invest in Sukuk, there are few other factors that determine the intention of UAE investors like expected return, religious factor which also have a strong influence, and availability of information. This study also indicates that gender factor has no significant influence on UAE investors to make the investment decision in Sukuk.

Here we find a theoretical and contextualizing research gap which urges to examine motives behind Sukuk investments in Pakistan; the research question designed as follows; which factors earlier acknowledged by different researchers persuade investor to invest in Sukuk taking in to account the mediating role of Financial Literacy?

Therefore, we seek to explore the impact of variables like Religious Aspect, Legal and Regulatory Framework, Expected Return, Availability of Information & Sukuk Features and Issuing Institution Reputation are proposed by the literature as important in determining the impact on Investment in Sukuk and what is the impact of Financial Literacy as a mediator between the relationships of expected return, expected return, availability of information & Sukuk features, issuing institution’s reputation and investment in Sukuk?

Research Objective

Research objectives set for this study are;

- I.) To analyze the impact of religious aspect on investment in Sukuk.
- II.) To analyze the impact of legal & regulatory framework on investment in Sukuk.
- III.) To analyze the impact of expected return on investment in Sukuk.
- IV.) To analyze the impact of availability of information & Sukuk features on investment in Sukuk.
- V.) To analyze the issuing institution's reputation on investment in Sukuk.
- VI.) To analyze the impact of Islamic Financial Literacy as a mediator between the relationships of expected return, availability of information/Sukuk features, issuing institution's reputation and investment in Sukuk.

Research Questions

Accordingly following the objectives, below are the research questions formulated for this study;

Accordingly following the objectives, below are the research questions formulated for this study;

RQ1: What is the impact of religious aspect on investment in Sukuk?

RQ2: What is the impact of legal & regulatory framework on investment in Sukuk?

RQ3: What is the impact of expected return on investment in Sukuk?

RQ4: What is the impact of availability of information & Sukuk features on investment in Sukuk?

RQ5: What is the issuing institution's reputation on investment in Sukuk?

RQ6: What is the impact of Islamic Financial Literacy as a mediator between the relationships of expected return, availability of information/Sukuk features, issuing institution's reputation and investment in Sukuk?

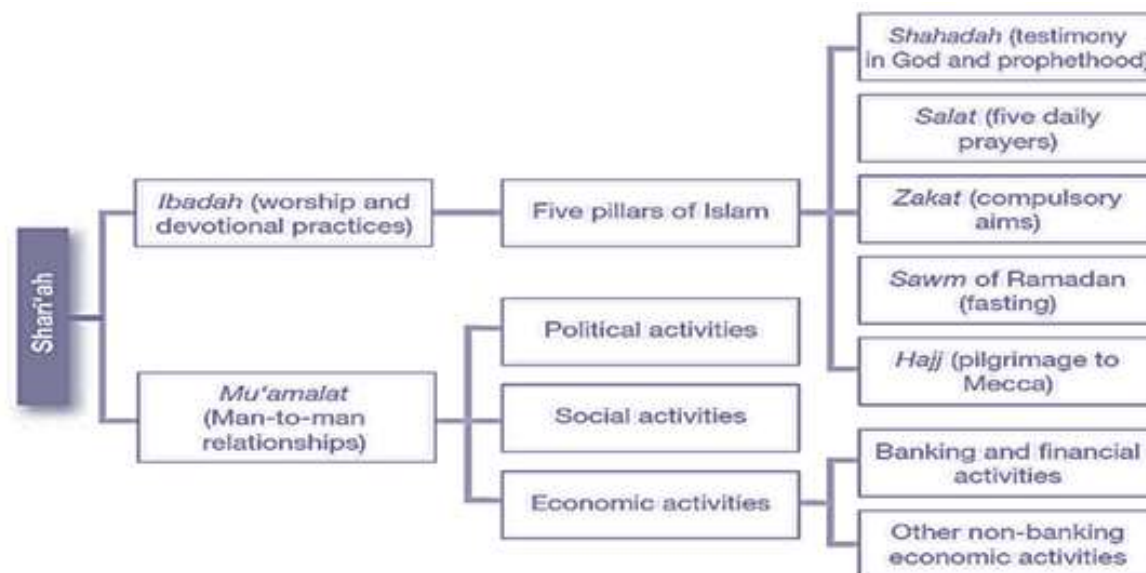
Scope of the Study

Scope of this study is limited to the Investor, investing in Sukuk in different currencies issued by corporates and Government of Pakistan till 31 December 2019.

Literature Review

Islamic banking has been defined as a banking system that conforms to the spirit, morals, ethical values and transactional modes derived from all sources of Shariah precisely term as Shariah Compliant. Islamic banking is interest free i.e. Ribah free banking. Islamic banking is not only Ribah free but also encourages eliminating immoral and antisocial practices. In a practical sense, Islamic banking is likely to create link with the real sectors of the economic system through trade focused activities. In Islamic Banking money is not treated as a commodity however it is used as store of value and medium of exchange. For that very reason, money cannot be sold or rent out at a price higher than its face value. Since, the money is linked with the real assets therefore it contributes directly in the economic development and lay down the foundation of equitable economic system.

Figure 1: Basis of Islamic Banking



Source: Basis of Islamic Banking; Ahmed Ali Siddiqui

2.1 Sukuk Market Round Up

2.1.1 Sukuk Market of Pakistan

First international sovereign Sukuk of USD 600 mln was issued in 2005 and first domestic Sukuk was issued in 2006. Till December 31, 2019, total 04 international Sukuk of USD 3.6 bln and 121 domestic Sukuk of Rs. 1463.96 bln have been

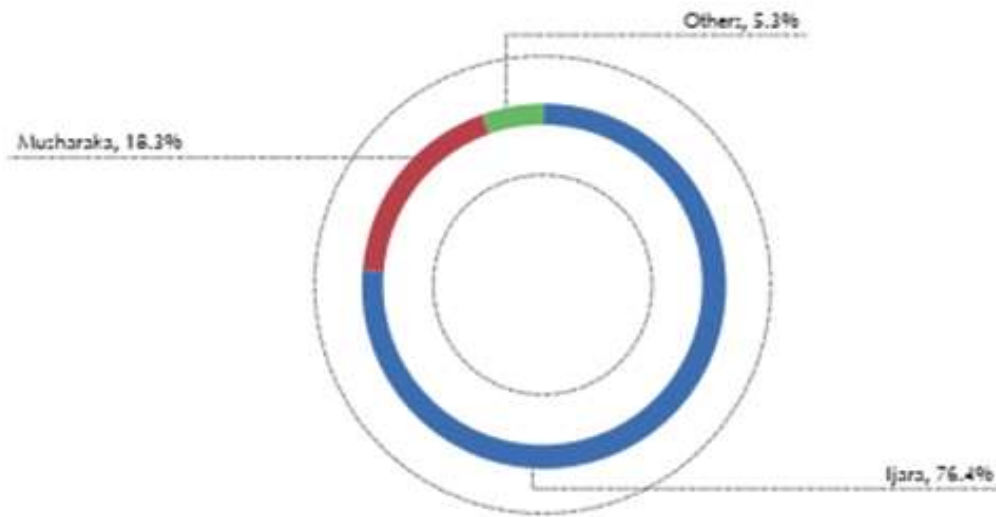
issued (IIFM Sukuk Report, 9th edition, 2020).

Table 1: Sukuk Statistics (Category wise)

| Listing Status | Number of issues | Amount in billion Rs |
|------------------|------------------|----------------------|
| Privately Placed | 107 | 1388.78 |
| Listed | 14 | 75.18 |
| Total | 121 | 1463.96 |

Source: IIFM Sukuk Report, 9th edition, 2020

Figure 2: Domestic Sukuk value (Mode wise)



Source: IIFM Sukuk Report, 9th edition, 2020

2.1.2 The International Sukuk Market

The size of international Sukuk market for the year ended Dec 31, 2019 stands with considerable gain of about 18.32 % growth amounting to record issuance of USD 145.70 Billion Sukuk. (IIFM Sukuk Report, 9th edition, 2020).

Table 2: International Sukuk Statistics

| Auction | Issue Date | Maturity Date | Amount of Sukuk |
|-------------------------------------|------------|---------------|-------------------|
| Pakistan First International Sukuk | Jan-05 | Jan-10 | USD 600 million |
| Pakistan Second International Sukuk | Nov-14 | Nov-19 | USD 1,000 million |
| Pakistan Third International Sukuk | Oct-16 | Oct-21 | USD 1,000 million |
| Pakistan Fourth International Sukuk | Nov-17 | Nov-22 | USD 1,000 million |

Source: IIFM Sukuk Report, 9th edition, 2020

2.1.3 Regulatory Framework for Sukuk Issuance

In Pakistan Sukuk can be issued under section 66 of the Companies Act, 2017 by two methods, it is a redeemable instrument.

i-Public Offering Method: Using this method the issuer is required to obtain approval of SECP for publication of prospectus and issue circulation.

ii-Private placement Method: Approval of SECP is not required in this method of Sukuk issuance, however, the issuers are required to meet the terms with the Private Placement of Securities Rules 2017 and Privately Placed Sukuk Regulations 2017.

In capital market mostly Sukuk are placed through Private placement method. Typically, commercial banks (conventional & Islamic), Mutual funds, Non-bank financial companies, Employees funds, Insurance companies and other corporate are the key investors in Sukuk.

(IIFM Sukuk Report, 9th edition, 2020).

2.1.4 Future Outlook of Sukuk

In the emerging economy like Pakistan, Sukuk can play a significant role in devel-

opment of economy; it is a successful Shariah compliant liquidity Management instrument. Sukuk is a better opportunity for corporate sector and government to generate funds and play their role in the development of country by deploying mega projects and contribute in CPEC activities.

Pakistan has great need for steady investments to support its massive infrastructural requirement from foreign investor and expatriate. In this context Sukuk can be utilized to boost the investment acidities in the capital market and to finance the capital requirement of various development and infrastructural project (IIFM Sukuk Report, 9th edition, 2020).

2.2 Sukuk Market Issues and Challenges

The issues and challenges faced by Sukuk market includes; Shariah Compliance Concerns from Scholars, Investors & Regulators point of view. There is lack of monitoring after issuance and execution of documentation. Mimicking the bond while ignoring the demands of investors is another issue capital market is being facing. There are lower disclosures in terms of structure & Shariah compliance while issuing Sukuk by corporations. In cross boarder transaction, regulatory formalities and legal documentation are cumbersome.

2.3 Variables & Hypothesis Development

Religious Aspect

In this research, role of religion influencing the Pakistani investor decision to invest in Sukuk can be determined by factor, religious aspect. Numerous past researches proves that religious aspect impacts the investor decision. Religiosity can be defined as set of believes, structured system of practices, symbols, and customs that are considered to bring close to God and to sense of responsibility among others in society (Osman et al., 2012).

Religious aspect can be described as the role that effects someone's decision and activities (Amin et al., 2011). Religiosity comprises the believes in interest free

economy and equal distribution of wealth and investment in business that are allowed from Islamic point of view (Butt et al., 2011).

Thus it can be derived that investor opinion to opt for Sukuk over bonds can be influenced by the related Shariah laws.

Therefore, this study anticipate that the religious aspect can be a factor of an individual choice to invest in Sukuk. Individual level of religiosity predicts the intention to use Islamic bank's product and services (Ahmad, 2008). It is evident from previous studies religion has significant positive influence on behavior (Islam & Chandrasekaran, 2019). Investor possessing higher level of Islamic believes and thoughts demonstrated the more probability to invest in Sukuk (Shafron, 2019). Religion believes affects positively influence the investment behavior and investor react to the issuance of Sukuk rather than traditional bonds (Klein et al., 2017).

Aforementioned literature review and empirical studies proposed the positive relationship between religious aspect and investment in Sukuk, thus we derived the following hypothesis:

H 1. Religious aspect has positive effect on investment in Sukuk.

Expected Return

According to some scholars conventional bonds and Sukuk possess similar structure therefore when it is compared with respect to risk and reward, there is no considerable difference (Aloui et al., 2015; Kim & Kang, 2012).

Shariah law prohibits the short selling, Gharar (uncertainty), speculations and arbitrage which leads to reduce the overall risk factor in Sukuk over the conventional bond (Iqbal & Mirakhor, 2011). Few studies have shown that during banking crises in 2007-2009, Sukuk have shown the negative correlation with stock market and return pattern of Sukuk is are very less volatile in comparison with EU/US graded bonds (Balcılar et al., 2015; Balli et al., 2021).

In the recent past demand for investment in Sukuk has considerably increased in Islamic countries as well as others due to their stability feature which reduces the risk and increases the return (BASYARIAH et al., 2021)

It has been observed in Malaysia and Indonesia that the Sukuk index has outperformed and their yield to maturity ratio is very lucrative for investor and on average Sukuk offered far better returns than conventional bonds.(El Mosaid & Boutti, 2014; Saeed et al., 2021)

Sukuk due to their inheriting feature of less risky and more stable attract positively in making their investment decision (Bhuiyan et al., 2020). Based on the above assumptions, we raise the following hypothesis: H 2. Expected return has positive effect on investment in Sukuk.

Availability of Information/Sukuk Features and Issuing institution reputation

Islamic banks focus on Shariah compliance and offer product to their customer according to their need, miss-selling is strongly discouraged. The main factor of increase in popularity of Sukuk is the increased awareness of the investor which reflects the preference over conventional bonds (Lo & Leow, 2014).

Level of service quality in Islamic banks is the main reason to attract customers and built loyalty which makes the good reputation (Haron et al., 2020). There is an evidence that Sukuk has higher information asymmetries which has negative impact on issuance (Aziz et al., 2021)

The structure of Sukuk under certain circumstances does not align the interest of stakeholders and management, firms avoid active market monitoring with higher information asymmetries and prefer Sukuk. Earlier studies also found that high agency cost of equity and debt prefer to issue Sukuk, special purpose vehicle (SPV) is used to pledge collateral, and this SPV works independent of the firm issuing Sukuk (Ebrahim et al., 2016; Halim et al., 2017).

In this competitive market issuing institution reputation is based on its credit rating, environmental, Social and Governance framework, and institution's focus toward sustainability.

These considerations give a reason to hypothesize the following:

H 3. Availability of information and Sukuk features has positive effect on investment in Sukuk.

H 4. Issuing institution reputation has positive effect on investment in Sukuk.

Legal & Regulatory Framework

Effective regulations are set by government to achieve social objectives and implemented by regulatory authorities at the minimal cost (Jalilian et al., 2007). On the other hand, bungling and uneven government regulations raises the investment cost and create uncertainly for investors (Parker, 1999). In this regard it can be concluded that quality of regulatory framework attract investor, helps firms to enter into market and compete with innovation and development.

Weak legal and regulatory framework shaken the investors trust and large investment projects comes to halt. Good regularity quality have a positive impact on innovation (Mahendra et al., 2015).

Though, Blind et al. (2017) identified that market environment may change the relationship between innovation and regulations may differ. Other studies have also provided a positive relationship between Legal and Regulatory Framework and the investment (Alam et al., 2019; Alnagar et al., 2020; BASYARIAH et al., 2021; Blind et al., 2017; Uddin et al., 2019; Zain & Sori, 2020). However, the quality of government regulations is being improved and new regulations are underway regarding Sukuk, the following hypothesis is postulated:

H 5. Legal & Regulatory framework has positive effect on investment in Sukuk.

Financial Literacy

Financial Literacy is a skill that an individual has a guess or ability to decide the

routine financial matters such as expenses, budget and revenue.

Financial literacy has been defined as “The ability to understand and effectively use various financial skills, including personal financial management, budgeting, and investing” (Fernando, 2021)

For investors financial literacy is very important factor to anticipate the financial risk and evaluate the risk in the investment instrument (Guiso & Jappelli, 2009; Tauni et al., 2017; Wang et al., 2011). A research study conducted in UAE on investors supported that financial literacy have significant influence on investment choices (Hassan et al., 2015)

Other researchers also established that there is a significant relationship between the financial literacy and investment choices, few researchers explored the effect of financial literacy and risk perception on investment choices of individual investors and found that financial literacy has a significant impact on the investment choices (Aren & Canikli, 2018; Aren & Zengin, 2016)

Based on these researches we can develop hypothesis as under:

H 6. Financial literacy has positive effect on investment in Sukuk.

H 7. Expected return has positive effect on financial literacy.

H 8. Availability of information and Sukuk features has positive effect on financial literacy.

H 9. Issuing institution reputation has positive effect on financial literacy.

H 10. Financial literacy mediates the relationship between expected return and investment in Sukuk.

H 11. Financial literacy mediates the relationship between availability of information and Sukuk features and investment in Sukuk.

H 12. Financial literacy mediates the relationship between Issuing institution reputation and investment in Sukuk.

3-Methodology

Ontology

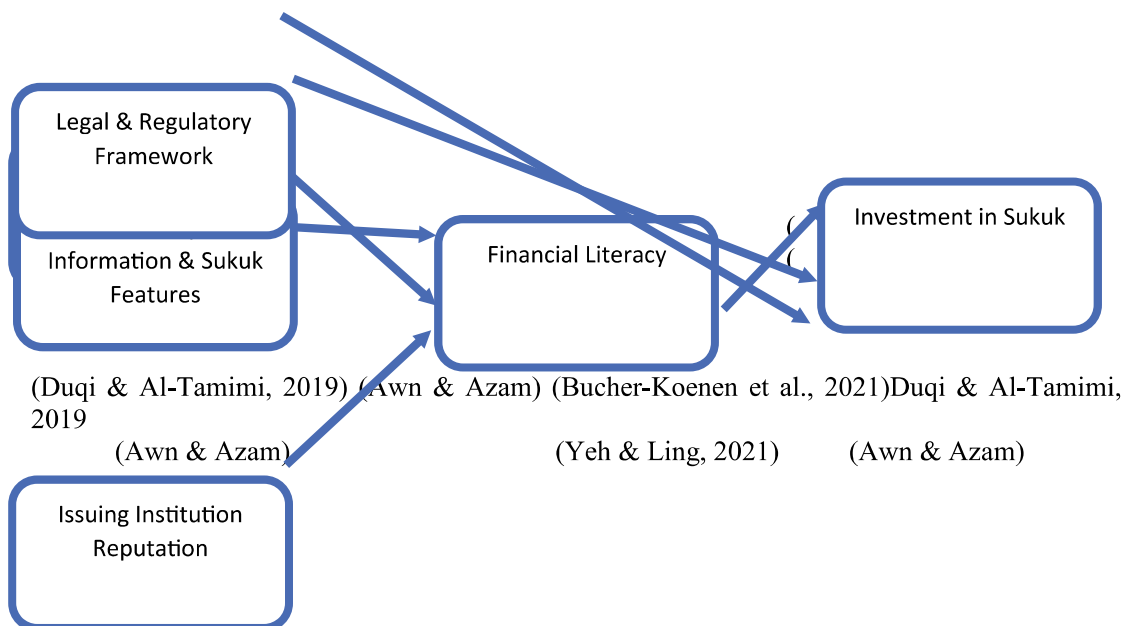
This research study is about the investment in Sukuk which is an Islamic mode to create equity and provide Ribah free profit to investors. Sukuk is asset backed and underlying contracts in Sukuk are Shariah compliant hence promoting the equitable economic system.

Epistemology

In this study the research philosophy is positivism and only accepts observable phenomena based on data and facts as knowledge. Population data consist of Investors, investing in Sukuk in different currencies issued by corporate and Government of Pakistan till 31 December 2020.

3.1 Research Framework

Figure 3: Research Framework



3.2 Hypothesis Development

For this study we have developed below mentioned hypothesis;

H 1. Religious aspect has positive effect on investment in Sukuk.

H 2. Expected return has positive effect on investment in Sukuk.

H 3. Availability of information and Sukuk features has positive effect on investment in Sukuk.

H 4. Issuing institution reputation has positive effect on investment in Sukuk.

H 5. Legal Regulatory framework has positive effect on investment in Sukuk.

H 6. Financial literacy has positive effect on investment in Sukuk.

H 7. Expected return has positive effect on financial literacy.

H 8. Availability of information and Sukuk features has positive effect on financial literacy.

H 9. Issuing institution reputation has positive effect on financial literacy.

H 10. Financial literacy mediates the relationship between expected return and investment in Sukuk.

H 11. Financial literacy mediates the relationship between availability of information and Sukuk features and investment in Sukuk.

H12. Financial literacy mediates the relationship between Issuing institution reputation and investment in Sukuk.

3.4 Research Design

This study adopted the Research design based on causal research or explanatory research. Investment in Sukuk is due to a cause and effect relationship. The entire variable described in our research framework triggers the investment in Sukuk which is a cause and effect phenomena.

3.5 Research Method

To conduct this study analysis, Structural Equation Modeling is used normally known as SEM. Structural equation modeling tests the proposed casual relationships so it is also called casual modeling. SEM is considered very effective for analyzing structural relationships by using a multivariate statistical analysis technique. In this technique combination of multiple regression and factor analysis is applied, and SEM can analyze the structural relationship between concealed and measured variables. The researchers give this method priority because it calculates interrelated dependence and multiple variables in a single analysis. Dependent, independent and mediating variables are used in this analysis.

3.6 Operational Definitions

Variable Description

Table 3: Variable Description Table

| Variable Name | Symbol | Description | Measurement | Reference |
|--|--------|--|---------------|--|
| Religious Aspect | RA | Religious values and bindings | Questionnaire | (Duqi & Al-Tamimi, 2019) (Szczepanowicz, 2011) (Gadar, 2004) |
| Expected Return | ER | Comparison of risk & return between conventional bonds and Sukuk. | Questionnaire | (Duqi & Al-Tamimi, 2019) (Szczepanowicz, 2011) (Gadar, 2004) |
| Availability of information & Sukuk Features | AISF | Conventional bonds have information symmetries where as Sukuk has Information asymmetries. Product design and features | Questionnaire | (Duqi & Al-Tamimi, 2019) (Szczepanowicz, 2011) (Gadar, 2004) |
| Issuing Institution's Reputation | IIR | Reputation is formed based on reliability, credibility and the social responsibility of an organization. | Questionnaire | (Duqi & Al-Tamimi, 2019) (Szczepanowicz, 2011) (Gadar, 2004) |
| Legal & Regulatory Framework | LRF | Rules and regulations outlined by regulators and Government. | Questionnaire | (Duqi & Al-Tamimi, 2019) (Szczepanowicz, 2011) (Gadar, 2004) |
| Financial Literacy | FL | Degree of Islamic finance knowledge to compare it with its conventional peer and understand the elimination of Ribah | Questionnaire | (Duqi & Al-Tamimi, 2019) (Szczepanowicz, 2011) (Gadar, 2004) |
| Investment in Sukuk | IIS | Amount and market share of Sukuk | Questionnaire | (Duqi & Al-Tamimi, 2019) |

3.7 Measurement of Variables

In this research study those questionnaires were adopted that suit the objective of the study taken from the customized questionnaire used by (Szczepanowicz, 2011) and (Gadar, 2004) in their studies, the questionnaire has three sections. First section covers employment, education level, socio economic variables of gender and demographic.

Second section consists of questions regarding variables used in this study regarding investment in Sukuk in Pakistan, Likert scale is used with a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree) to determine the effect of each variable on investment decision in Sukuk.

Third section of the questionnaire is designed to evaluate the investors sensitivity related to their investment in Sukuk incorporating some indicators related to Sukuk such as reason to invest, market problems, risks types, satisfaction level, and maturity period of Sukuk.

3.8 Data Collection

Data is collected from Sukuk investors of Pakistani Capital Market and corporates.

Sampling

This study used non probability sampling method, in which Convening sampling technique would be adopted. List of Sukuk investors will be sought from different Islamic banks involved in Sukuk/issuance/structuring and capital market brokers who deal with sale/purchase of Sukuk.

Data collection procedures

Due to COVID-19 pandemic, Online Survey form designed in Google Form is used and link was sent to target audience through email/WhatsApp, allowing them to submit their response and a spreadsheet was compiled to get the consolidated results.

3.9 Result & Discussion

The primary data collected through a questionnaire from 111 respondents. Demographic profile of the respondents consists of 7 items. There are 07 latent variables consisting of total 45 items. Results gathered from questionnaire were loaded in SmartPLS software for analysis using smart equation model.

Response Rate

To conduct this study questionnaire was sent to 120 investors out of which 111 submitted the Google Form which constitute response rate of 92.5% that is used in this empirical research. Questionnaires were fill up by the investors of Pakistan Stock Exchange or the executives of Islamic Banks who normally invest in Sukuk or involve in Sukuk issuance, these executives are holding decision making positions and working in the functions of Shariah Compliance, Shariah Advisory, Treasury and Finance.

Data Analysis and Results

Data analysis was done in Smart PLS using structural equation modeling process which require two steps;

1. Building and Testing a Measurement Model
2. Building and Testing a Structural Model

In the below Table 5 data statistics are given which shows the missing value, outlier in the data and normality of the data. It is important fix these errors because any error in the data may have adverse effect on the results. Therefore, before data analysis, the current study examined these errors. It is shown in Table 5 data has no missing value as well as outlier. Furthermore, as this study is using SmartPLS therefore, normality of the data is not required. Smart PLS is most suitable data analysis tool which has the ability to deal with non-normal data.

Table 1: Data Statistics

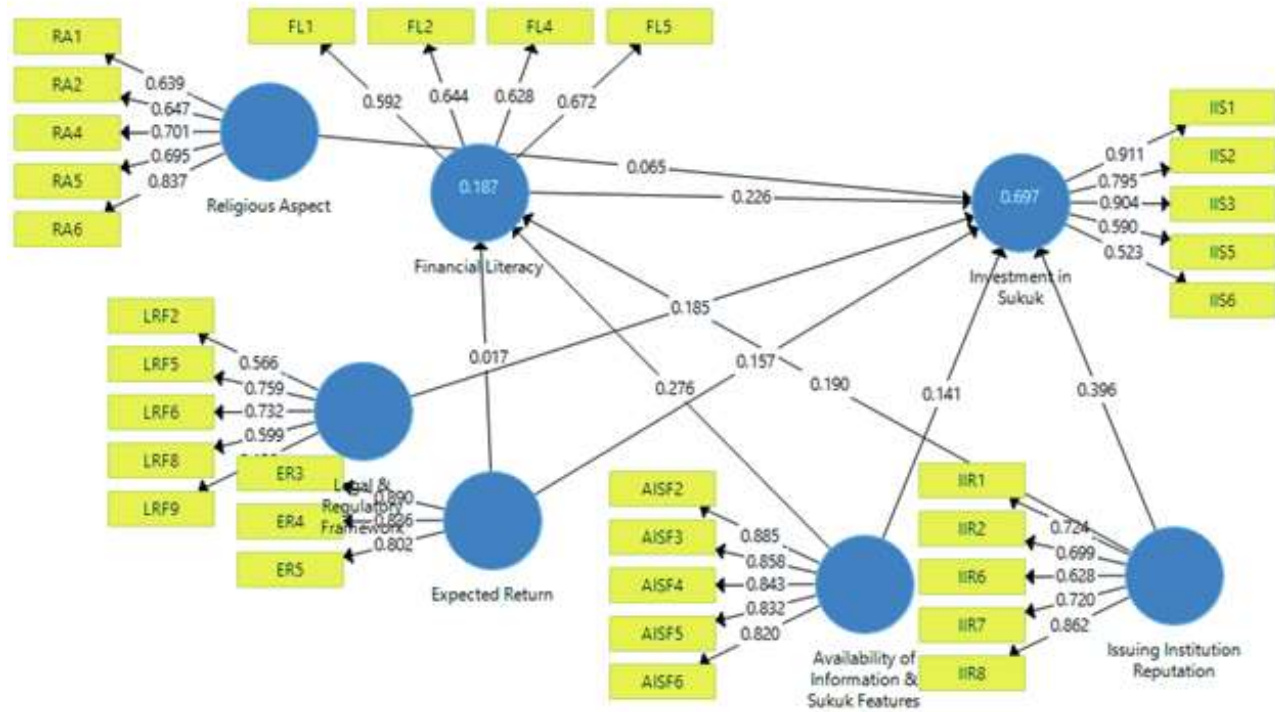
| | No. | Missing | Mean | Median | Min | Max | Standard Deviation | Excess Kurtosis | Skewness |
|-------|-----|---------|-------|--------|-----|-----|--------------------|-----------------|----------|
| RA1 | 1 | 0 | 3.658 | 4 | 1 | 5 | 1.078 | -0.186 | -0.547 |
| RA2 | 2 | 0 | 3.757 | 4 | 1 | 5 | 1.172 | -0.527 | -0.637 |
| RA3 | 3 | 0 | 3.829 | 4 | 1 | 5 | 1.114 | 0.133 | -0.804 |
| RA4 | 4 | 0 | 3.495 | 3 | 1 | 5 | 1.154 | -0.435 | -0.417 |
| RA5 | 5 | 0 | 3.667 | 4 | 1 | 5 | 1.043 | -0.178 | -0.501 |
| RA6 | 6 | 0 | 2.36 | 2 | 1 | 5 | 1.113 | -0.168 | 0.715 |
| ER1 | 7 | 0 | 3.243 | 3 | 1 | 5 | 0.913 | 0.008 | -0.217 |
| ER2 | 8 | 0 | 2.36 | 2 | 1 | 5 | 1.012 | 0.197 | 0.865 |
| ER3 | 9 | 0 | 3.82 | 4 | 1 | 5 | 0.862 | 0.54 | -0.754 |
| ER4 | 10 | 0 | 3.64 | 4 | 1 | 5 | 0.957 | 0.243 | -0.72 |
| ER5 | 11 | 0 | 3.91 | 4 | 1 | 5 | 0.906 | 1.703 | -1.146 |
| AISF1 | 12 | 0 | 3.27 | 3 | 1 | 4 | 0.869 | 0.672 | -1.143 |
| AISF2 | 13 | 0 | 3.577 | 4 | 1 | 5 | 1.119 | 0.005 | -0.859 |
| AISF3 | 14 | 0 | 3.577 | 4 | 1 | 5 | 1.009 | -0.309 | -0.452 |
| AISF4 | 15 | 0 | 3.559 | 4 | 1 | 5 | 1.037 | -0.031 | -0.699 |
| AISF5 | 16 | 0 | 3.766 | 4 | 1 | 5 | 1.022 | 0.626 | -0.9 |
| AISF6 | 17 | 0 | 3.541 | 4 | 1 | 5 | 1.121 | -0.311 | -0.453 |
| IIR1 | 18 | 0 | 3.739 | 4 | 1 | 5 | 1.029 | 0.091 | -0.864 |
| IIR2 | 19 | 0 | 3.811 | 4 | 1 | 5 | 0.844 | 1.74 | -1.177 |
| IIR3 | 20 | 0 | 2.901 | 3 | 1 | 5 | 1.098 | -0.973 | 0.117 |
| IIR4 | 21 | 0 | 3.405 | 4 | 1 | 5 | 0.962 | -0.853 | -0.342 |
| IIR5 | 22 | 0 | 3.315 | 4 | 1 | 5 | 0.958 | -0.814 | -0.362 |
| IIR6 | 23 | 0 | 3.73 | 4 | 1 | 5 | 0.91 | 0.754 | -1.034 |
| IIR7 | 24 | 0 | 3.667 | 4 | 1 | 5 | 1.043 | -0.018 | -0.743 |
| IIR8 | 25 | 0 | 4.063 | 4 | 1 | 5 | 1.093 | 0.088 | -1.05 |
| LRF1 | 26 | 0 | 2.261 | 2 | 1 | 4 | 1.191 | -1.552 | 0.193 |
| LRF2 | 27 | 0 | 2.505 | 3 | 1 | 4 | 1.003 | -1.063 | -0.121 |
| LRF3 | 28 | 0 | 2.928 | 3 | 1 | 4 | 0.908 | 0.344 | -0.955 |
| LRF4 | 29 | 0 | 2.748 | 3 | 1 | 4 | 0.944 | -0.285 | -0.774 |
| LRF5 | 30 | 0 | 2.865 | 3 | 1 | 4 | 0.716 | 1.786 | -1.133 |
| LRF6 | 31 | 0 | 3.279 | 4 | 1 | 5 | 1.187 | -0.84 | -0.396 |
| LRF7 | 32 | 0 | 2.937 | 3 | 1 | 5 | 1.016 | -0.902 | 0.076 |
| LRF8 | 33 | 0 | 3.532 | 4 | 1 | 5 | 0.928 | 0.838 | -1.121 |
| LRF9 | 34 | 0 | 3.604 | 4 | 1 | 5 | 1.068 | -0.611 | -0.364 |
| FL1 | 35 | 0 | 2.396 | 2 | 1 | 5 | 1.232 | -0.77 | 0.55 |
| FL2 | 36 | 0 | 3.423 | 3 | 1 | 5 | 1.027 | -0.033 | -0.322 |
| FL3 | 37 | 0 | 3.18 | 4 | 1 | 5 | 1.187 | -0.818 | -0.815 |
| FL4 | 38 | 0 | 2.288 | 2 | 1 | 5 | 1.173 | -0.877 | 0.539 |
| FL5 | 39 | 0 | 2.135 | 2 | 1 | 5 | 1.095 | -0.07 | 0.897 |
| IIS1 | 40 | 0 | 3.874 | 4 | 1 | 5 | 1.194 | -0.526 | -0.783 |

Assessment of Measurement Model

The current study examined factor loading. Various studies provided different criteria to retain the scale items. The current study considered 0.5 as minimum

threshold level to retain the scale items. The factor loadings are given in Table 6, which shows that; all the items have factor loadings above 0.5. However, few items were deleted due to the low factor loading. Additionally, PLS measurement model is shown below;

Figure 4: Measurement Model



This model shows the direct relationship of independent variable with the dependent variable that is Investment in Sukuk. Three variables namely Expected Return, Availability of Information & Sukuk Features and Issuing Institution Reputation have also direct relationship with mediating variable Financial Literacy.

01 item from RA, 02 items from ER, 01 item from AISF, 03 items from IIR, 04 items from LRF, 01 item from FL and 01 item from IIS were deleted due to value less than 0.5.

Table 1: Factor Loadings

| | Availability of Information & Sukuk Features | Expected Return | Financial Literacy | Investment in Sukuk | Issuing Institution Reputation | Legal & Regulatory Framework | Religious Aspect |
|--------|--|-----------------|--------------------|---------------------|--------------------------------|------------------------------|------------------|
| AISF 2 | 0.88 | | | | | | |
| AISF 3 | 0.86 | | | | | | |
| AISF 4 | 0.84 | | | | | | |
| AISF 5 | 0.83 | | | | | | |
| AISF 6 | 0.82 | | | | | | |
| ER3 | | 0.89 | | | | | |
| ER4 | | 0.84 | | | | | |
| ER5 | | 0.80 | | | | | |
| FL1 | | | 0.59 | | | | |
| FL2 | | | 0.64 | | | | |
| FL4 | | | 0.63 | | | | |
| FL5 | | | 0.67 | | | | |
| IIR1 | | | | | 0.72 | | |
| IIR2 | | | | | 0.70 | | |
| IIR6 | | | | | 0.63 | | |
| IIR7 | | | | | 0.72 | | |
| IIR8 | | | | | 0.86 | | |
| IIS1 | | | | 0.91 | | | |
| IIS2 | | | | 0.79 | | | |
| IIS3 | | | | 0.90 | | | |
| IIS5 | | | | 0.59 | | | |
| IIS6 | | | | 0.52 | | | |
| LRF2 | | | | | | 0.56 | |
| LRF5 | | | | | | 0.76 | |
| LRF6 | | | | | | 0.73 | |
| LRF8 | | | | | | 0.60 | |
| LRF9 | | | | | | 0.54 | |
| RA1 | | | | | | | 0.64 |
| RA2 | | | | | | | 0.65 |
| RA4 | | | | | | | 0.70 |
| RA5 | | | | | | | 0.69 |
| RA6 | | | | | | | 0.84 |

a) Internal consistency reliability:

Measurement model first of all requires the conduction of reliability analysis which is done through checking composite reliability. The threshold value that is desired is 0.70 (Ringle et al., 2020). Thus it can be seen from table below that composite reliability (CR) of all the latent constructs is greater than 0.70. That is why we can say that this model has composite reliability.

The other component of measurement model that needs focus is convergent validity. To measure convergent validity, Average Variance Extracted (AVE) needs to be calculated which has a threshold value of 0.50 (Ringle et al., 2020). All other constructs have values above 0.50 except moderating effect (ME) which has a value of 0.393. A value 0.40 can be accepted if the composite reliability is greater than 0.60 (Fornell & Larcker, 1981). From the below table it can be seen that ME has a CR value of 0.882. It is very high and AVE value is so close to 4 it can easily be rounded to 4. So the values are well within range. Thus, it is concluded that this study establishes convergent validity.

Cronbach Alpha measures internal consistency which shows how closely related items are. It basically measures the reliability of scale. As all the values are greater than 0.70 except for FI as seen in table 4.9 below. But it is still within acceptable range and as number of items is smaller compared to other items it is showing low value of Cronbach alpha. Thus, it shows that these constructs possess internal consistency.

Table 6: Reliability and Convergent Validity

| | Cronbach's Alpha | rho_A | Composite Reliability | AVE |
|--|-------------------------|--------------|------------------------------|------------|
| Availability of Information & Sukuk Features | 0.90 | 0.909 | 0.93 | 0.72 |
| Expected Return | 0.79 | 0.815 | 0.88 | 0.71 |
| Financial Literacy | 0.74 | 0.705 | 0.79 | 0.50 |
| Investment in Sukuk | 0.81 | 0.869 | 0.87 | 0.58 |
| Issuing Institution Reputation | 0.78 | 0.825 | 0.85 | 0.53 |
| Legal & Regulatory Framework | 0.76 | 0.702 | 0.71 | 0.56 |
| Religious Aspect | 0.79 | 0.805 | 0.78 | 0.50 |

b) Convergent validity:

Literature recommended that the convergent validity should be achieved before to examine the relationship between variables. Therefore, by following the instructions of previous studies, the current study achieved the convergent validity with the help of CR and AVE. The value of CR must be higher than 0.7 and value of AVE must higher than 0.5 to achieve the convergent validity. These values are reported in Table 7 which shows that these values achieved the minimum threshold level. Thus, the current study achieved the convergent validity.

c) Discriminant validity:

There are various techniques to confirm the discriminant validity. Generally, literature highlighted the three techniques to access the discriminant validity which include; 1) AVE square root, 2) cross loadings, and 3) Heterotrait-Monotrait (HTMT). However, HTMT is the most recent and recommended technique. Therefore, the current study used HTMT0.9. According to this criteria, none of the value should be above 0.9. HTMT is given in Table 8 which achieved the criteria of discriminant validity.

Table 7: HTMT

| Availability of Information & Sukuk Features | Expected Return | Financial Literacy | Investment in Sukuk | Issuing Institution Reputation | Legal & Regulatory Framework | Religious Aspect |
|--|-----------------|--------------------|---------------------|--------------------------------|------------------------------|------------------|
| Availability of Information & Sukuk Features | | | | | | |
| Expected Return | 0.53 | | | | | |
| Financial Literacy | 0.42 | 0.33 | | | | |
| Investment in Sukuk | 0.73 | 0.73 | 0.59 | | | |
| Issuing Institution Reputation | 0.72 | 0.75 | 0.42 | 0.81 | | |
| Legal & Regulatory Framework | 0.76 | 0.72 | 0.53 | 0.77 | 0.78 | |
| Religious Aspect | 0.19 | 0.34 | 0.46 | 0.27 | 0.26 | 0.51 |

d) Multicollinearity:

Variance Inflated For (VIF) is used to measure multi-collinearity. It evaluates whether the different indicators are actually different from each other or not (Joe F. Hair et al., 2014). The threshold for these values is <5. A value larger than that indicates a relationship that is highly collinear to other variables and it needs to be

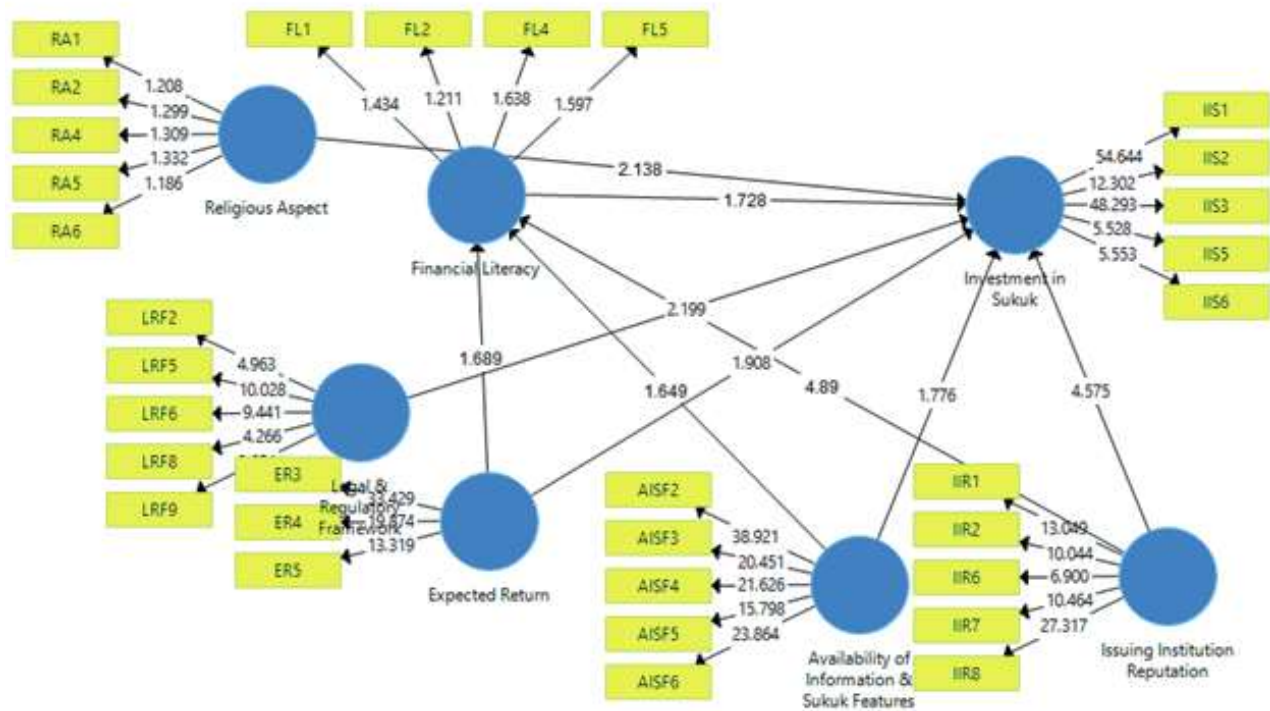
reconsidered or adjusted. From table 9 below it can be seen that all values are less than 5 so there is no issue of multi-collinearity.

Table 1 : VIF Values

| | Financial Literacy | Investment in Sukuk |
|--|--------------------|---------------------|
| Availability of Information & Sukuk Features | 1.70 | 2.04 |
| Expected Return | 1.55 | 1.73 |
| Issuing Institution Reputation | 2.10 | 2.25 |
| Legal & Regulatory Framework | | 2.04 |
| Religious Aspect | | 1.33 |

Assessment of Structural Model

Figure 5: Structural Model



a) Significance of Weights:

Moreover, this study examined the relationship between variables with the help of Smart PLS bootstrapping as given in Figure 12. In this process, t-value and beta value is considered. T-value 1.64 was considered to accept or reject the hypotheses. Direct effect results are given in Table 10 and Indirect Effect Results are shown in Table 11.

On the basis of aforementioned rule Hypothesis built for this study are evaluated as under;

H 1. Religious aspect has positive effect on investment in Sukuk.

The results from table 10 show that RE has a significantly positive effect on IIS ($\beta = 0.06$, $t = 2.14$, $p = 0.02$) Hence it is accepted

H 2. Expected return has positive effect on investment in Sukuk.

The results from table 10 show that ER has a significantly positive effect on IIS ($\beta = 0.16$, $t = 1.90$, $p = 0.03$) Hence it is accepted

H 3. Availability of information and Sukuk features has positive effect on investment in Sukuk.

The results from table 10 show that AISF has a significantly positive effect on IIS ($\beta = 0.14$, $t = 1.78$, $p = 0.04$) Hence it is accepted

H 4. Issuing institution reputation has positive effect on investment in Sukuk.

The results from table 10 show that IIR has a significantly positive effect on IIS ($\beta = 0.39$, $t = 4.57$, $p = 0.00$) Hence it is accepted

H 5. Legal & Regulatory Framework has positive effect on investment in Sukuk.

The results from table 10 show that LRF has a significantly positive effect on IIS ($\beta = 0.18$, $t = 2.19$, $p = 0.01$) Hence it is accepted

H 6. Financial literacy has positive effect on investment in Sukuk.

The results from table 10 show that FL has a significantly positive effect on IIS ($\beta = 0.23$, $t = 1.73$, $p = 0.04$) Hence it is accepted

H 7. Expected return has positive effect on financial literacy.

The results from table 10 show that ER has a significantly positive effect on FL ($\beta = 0.02$, $t = 1.70$, $p = 0.04$) Hence it is accepted

H 8. Availability of information and Sukuk features has positive effect on financial literacy.

The results from table 10 show that AISF has a significantly positive effect on FL ($\beta = 0.28$, $t = 1.65$, $p = 0.05$) Hence it is accepted

H 9. Issuing institution reputation has positive effect on financial literacy.

The results from table 10 show that IIR has a significantly positive effect on FL ($\beta = 0.19$, $t = 4.89$, $p = 0.00$) Hence it is accepted

H 10. Financial literacy mediates the relationship between expected return and investment in Sukuk.

The results from table 11 does not support that Financial literacy mediates the relationship between expected return and investment in Sukuk ($\beta=0.40$, $t=0.15$, $p=0.44$) Hence it is rejected.

H 11. Financial literacy mediates the relationship between availability of information/Sukuk features and investment in Sukuk.

The results from table 11 supports that Financial literacy mediates the relationship between Issuing institution reputation and Sukuk features and investment in Sukuk ($\beta=0.06$, $t=2.03$, $p=0.02$) Hence it is accepted.

H 12. Financial literacy mediates the relationship between Issuing institution reputation and investment in Sukuk.

The results from table 11 does not support that Financial literacy mediates the relationship between Issuing institution reputation and Sukuk features and investment in Sukuk ($\beta=0.04$, $t=1.47$, $p=0.07$) Hence it is rejected.

Table 1: Direct Effect Results

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P Values | Decision |
|---|---------------------|-----------------|----------------------------|--------------------------|----------|-----------|
| Availability of Information & Sukuk Features -> Financial Literacy | 0.28 | 0.17 | 0.18 | 1.65 | 0.05 | Supported |
| Availability of Information & Sukuk Features -> Investment in Sukuk | 0.14 | 0.13 | 0.08 | 1.78 | 0.04 | Supported |
| Expected Return -> Financial Literacy | 0.02 | 0.01 | 0.01 | 1.70 | 0.04 | Supported |
| Expected Return -> Investment in Sukuk | 0.16 | 0.16 | 0.08 | 1.90 | 0.03 | Supported |
| Financial Literacy -> Investment in Sukuk | 0.23 | 0.15 | 0.13 | 1.73 | 0.04 | Supported |
| Issuing Institution Reputation -> Financial Literacy | 0.19 | 0.16 | 0.05 | 4.89 | 0 | Supported |
| Issuing Institution Reputation -> Investment in Sukuk | 0.39 | 0.39 | 0.09 | 4.57 | 0 | Supported |
| Legal & Regulatory Framework -> Investment in Sukuk | 0.18 | 0.19 | 0.08 | 2.19 | 0.01 | Supported |
| Religious Aspect -> Investment in Sukuk | 0.06 | 0.09 | 0.03 | 2.14 | 0.02 | Supported |

Table 1: Indirect Effect Results

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics ((O/STDEV)) | P Values | Decision |
|---|---------------------|-----------------|----------------------------|--------------------------|----------|---------------|
| Availability of Information & Sukuk Features -> Financial Literacy -> Investment in Sukuk | 0.06 | 0.05 | 0.03 | 2.03 | 0.02 | Supported |
| Expected Return -> Financial Literacy -> Investment in Sukuk | 0.04 | 0.01 | 0.03 | 0.15 | 0.44 | Not Supported |
| Issuing Institution Reputation -> Financial Literacy -> Investment in Sukuk | 0.04 | 0.04 | 0.03 | 1.47 | 0.07 | Supported |

b) R2 Value-Coefficient of Determination:

R² also known as coefficient of determination is used to measure the predictive accuracy of the model. It sees the combined effect of exogenous variables on endogenous variables (Joe F. Hair et al., 2014). The values of R² vary between 0 and 1. 1 indicates complete accuracy for predicting. There is a rule of thumb to determine which values are acceptable for R². These are 0.75, 0.50 and 0.25. They each represent predictive accuracy of substantial, moderate and weak (Joe F. Hair et al., 2014).

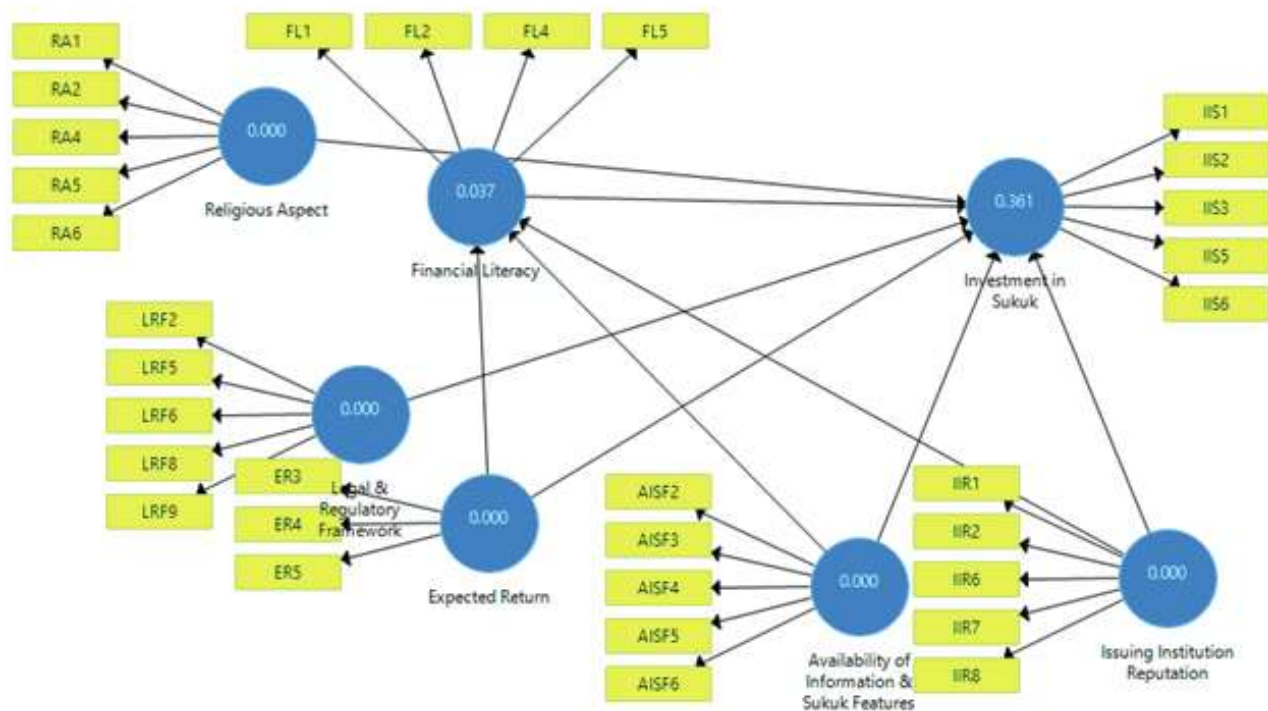
This study examined the variance explained in the dependent variable. As given in Figure 11, the R-square value 0.697. It shows that; all the variables are expected to bring 69.7% change in investment in Sukuk. This variance is strong as per the instructions of previous studies.

c) Predictive Relevance (Q2)

It is important to examine the quality if the model. Therefore, to examine the quality of the model, the current study used Predictive Relevance as shown in Figure 13. Predictive Relevance value is 0.361 for investment in Sukuk as shown in Figure 13. According to the literature, Predictive Relevance value must be higher than zero to achieve the certain quality of the model. In the current study, Predictive Relevance for investment in Sukuk is 0.361 which is above zero. This value is also shown in Table 12.

Table 1: Predictive Relevance (Q²)

| | SSO | SSE | Q ² (=1-SSE/SSO) |
|---------------------|-----|---------|-----------------------------|
| Financial Literacy | 444 | 427.744 | 0.037 |
| Investment in Sukuk | 555 | 354.865 | 0.361 |

Figure 6: Predictive Relevance (Q2)

This study purpose was to identify the factors that persuade the investors for taking investment decision, whether to invest in Sukuk and how existing and prospect Sukuk investors respond to Sukuk issuance. This study tested the different variables and mediating role of financial literacy on investment in Sukuk.

Results of this research study indicate that majority of the Sukuk investors are financial institutions and corporates with very low participation of individual investor. Research finding's empirical results supports the proposed hypothesis(s) and mediating role of Financial Literacy was only evident from results with Availability of Information and Sukuk Features.

3.10 Conclusion

Empirical results and data analysis of this study shows harmony with the previous researches conducted in different countries. There was 12 proposed hypothesis designed for this study out of which 09 has direct relationship with investment in Sukuk and 03 has indirect relationship accounting for the mediating role of financial literacy as one of the factor.

All the 09 direct relationship hypotheses have been accepted using structural

equation model technique for data processing. Out of 03 Indirect hypotheses with mediating role of financial literacy with i) institution reputation and Sukuk features ii) expected return, on investment in Sukuk are rejected because these variable data fails to meet the acceptance criteria, however iii) financial institution reputation and Sukuk features along with mediating role of financial literacy on investment in Sukuk has been accepted.

Logical Matrix:

| Objective | Hypotheses | Result | Coherence with previous Studies |
|--|---|---------------|---------------------------------|
| O1: To analyze the impact of religious aspect on investment in Sukuk. | H1: Religious aspect has positive effect on investment in Sukuk. | Supported | Yes |
| O2: To analyze the impact of expected return on investment in Sukuk. | H2: Expected return has positive effect on investment in Sukuk. | Supported | Yes |
| O3: To analyze the impact of availability of information & Sukuk features on investment in Sukuk. | H3: Availability of information and Sukuk features has positive effect on investment in Sukuk. | Supported | Yes |
| O4: To analyze the issuing institution's reputation on investment in Sukuk. | H4: Issuing institution reputation has positive effect on investment in Sukuk. | Supported | Yes |
| O5: To analyze the impact of legal & regulatory framework on investment in Sukuk. | H5: Legal Regulatory framework has positive effect on investment in Sukuk. | Supported | Yes |
| O6: To analyze the impact of Islamic Financial Literacy as a mediator between the relationships of expected return, availability of information/Sukuk features, issuing institution's reputation and investment in Sukuk. | H6: Financial literacy has positive effect on investment in Sukuk. | Supported | Yes |
| | H7: Expected return has positive effect on financial literacy. | Supported | Yes |
| | H8: Availability of information and Sukuk features has positive effect on financial literacy. | Supported | Yes |
| | H9: Issuing institution reputation has positive effect on financial literacy. | Supported | Yes |
| | H10: Financial literacy mediates the relationship between expected return and investment in Sukuk. | Not Supported | N/A |

Table 12: Logical Matrix

This study is considered as the one of its kind conducted with reference to Pakistan. Literature review yet haven't revealed any study that focus particularly on socio-economic factors which influence the tendency of the investors to invest or trade Sukuk with the mediating effect of Financial Literacy. This study results also support the significant positive results of legal and regulatory framework on the investment of Sukuk.

This study results indicate that majority of the Sukuk investors are financial institutions and corporates with very low participation of individual investor. Research finding's empirical results supports the proposed hypothesis(s) and mediating role of Financial Literacy was evident from results. Banks and corporates that issues Sukuk or intent to issue Sukuk should take appropriate measure to enhance the financial literacy of the general public as well as at the institutional level.

In Pakistan's perspective there is a dire need to adopt and implement certain international Islamic Standard and guidelines on Sukuk issued by certain international Islamic regulatory bodies like AAOIFI and IFSB by Pakistani regulatory bodies as State Bank of Pakistan and Security and Exchange Commission of Pakistan. A government and tax authority lacks clarity about the accounting & tax treatments for different modes and Structures of Sukuk.

Regulatory bodies should take adequate steps for developing the proper disclosures of Structure, documentation & accounting treatment for Sukuk. At times there are deficiencies on part of Shariah Compliance Fatwa by Reputable Scholars. There should be a continuous monitoring mechanism for Sukuk till its maturity; Shariah Compliance is not a just one-time exercise. Proper mechanism is not designed for correspondence and query response to investors. Innovate is key to growth but in a simple structured design.

References

- Ahmad, W. M. W. (2008). Religiosity and banking selection criteria among Malays in Lembah Klang. *Jurnal Syariah*, 16(2), 99-130.
- Alam, A., Uddin, M., & Yazdifar, H. (2019). Institutional determinants of R&D investment: Evidence from emerging markets. *Technological Forecasting and Social Change*, 138, 34-44.
- Alnagar, A. M. H., Othman, A. H. A., Noor, A. M., & Zakariyah, H. (2020). The Challenges of Developing the Saudi Sukuk Market in Line with Objectives of Vision 2030. International Conference on Business and Technology,
- Aloui, C., Hammoudeh, S., & Hamida, H. B. (2015). Co-movement between sharia stocks and sukuk in the GCC markets: A time-frequency analysis. *Journal of International Financial Markets, Institutions and Money*, 34, 69-79.
- Amin, H., Rahman, A. R. A., Sondoh, S. L., & Hwa, A. M. C. (2011). Determinants of customers' intention to use Islamic personal financing: The case of Malaysian Islamic banks. *Journal of Islamic Accounting and Business Research*.
- Aren, S., & Canikli, S. (2018). The effect of financial literacy and risk perception on investment choices of individual investors. 8th International Conference on Leadership, Technology, Innovation and Business Management,
- Aren, S., & Zengin, A. N. (2016). Influence of financial literacy and risk perception on choice of investment. *Procedia-Social and Behavioral Sciences*, 235, 656-663.
- Awn, A. M., & Azam, S. F. THE DETERMINANTS OF INVESTMENT IN ISLAMIC SUKUK: A STUDY OF LIBYAN INVESTORS.
- Aziz, S., Ashraf, D., & El-Khatib, R. (2021). Societal trust and Sukuk activity. *Journal of International Financial Markets, Institutions and Money*, 74, 101384.
- Balcilar, M., Demirer, R., & Hammoudeh, S. (2015). Global risk exposures and industry diversification with Shariah-compliant equity sectors. *Pacific-Basin Finance Journal*, 35, 499-520.

- Balli, F., Ghassan, H., & Al Jeeфри, E. H. (2021). Sukuk and bond spreads. *Journal of Economics and Finance*, 45(3), 529-543.
- BASYARIAH, N., KUSUMA, H., & QIZAM, I. (2021). Determinants of sukuk market development: macroeconomic stability and institutional approach. *The Journal of Asian Finance, Economics, and Business*, 8(2), 201-211.
- Bhuiyan, R. A., Puspa, M., Saiti, B., & Ghani, G. M. (2020). Comparative analysis between global sukuk and bond indices: value-at-risk approach. *Journal of Islamic Accounting and Business Research*.
- Blind, K., Petersen, S. S., & Riillo, C. A. (2017). The impact of standards and regulation on innovation in uncertain markets. *Research Policy*, 46(1), 249-264.
- Bucher-Koenen, T., Alessie, R., Lusardi, A., & van Rooij, M. (2021). Financial Literacy and Stock Market Participation.
- Butt, I., Saleem, N., Ahmed, H., Altaf, M., Jaffer, K., & Mahmood, J. (2011). Barriers to adoption of Islamic banking in Pakistan. *Journal of Islamic Marketing*.
- Duqi, A., & Al-Tamimi, H. (2019). Factors affecting investors' decision regarding investment in Islamic Sukuk. *Qualitative Research in Financial Markets*.
- Ebrahim, M. S., Jaafar, A., Omar, F. A., & Salleh, M. O. (2016). Can Islamic injunctions indemnify the structural flaws of securitized debt? *Journal of Corporate Finance*, 37, 271-286.
- El Mosaid, F., & Boutti, R. (2014). Sukuk and bond performance in Malaysia. *International Journal of Economics and Finance*, 6(2), 226-234.
- Gadar, K. (2004). The influence of dealers' perceptions on the buying and selling of Islamic bonds [Durham University].
- Guiso, L., & Jappelli, T. (2009). Financial literacy and portfolio diversification (Working Paper No. 212). Center for Economic Studies and Finance, Department of Economics, University of Naples. Retrieved from <http://www.csef.it/WP/wp212.pdf>.
- Halim, Z. A., How, J., & Verhoeven, P. (2017). Agency costs and corporate sukuk issuance. *Pacific-Basin Finance Journal*, 42, 83-95.
- Haron, R., Subar, N. A., & Ibrahim, K. (2020). Service quality of Islamic banks: satisfaction, loyalty and the mediating role of trust. *Islamic Economic*

Studies.

Hassan, H., Tamimi, A., Anood, A., Kalli, B., Al-tamimi, H., Anood, A., & Kalli, B. (2015). Financial literacy and investment decisions of UAE investors. *J Risk Fincance*, 10(5), 500-516.

Iqbal, Z., & Mirakhor, A. (2011). *An introduction to Islamic finance: Theory and practice* (Vol. 687). John Wiley & Sons.

Islam, T., & Chandrasekaran, U. (2019). Religiosity, values and consumer behaviour: a study of young Indian Muslim consumers. *Journal of Consumer Marketing*.

Jalilian, H., Kirkpatrick, C., & Parker, D. (2007). The impact of regulation on economic growth in developing countries: A cross-country analysis. *World development*, 35(1), 87-103.

Kim, H.-B., & Kang, S. H. (2012). The sharia stock and sukuk GII of Islam finance. *한국국제경영관리학회 학술발표대회 논문집*, 267-290.

Klein, P.-O., Turk, R., & Weill, L. (2017). Religiosity vs. well-being effects on investor behavior. *Journal of Economic Behavior & Organization*, 138, 50-62. Lo, C. W., & Leow, C. S. (2014). Islamic banking in Malaysia: A sustainable growth of the consumer market. *International Journal of Trade, Economics and Finance*, 5(6), 526.

Mahendra, E., Zuhdi, U., & Muyanto, R. (2015). Determinants of firm innovation in Indonesia: the role of institutions and access to finance. *Economics and Finance in Indonesia*, 61(3), 149-179.

Osman, A. F., Htay, S. N. N., & Muhammad, M. O. (2012). Determinants of cash waqf giving in Malaysia: survey of selected works. *Workshop Antarbangsa Pembangunan Berteraskan Islam V (WAPI-5)*,

Parker, D. (1999). Regulation of privatised public utilities in the UK: performance and governance. *International Journal of public sector management*.

Saeed, M., Elnahass, M., Izzeldin, M., & Tsionas, M. (2021). Yield Spread Determinants of Sukuk and Conventional Bonds. *Economic Modelling*, 105664.

Shafron, E. (2019). Investor tastes: Implications for asset pricing in the public debt market. *Journal of Corporate Finance*, 55, 6-27. Szczepanowicz, A. (2011). Unconventional banking in a conventional environment: Islamic

banking and finance in the USA Georgetown University].

Tauni, M. Z., Fang, H., Mirza, S. S., Memon, Z. A., & Jebran, K. (2017). Do investor's big five personality traits influence the association between information acquisition and stock trading behavior? *China Finance Review International*.

Uddin, M., Chowdhury, A., Zafar, S., Shafique, S., & Liu, J. (2019). Institutional determinants of inward FDI: Evidence from Pakistan. *International Business Review*, 28(2), 344-358.

Wang, M., Keller, C., & Siegrist, M. (2011). The less You know, the more You are afraid of—A survey on risk perceptions of investment products. *Journal of Behavioral Finance*, 12(1), 9-19.

Yeh, T.-m., & Ling, Y. (2021). Confidence in Financial Literacy, Stock Market Participation, and Retirement Planning. *Journal of Family and Economic Issues*, 1-18.

Zain, N. S., & Sori, Z. M. (2020). An exploratory study on Musharakah SRI Sukuk for the development of Waqf properties/assets in Malaysia. *Qualitative Research in Financial Markets*.

Web Sites:

<https://www.iifm.net/wp-content/uploads/2020/09/IIFM-Sukuk-Report-9th-Edition.pdf>

<https://www.statisticssolutions.com/structural-equation-modeling/>

<https://www.sbp.org.pk/ibd/bulletin/2020/Sep.pdf>

<https://en.wikipedia.org/wiki/Ecology>

<http://aaoifi.com/?lang=en>

<https://www.islamicfinancenews.com/>

<https://www.ifsb.org/sec03.php>