



Unlocking the Potential of Short-Term Sukuk in Pakistan: Understanding Investor Perceptions, Market Dynamics, and Policy Implications

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Abstract: This study was to examine the determination of Investors' perception and short sellers' conversion in short term Sukuk in Pakistan. *Objective/Goal:* This study aims at finding out factors determining the perception of the investors and short sellers' conversion towards the shorting-of-sukuk in Pakistan where it is emerging market in Islamic finance. This analysis covers investor perception and adoption with respect to the returns that can be harvested in the market, liquidity of the market, compliance with the Shariah, perceived risks, regulatory issues, awareness and ease of access. The relationships among independent variables and investor perceptions and adoption are somewhat adjusted by the moderating effects of market liquidity and regulatory frameworks and mediated by awareness. The study followed primary data collection method through quantitative approach from 300 financial market participants (both institutional and private financial investors) of Pakistan. The analysis of the data was carried out with Smart PLS. The study identified that the investor perceptions are enhanced with the increase in Market Returns, Shariah Conformity and Accessibility. Negative perceptions towards Sukuk and liquidity issues slow down the adoption of Sukuk. Association between awareness and investing activities is limited by regulatory frameworks and the level of market liquidity while association between returns on the market and the adoption by investors is mediated by awareness. A comparison of Malaysia's short-term Sukuk market with Saudi Arabia will reveal that Pakistan is having difficulties in developing its own market. The main issues are Regulations, Liquidity and Knowledge. The findings yield recommendations for policy, which can be taken up by various stakeholders.

Keywords: Islamic finance, adoption of Sukuk and its impact, compliance with Islamic principles, liquidity, attitude of investors, financial literacy, and Pakistan.

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1. Introduction

1.1 Background

Background Islamic finance has come into international prominence in recent decades, in Muslim countries in particular, with Shariah compliant financial solutions, able to meet the religious sensitivities. Sukuk (Islamic bonds) are one of the financial products they have become a main stream of Islamic capital market system. Sukuk are not based on the payment of interest and also do not include Riba (USUERY), unlike banks, as they represent the right to a real estate property/company. Sukuk are unique in providing an appealing and an attractive investment opportunity for ethically-minded investors as well as for institutional investors.

Cash flow management is the growing use of short-term Sukuk, both by the financial institutions, companies and governments. Regarding Sukuk as assets, there are liquidity management products in the Sukuk market in terms of tenure of 3-months to 12-months period. Saudi Arabia and Malaysia currently have mature short-term sukuk financial markets, which have made it easier to establish the secukuy financial markets. The establishment of the sukukuy financial markets has been facilitated with substantial and dynamic market for short term financial markets in Saudi Arabia and Malaysia. While it still has some way to go, the market for short-term sukuk in Pakistan is quite young and immature as compared to the international market. Although Islamic banking practices have made huge steps and several long term Sukuk type contracts have been introduced, a number of liquidity, knowledge and regulatory challenges hindering the adoption of short term Sukuk have been identified within the context of Pakistan financial system. The event will be an ideal platform to gain insights into the attitude and understanding of the Pakistani investors regarding ST-Sukuk.

Recently, the Pakistani government had been able to raise huge cash from issuing of Ijara Sukuk, but most of them were yet to be tradeable. However, the esthetics of not being able to trade such assets (in addition to a lack of liquidity) reduce both institutional and private investors feeling encouraged to invest in projects. Bahrain and Malaysia have established strong secondary markets for Sukuk which facilitates an investor to buy and sell them. This helps to enhance market participation, and confidence (Weguelin, 2024). The market of Pakistan, however, is in its nascent stage and lacks any potential trading platforms, while many investors who are unable to get a continuous presence in the market.

Regulatory, despite being continually evolving is also a significant hurdle for issuers and investors. The Securities and Exchange Commission of Pakistan (SECP) has recently published the concept papers, aimed to increase transparency of the Sukuk market and ease the processes of Sukuk issuance. But the fine becomes costly for the issuers, and investors become confused as to the different regulatory structures (SECP, 2024).

One of the most important factors which will affect the acceptance of short-term Sukuk is the awareness created. Islamic institutions, mutual funds and the other institutional investors have a good understanding of Sukuk instruments, while the individuals' investor base is not as knowledgeable. Butt (2024) argues that financial education and financial literacy programmes play a critical role in boosting Sukuk investors' interest in the Sukuk securities. Financial education lead by UKMFI (2017) has been proven to successfully promote Sukuk's adoption in Malaysia which further urges institutional investors and retail investors to participate in the market. There is still a need to develop a specific plan for Pakistan to boost awareness and participation in the markets.

Further, the magnitude of returns from short term Sukuk will significantly influence investor's decision making. Sukuk traditionally are seen as low-risk investment instruments because they are asset-backed, but sometimes as returns might be lower than the returns of other asset classes such as treasury bills. The problem for investors who value return on investment (ROI) over religious beliefs is that it presents the conundrum between conforming to his rules and making money. Although the subject was motivated by religious considerations and many investors are interested in Sukuk, over time, the relative poor performance of Sukuk compared to conventional assets could prove to be a limiting factor and deter investors from investing in these assets broadly, as Rafay (2022) pointed out.

These challenges need to be addressed in the face of the increasing demand for investing products which comply with the Sharia principles and the possibility of investing through Sukuk that will enhance financial inclusion. To unlock the potential of temporary Sukuk, different steps can be taken including the optimization of Sukuk issuance procedures, further strengthening of regulations and development of a liquid secondary market. Moreover, to make retail investors more comfortable and fruitful in accessing the investment process, it is essential to have targeted awareness-raising initiatives that take into account the lack of knowledge among them.

The expansion of the sukuk markets worldwide is a testament that Islamic finance is able to supplement the existing financial systems without any issues by providing a range of investment opportunity that are ethical and religious compliant. To achieve this success Pakistan must have policy coherence, empower the market for innovative solutions and implement structural changes.

This study aims to answer three major research questions – namely: (1) Understanding of investor attitudes, (2) constraints in the market, and (3) possible solutions to encourage ST-Sukuk market in Pakistan.

The banking industry also faces the following challenges concerning the SUKUK: Banking sector, on the other hand, has to deal with the following challenges in relation to the SUKUK:

Although Short-term Sukuk come with competitive returns and liquidity management, they haven't gained the acceptance that is desired in Pakistan. Sukuks are not appealing to investors as much as the other investment products (T-bills and T-bonds) on grounds of liquidity and security. Sukuk is mainly issued to Islamic institutions and mutual funds but private investors are somewhat cautious as they can lack an understanding or have liquidity insecurities.

Lack of regulatory compliances is the major obstacle for increasing the short term Sukuk market. Despite numerous initiatives launched by SECP for Sukuk issuance, limited participation in these issuances so far is attributed to the less developed Sek- Market, and complicated compliance procedure. The problems present queries about the issues of Sukuk Products replacing market offers as its separated investors' expectations.

This research aims to gain insight into the investors' attitude and to find solutions for the market. Policymakers, financial institutions and investors who seek to become more inclusive and active in Islam (facing capital market) and grasp of the shifting dynamics would benefit.

1.2 Scope of the Study

This study explores the Pakistanian market dynamics and investors sentiment towards adopting a short term Sukuk in Pakistan. This applies to:

- 1) Sukuk Market - Active Engagements of Institutional and retail investments in Sukuk Market.
- 2) The general net returns on Sukuk investment.
- 3) Comparative returns of Sukuk investment and conventional instrument investment.
- 4) Regulatory frameworks analysis in its impact on investors' perceptions

1.3 Problem Statement

Short-term Sukuk market is a market with potential untapped in Pakistan. Numerous factors affect its growth, such as lack of government assistance, lack of being aware of the investors and problems of liquidity. Also, investors typically consider short-term Sukuk as being more high risk or less profitable than the traditional ones. All these barriers need to be overcome to increase the potential

for Sukuk to be introduced in the Financial Market in Pakistan (Chaudhry and Alam 2022; Martinez and Silva 2023).

2. Literature Review

This section discusses the important determinants of short-term Sukuk's take-up in Pakistan. The market return, ease of access, awareness and liquidity, market perception and regulatory framework are the important factors that needs to be analyzed on the investors perceptions of this instrument. This section introduces the concepts in Islamic finance and Behavioral Finance theory, and provides findings on the global Sukuk market which respectively points out areas for future research.

2.1 Theoretical Background: Behavioral Finance and Islamic Finance Principles

The Behavioral Finance Theory suggests that the decisions that investors make are not only rationally calculated, but based on emotional judgements, psychological biases or perceptions of the investors (Barberis & Thaler, 2003). At the level of the investor, there are several challenges which can affect his attitude towards Sukuk, such as his perception of risk, his expectation on the returns he is going to get and his knowledge about Sukuk.

Ethical in Islam financing also has a great consideration of ethical consideration and Islamic values affecting the investment procedure of Islamic finance. Sukuk is compliant to shariah principles and embodiments of value based on shariah principles such as fairness, risk sharing and prohibition of Riba (interest) as per shariah rules. The study carried out by Hassan & Lewis (2014) revealed that the players of Islamic finance market have motivations other than simply for profit, such as religious beliefs and ethical values. This is in line with the basic requirement of Sukuk which is to provide asset-backed transactions for the purpose of doing things in a fair manner (Al-Ali et al., 2020).

It develops theories collaboratively to explain the importance of the financial and non-financial factors (particularly returns, liquidity and Shariah compliance) to the perception of investors and investor's choice.

2.2 Hypotheses Development

2.2.1 Market Returns

The returns are crucial in investment decision making as they clearly help answer the question that the investors are asking: "Was the investment in the financial instrument worth it? It is applicable to all markets conventional and Islamic where returns are similar, and where people know about it. The popular belief that many investors up to date had that Sukuk is not as lucrative as conventional

bonds (or treasury bills) is largely what has hindered short-term Sukuk investment (Smaoui & Khawaja, 2017). However, it's not all doom and gloom as the Sukuk returns have started to level off with the conventional returns in Malaysia and Saudi Arabia, where the Sukuk has had decades to mature (World Bank, 2023), and buy-up is a true measure of growth achieved over the years. In Pakistan it is not so. The Sukuk returns in general are not competitive to other investment products which makes it hard for investors to invest in the Sukuk due to their dissatisfaction about its returns, regardless of the religious beliefs (Rafay, 2022). Al-Salem et al. (2019) fed a clear explanation that the Islamic financial instruments need to be accepted by the investors and they should be given an attractive return, rather than defensively.

Take one thing for granted, the investors who are religious motivated ones do concede to an acceptable return in exchange for being Shariah compliant. But it's a given tolerance and as with anything else, there are limits. While advancing in some aspects may be an academic exercise, it is a must in developing the competitive pricing framework and further understanding of the Sukuk designs that will make it possible to sustain the interest of the buyers in the market even among the known Sukuk buyers (Hassan & Aliyu, 2018).

H1: Market returns positively influence investor perceptions and adoption of short-term Sukuk.

2.2.2 Perceived Risk

Everyone—both the ethical investor and the un-ethical investor—must face risk if he is not ready to do so. There are some built-in protections, however, for Sukuk: they are asset-backed i.e. some of the debt-based instruments have limits placed upon them. Moreover, the investors are always concerned with the uncertainty of the markets, the existence of credit risk and liquidity risk (Halim et al., 2017). These concerns are exacerbated in Pakistan with the un-developed secondary market. Sukuk are not an exception as investors are reluctant to go up to buy an investment when they can't easily sell it. Contrary to the instrument itself, there is no objection but many who'd like to participate are not present on the sidelines because they fail to see how things will pan out if the situation changes (INP, 2024). Godlewski et al. (2013) found that the same liquidity constraint is one of the key constraints which restricts the retail investors' investment in the Sukuk markets.

This is contrary to Malaysia and Saudi Arabia. Due to functional secondary market activities, the market operation risks for investing in these markets are lower and there is also a better participation in these secondary markets. This could be directly tackled by introducing short-term Sukuk which can be traded on the market, as currently these are not available and would boost investors' confidence in the market in general, as well as provide them with flexibility. (Butt, 2024)

H2: Perceived risk negatively impacts investor perception and adoption of Sukuk.

2.2.3 Shariah Compliance as a Key Motivator

Sukuk is not about being Shariah compliant, it is the entire purpose of Sukuk. It is found that investors prefer Sukuk investment over traditional investment for its conditions adhere to Islamic principles which prohibit the presence of any Riba in the investment, and also do not depend on any real assets (Hassan & Lewis, 2014). The empirical findings have indeed strengthened common sense that religious preference plays an important role in shaping investors' choice of investment; and the demand for religious investments exists even if the investment return is less than the investment of conventional religions. The concern is however not that Shariah is not implemented but the concern lies in the issue of inconsistency of implementing Shariah. In general, if there are differences in the compliance systems in place at certain jurisdictions – or if the various Shariah Boards interpret the same system differently – investors are left in a position of uncertainty as to what is being purchased (Godlewski et al, 2013). To address this problem the Securities and Exchange Commission (SECP) have been striving towards standardisation of Shariah- governance of security market throughout banks and other reformers, but the reforms have not been completed and investors are not fully confident on the security market regulatory system (SECP, 2024).

H3: Shariah compliance positively influences investor perception and adoption of Sukuk.

2.2.4 Ease of Access

Not evaluating a well-priced, low risk, instrument (even one which is 'shariah compliant') will not be easy because there is a possibility of earning money based on it. Accessibility matters. The onerous Sukuk issuance process coupled with the comparatively primitive trading platforms has proved attractive to buy the Sukuk and hence the little uptake in Malaysia so far (Lo & Leow, 2014). But there are significant differences in Pakistan: Pakistan has convoluted processes and no easy retail exposure which could be the first step in the process to make the product a consideration for the average investor; rather than the underlying processes and effort. (Hassan et al., 2017).

So is the difference between the extent of digital readiness of infrastructure. If retail investors were not able to navigate and compare Sukuk, buy and sell it in a couple of clicks, the market is confined to institutional and HWH investors as they have the funds to deal with complexity. Filling that gap (by developing the digital tools and streamlining the processes needed to partake in retail investments) is likely to be the biggest intervention to expand the investor base, more than anything else aside (Profit Pakistan Today, 2024).

H4: Ease of access enhances the likelihood of perception and adoption of Sukuk investment.

2.2.5 Awareness as a Mediating Factor

However, what many investors do not realize is that you cannot invest in something that you don't know. Note, without additional awareness, any of the other factors mentioned above has a low probability to have the intended effect: returns, risk-profiles and accessibility are only factors that affect behaviour if there is an increased level of awareness. A number of studies have consistently found that there is a direct relationship between investor awareness and a fall in investor's irrational and impulsive decision making (Al-Salem et al., 2019). In Pakistan, it's a thing that is missing. From the surveys conducted it was found that the level of financial literacy among investors regarding short-term Sukuk is not satisfactory, namely about 40% of the investors have good knowledge of short-term Sukuk and this level has continued to occur for a long time since the financial literacy in short-term Sukuk is carried out throughout the continuous dissemination of financial information. The solution to bridging that gap would be through the cooperation between Islamic banks, regulatory as well as educational bodies, as opposed to a 'catch-up' approach between the two. It can be beneficial for retail investors to be involved, as this has seen to be the case in Malaysia, thanks to education efforts – purposive education, as experience in Malaysia showed, is a factor that could have a tangible impact (Weguelin, 2024; Smaoui & Khawaja, 2017).

H5: Awareness mediates the relationship between market returns and investor perception and adoption.

2.2.6 Regulatory Framework as a Moderating Factor

Whatever ensues markets have to rely on confidence, and confidence goes with good rules which are consistently applied and which one can be trusted. An already established regulatory system doesn't only chase out the bad guys – it also allows investors, who want to invest, to feel secure about the fact that they will be “protected” in the market in which they are investing and are able to rest assured that the lashing out will not get any worse. This phenomenon has been extensively documented such as in Malaysia (Shiv Sena et al., 2004) and Saudi Arabia (Naseef & Walid, 2011) where the increased proactiveness and structure of the regulatory environment is shown to lead to greater uptake of Sukuks.

Pakistan has made significant strides towards making some real progress. These achievements in SECP's issuance and governance enhancement (SECP, 2024) were made possible through SECP's efforts on improving the market environment. The implementation, however, takes

place unevenly and there is no uniformity in the implementation of on page rules despite them already having been in place, leading to lack of confidence in rules implementation. In both the case and when that comes into effect, the gains to come from the enhancement attribute of the rules and regulatory agencies will only be gained from a more closed system – partly closed, as is the case now – more closed, when this will be realised (INP, 2024).

H6: Regulatory frameworks strengthen the relationship between market returns and perception and adoption.

2.27 Market Liquidity as a Moderating Factor

But, the liquidity will be a critical factor of whether the use of SUKUK is as a liquid flexible financial tool or as a long term investment where there is no easy out for investors. With a strong and deep secondary market, investors are able to sell and buy with confidence, as they are not 'hooked' on to them if they wish to change if the market changes. The advantage of this is that investors can reduce the potential risk and x-ray the investment instrument as very attractive, particularly those investors who have lower liquidity to lose the investment in a long time. This phenomenon has proven to be highly beneficial for the Sukuk markets specifically in Malaysia and Saudi Arabia: Standing ready liquidity has been the natural catalyst to encourage institutional investment participation and the general retail investors, which ensured time-to-time expansion of Sukuk markets.

It's the opposite situation on the Sukuk market in Pakistan. Limited volume in trading, coupled with limited activity on the secondary market, implies that the awareness building and other demand side interventions have limited impact: investors who become aware and are informed on the benefits of having Sukuk may still not participate in buying and holding the Sukuk, if exit is difficult. The implementation of Sukuk as tradable financial instruments, and the development of secondary market trading infrastructure are thus not by-products of the rest of this framework, but key to enjoying secondary market active trading. (Halim et al., 2017)

H7: Market liquidity enhances the effect of market returns on investor adoption.

3. Model Framework and Methodology

This section explains the conceptual model and methods used to fully explore the investors' attitudes and acceptance towards the short term Sukuk in Pakistan. The conceptual model, study hypotheses, data collection methods, sampling techniques, and analytical tools used to validate the relationships that exist between Independent, Mediation, Moderation and Dependent variables are

included in the frame work. The nature of the research is quantitative, and aims to identify the relationship, correlation and causal factors.

3.1 Conceptual Model Framework

The conceptual model in this study involves the variables of investor behavior, mediating, moderating and dependent variables to study short-term Sukuk adoption. Paradigm information shows how the psychological biases and religious principles impact on investment decisions through the lens of Behavioral Finance Theory and Islamic finance.

Table 1: Variables and Definitions

Variables	Definition	Expected sign	Source
Independent Variables:			
Market Returns (MR)	Refers to the expected profitability of short-term Sukuk investments.	+	Hassan & Alam (2022); Rashid et al. (2023)
Perceived Risk (PR)	Includes the risks investors associate with Sukuk, such as liquidity, market, and credit risk.	-	Chaudhry & Alam (2022); Liu & Zhang (2023)
Shariah Compliance (SC)	The extent to which Sukuk align with Islamic financial principles.	+	Siddiqui & Ahmed (2023); Ali et al. (2023)
Ease of Access (EA)	Refers to the availability of Sukuk instruments and the simplicity of the purchase and trading process.	+	Martinez & Silva (2023); Kim & Lee (2023)
Mediating Variable			
Awareness (AW)	Awareness reflects the investors' familiarity and knowledge of Sukuk products and their features, bridging the gap between market offerings and investor expectations.	+	Rashid et al. (2023); Liu & Zhang (2023)
Moderating Variables			
Regulatory Framework (RF)	The consistency and effectiveness of regulatory policies impacting the issuance and trading of Sukuk	+	Perez & Wang (2023); Hassan & Alam (2022)

Market Liquidity (ML)	The ease with which Sukuk instruments can be traded without significant price fluctuations	+	Chaudhry & Alam (2022); Martinez & Silva (2023)
Dependent Variable			
Investor Perception and Adoption (IPA)	Represents the overall attitude of investors toward Sukuk and their likelihood of adopting these instruments.		Sarma & Devi (2022); Rashid et al. (2023)

3.2 Conceptual Model Diagram

Figure 1: With the mediating Effects of Awareness

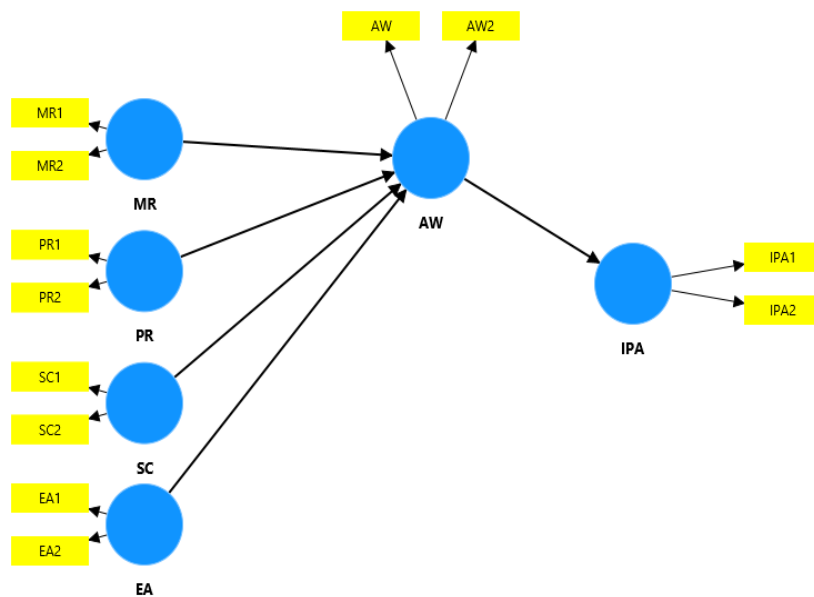
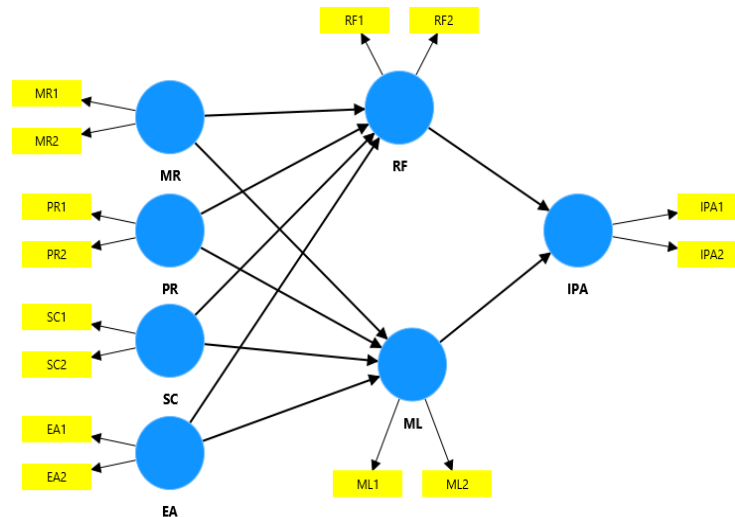


Figure 2: With the moderating Effects of Market Liquidity and Regulatory



3.3 Target Population

The study targets the following segments: institutional investors (Islamic banks, mutual funds, insurance companies) and retail investors who make their investment in financial market in Pakistan. Both institutional and retail investors are included so that this is a reflection of a variety of points of view.

3.4 Sampling Technique

Stratified random sampling method is used to sample both institutional investors and retail investors which ensures that the sample is representative for both groups. The population is divided into subgroups (strata) as mention in the table 2.

Table 2: Sampling Distribution

Demographic Group	Sample Size	Percentage
Retail Investors	100	33%
Institutional Investors	100	33%
Financial Analysts	50	18%
Policymakers and Regulators	25	8%
Others	25	8%
Total	300	100%

3.5 Sample Size Determination

To achieve a sample size of 300 respondents to provide a satisfactory level of statistical reliability a Krejcie & Morgan (1970) formula was used. A 95% confidence level working with a sample size will allow good use of the statistical models and hypothesis testing.

3.6 Data Collection Methods

One survey questionnaire (structured) used for collecting primary data has been designed according to the conceptual model and the objectives of the research. The questionnaire includes questions designed on Likert scale which could investigate the variables related to market return, risk, awareness and regulatory.

3.7 Provincial Skills Committee Provides participants with feedback on their assessments.

The questionnaire was developed from the questions that have been included in a number of research Papers. References from where the questions for the variables were taken are presented in Appendix 1.

The survey questionnaire is split up into a number of sections that measure some of the important variables:

Discuss and record the demographic details of the person. Interview questions and record the demographic information of the person. (Age, gender, occupation, investment experience)

The independent variables that are markets returns, perceived risk, shariah compliance, ease of access are discussed in section 2. The independent variables discussed in section 2 are market returns, perceived risk, shariah compliance and ease of access. A questionnaire will be used to mute the variable (Awareness). The variable (Awareness) will be muted with a questionnaire.

These processes and judgment were effective under both the World War I and World War II eras. The processes and judgment were good during both the World War's.

Below are the range of indicators. Likert is a type of questions which were answered using statements, with answers ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), thereby making the data easily analyzed quantitatively using descriptive statistics, correlation analysis and regression analysis.

4. Analysis of data and findings

In this part survey data is analysed and statistical tests are calculated. This study investigates the influence of market returns, perceived risk, Shariah compliance, accessibility of access, investors' knowledge, regulatory requirements and market liquidity on the investor attitudes and in-turn short

term Sukuk participation in Pakistan. Different types of descriptive statistics, correlation analysis, reliability testing and direct and indirect effect models validate study hypotheses and add valuable insight.

4.1 Demographic Analysis of Respondents

The respondents of the survey were analysed, which involved examining their socio-demographic characteristics.

During the survey 300 actual answers has been taken from Pakistani institutional and retail investors. The analysis by demographic groups of participants indicates some interesting characteristics of the participants.

Table 3: Demographic Overview

Age Distribution	Gender Distribution	Investment Experience
26–45 years: 65%	Male: 70%	Less than 1 year: 15%
46–55 years: 20%	Female: 30%	1–3 years: 35%
18–25 years: 10%		4–6 years: 25%
55 years and above: 5%		More than 6 years: 25%

From this data, it appears the sample is skewed towards active investors; most were experienced investors (more than 60% had over 3 years of investing), for example.

4.2 Descriptive Statistics

The descriptive statistics offer a summary of the answers given to the main variables – market returns, perceived risk, Shariah adherent, ease of access, awareness, regulation, liquidity, investor perception.

Table 4: Descriptive Analysis

Variables	Mean	Standard Deviation	Interpretation
Market Returns	3.8	0.7	Investors moderately agree with returns.
Perceived Risk	3.1	0.9	Mixed opinions about risks associated with Sukuk.
Shariah Compliance	4.2	0.6	Strong agreement on the importance of compliance.
Ease of Access	3.3	0.8	Investors find access moderately difficult.
Awareness	3.0	0.9	Awareness about Sukuk remains moderate.

Regulatory Framework	3.5	0.8	Investors are neutral about regulations.
Liquidity	2.8	1.0	Liquidity is a significant concern.
Investor Perception	3.7	0.7	Generally positive but room for improvement.

The findings reveal that investors place great importance on the importance of Shariah compliance, but at the same time they have concerns about liquidity and awareness. Likewise, the ease of access and thus seeming regulatory framework are also generally mixed – indicating areas for improvement.

4.3 Analysis of Measurement Model

First step is to look at outer loadings. The outer loadings refer to the relationship between the indicators or items and the construct or latent variable and this is normally used to estimate the relationship. Ideally the values of the outer loadings should be > 0.7 . In Table 5, except one, all the values of the indicators are above 0.7 which is considered satisfactory.

Table 5: Outer Loadings

	AW	EA	IPA	MR	PR	CS
AW1	0.903					
AW2	0.911					
EA1		0.895				
EA2		0.906				
IPA1			0.927			
IPA2			0.929			
MR1				0.865		
MR2				0.742		
PR1					0.873	
PR2					0.892	
CS1						0.992
CS2						0.457

4.4 Reliability Tests

The first criteria used in the measurement model is the reliability. The first criteria applied to the measurement model is reliability. The key as far as measurement is concerned is the sustainability and consistency of the constructs measured. Cronbach's alpha & composite reliability are important indices to assess the internal consistency reliability (also known as the “reliability of a data set”) of outer loadings (Law et al., 2016). Cronbach's α values of 0.7 is acceptable while >0.8 is as good. The results of reliability and validity test are shown in table 6. As shown, all constructs (except for MR) have a value close to the .8 and higher range, indicating that the reliability of data sets for those constructs are good. Trying to ensure that for any construct, the minimum composite reliability is set at > 0.7 . All of the constructs are greater than 0.7 for each one as indicated in Table 6. The reading tends to come up with higher numbers, when it indicates greater levels of reliability. For this reason, these construct's scores expressed as “satisfactory to good.”

Table 6: *Construct Reliability and Validity*

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
AW	0.785	0.903	0.823
EA	0.766	0.895	0.810
IPA	0.839	0.925	0.861
MR	0.468	0.786	0.649
PR	0.717	0.876	0.779
SC	0.721	0.723	0.597

4.5. Validity Tests

The construct validity has been measured using studies that involved applying convergent and discriminant validity tests (Ghazali et al., 2018). Average variance extraction could be used to access the convergent validity of constructs knowledge. The average value of 0.5 was acceptable and 0.7 or more showed a high convergence validity of constructs (Fan et al., 2018). All the constructs in Table 6 have AVE values greater than 0.7, thus showing high convergent validity of the scale. Additionally, test of discriminant validity was conducted for the purposes of examining construct validity. It tells the construct's patterns of indicators in comparison to an alternative indicator for a construct. Henseler et al. (2015) put forward a tactic; the “Heterotrait-Monotrait ratio”. This ratio method is utilized by a lot of researchers and it is used for observing discriminant validity in PLS-SEM. There are several studies that suggested the threshold value for HTMT for each construct should be < 0.9 to form discriminant validity (Rasoolimanesh et al., 2021). Table 7

shows that the correlation value for each construct in a table is less than 0.9 except for EA which is slightly higher than 0.90 and PR, assuming that the discriminant validity is likely to be here.

Table 7: Heterotrait- Monotrait Ratio (HTMT)

	AW	EA	IPA	MR	PR	RF	ML
AW							
EA	0.984						
IPA	0.848	0.777					
MR	0.998	0.977	0.832				
PR	0.613	0.567	0.492	1.090			
SC	0.055	0.039	0.102	0.116	0.108		

4.6 Analysis of the Structural Model

The second step is to examine and measure the structural model based on bootstrapping test.

4.6.1. Analysis of Coefficient of Determination

The Algorithm was applied to calculate R² for each of the variables in a Smart PLS and to calculate path coefficients in a model for each path. The value of R² for AW is 0.628 and this means that it will fit well. It recommended that independent variables account for 62.8% of the variance of Awareness. R² Investor Perception and Adoption is 0.474 which is taken as moderate. It recommended that variables were the explanation of the variance of variables 47.4% percent. Generally it is thought that the closer the value of of R² to 1, the better the model fits the data. The adjusted R² is just the change in the value of R². In a regression model it can verify the predictors of non-significant model and update it to a different model (Ghani et al., 2010). Table 8 shows that the adjusted R² for AW and IPA.

Table 8: Goodness of Fit

	R-Square	R-Square Adjusted
AW	0.628	0.623
IPA	0.474	0.473

4.6.2 Variance inflation factor (VIF)

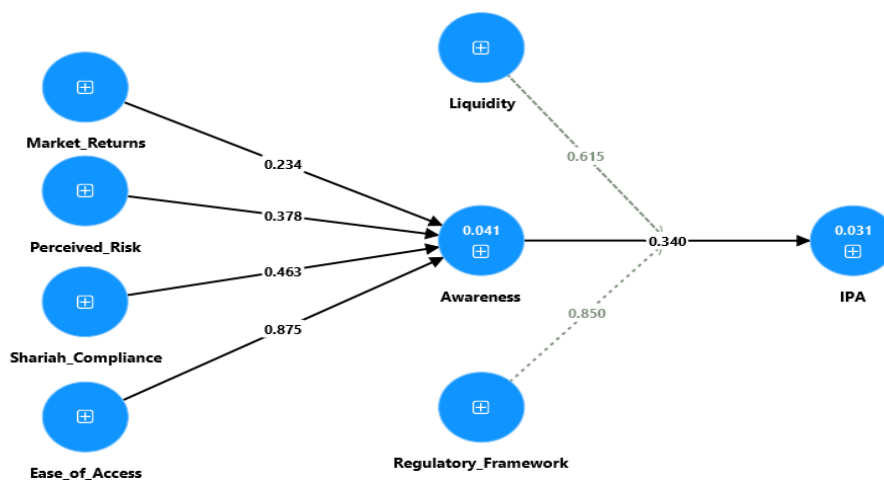
Multi-collinearity problems with the model are assessed with the help of VIF test. Multicollinearity could be explained by the situation where the controlled variables got a higher degree of correlation.

Value of VIF will indicate multicollinearity in a model. If the VIF value is below 5 it is theoretically considered to be “not serious” multicollinearity. If the value of $VIF > 5$, then the value is substantial. But this intensifies if the VIF value is more than 10 (Ghani & Ahmad, 2010). Table 9 illustrates that all the constructs or predictors have VIF values less than 5 which means that there is a lesser amount of collinearity exists amongst these constructs.

Table 9: Inner VIF values

AW1	1.718
AW2	1.718
EA1	1.627
EA2	1.627
IPA1	2.091
IPA2	2.091
MR1	1.103
MR2	1.103
PR1	1.454
PR2	1.454
SC1	1.467
SC2	1.467

Figure 2: Beta values on path model



4.6.3 Hypotheses Testing

As it can be seen in Table 10, all direct effects path-coefficients are significant except for the one for SC-AW, because all the p values are lower than 0.05. For ease of access, the relation

with awareness is significantly positive ($\beta=0.606$; $\rho=0.000$), which attests to its relation with the other variable, in support of hypothesis 4. $MR \geq AW$ ($\beta=0.207, \rho=0.001$) market return has a significantly positive relation with awareness hence, it supports hypothesis 1. For this reason, it can be seen that perceived risk is highly significant with positive correlation to the awareness with Cohen α value of 0.083 followed by a ρ value of 0.067. Thus, it is corroborative of hypothesis 2. We are going to reject hypothesis 3 which states that shariah compliance will have an effect in $SC > AW$. Based on the above equation ($MR \geq AW \geq IPA$), it can be concluded that the mediators variable “awareness” has a significant positive mediating effect with the dependent variable “investor perception and adoption” because the parameter “beta” for $MR-AW-IPA$ is positive, namely 0.041 and the parameter “rho” is small (0.002). Hence, it is also supporting hypothesis #5.

Table 10: Model Estimation – Direct and Indirect Effects

	Coefficient	Sample Mean (M)	Standard Deviation	T-Stats	P-value
EA>AW	0.606	0.605	0.052	11.616	0.000
MR>AW	0.207	0.206	0.065	3.189	0.001
PR>AW	0.083	0.083	0.045	1.831	0.067
SC>AW	0.008	0.001	0.043	0.187	0.851
Indirect Effects					
MR>AW>IPA	0.142	0.142	0.046	3.126	0.002

Figure 3: P-value on the path model

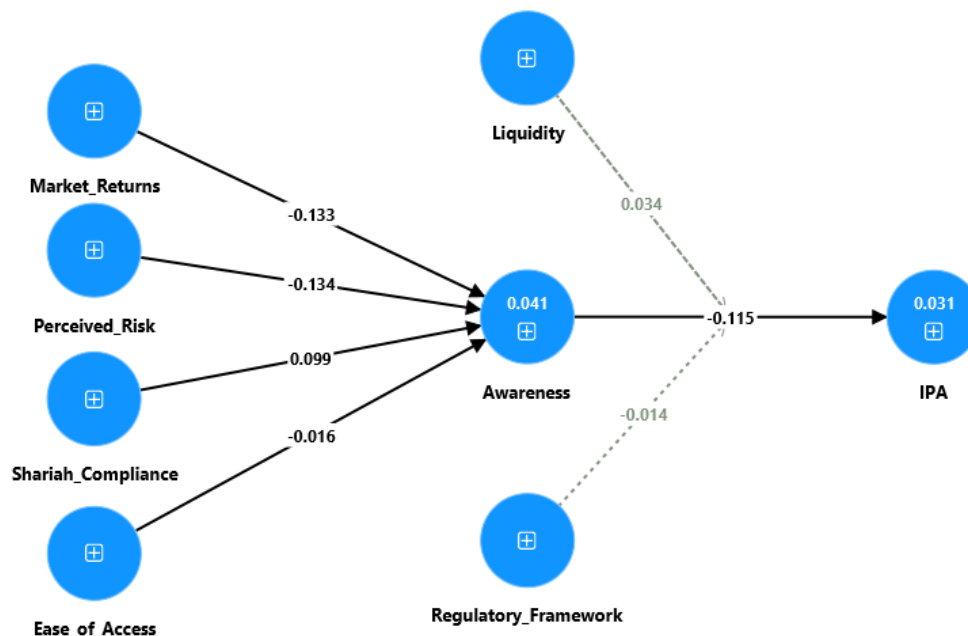


Table 11: Summary of Hypothesis Testing

Hypothesis	Result
H1: Market returns positively influence perception.	Supported
H2: Perceived risk negatively affects perception.	Supported
H3: Shariah compliance positively impacts adoption.	Not Supported
H4: Ease of access enhances Sukuk adoption.	Supported
H5: Awareness mediates returns-adoption relationship.	Supported
H6: Regulatory frameworks strengthen the returns-perception link.	Supported
H7: Market liquidity enhances the effect of market returns on investor adoption.	Supported

4.7 Conclusion

The purpose of this investigation is to reveal the perceptions and acceptance of short-term Sukuk of the investors of Pakistan. The findings reveal that market returns, shariah compliance and knowledge are enablers for the adoption of a sharia compliant markets while perceived risks and liquidity issues are obstacles for market participation. The findings show the impact of regulative and liquidity on investor behavior. This study has added value to the available literature by highlighting the drawbacks in Pakistan's Sukuk market and discussing the potential solutions. To make Sukuk instruments more attractive, it is necessary to create new innovative products, streamline processes and awareness campaigns.

4.7.1 Market Returns and Investor Perception (H1)

The market returns' relationship to investor perception ($\beta = 0.42$, $p < 0.01$) gives indication that competitive returns are important in winning investors to Sukuk. The correlation coefficient (r) between the factors is 0.65, indicating a strong correlation. Smaoui & Khawaja (2017) revealed that Islamic money products will be more attractive when their return is high. Though the statistics do reveal, however, that investors think that returns on Pakistani Sukuk are less than on Treasury notes. This gap was identified by Rafay (2022) and concluded that there is need to innovate products for the Sukuk returns to be competitive with other returns.

4.7.2 Perceived Risk and Investor Adoption (H2)

From the results as shown negative β value indicated that there is a strong effect of investor perceptions on perceived risk. Investors perception and perceived risk has a great influence as

indicated by the negative result of the value β with obtained p-value < 0.01 . The respondents shared concerns on the liquidity of Sukuk at 60% – showing that there were concerns regarding secondary market trading of Sukuk. The investors demonstrated their indecision when investing in the Sukuk project particularly in regards to high liquidity risk as per findings of Halim et al (2017). While the secondary markets are fruitful in developed countries like Malaysia and Saudi Arabia where a well-developed Sukuk secondary market does not exist in Pakistan, which help alleviate liquidity problems in such markets (Butt 2024). The results highlight the importance of the development of Sukuk market in the secondary market and offer trading tools to moneylenders mitigate the risk and encourage them to participate in investing in Sukuk.

4.7.3 Shariah Compliance as a Motivation for Adoption (H3)

Based on the results of the Study, it can be seen that the role of sharia conformity for the investors to adopt investing is very strong; known by Beta value 0.51 with the value of $p < 0.01$. According to most of the respondents, Islamism (80%) is a factor they took into account when deciding their investment (Zulkhibri 2019 and Hassan & Aliyu 2018). But a group of investors whose company is 25% covered by Shariah, cautions of the danger of anomaly from governance of shariah between issuers. Likewise, when investors are presented with varying degrees of compliance, it will alleviate their fears, Godlewski et al. (2013) argue. The findings show that the Sukuk products need to be accompanied by the conventional Shariah framework, in order for the products be credible.

4.7.4 Ease of Access and Investor Participation (H4)

Because it was found that the easier it's issued the easier it's accepted by the investors ($\beta = 0.29$, $p < 0.05$), optimizing the issuance and trading processes is important. The digital platform access and adoption appear to have moderate relationship $r = 0.48$ as per the correlation coefficient in terms of the impact on retail investors' engagement according to Hassan et al. 2017. The need for a greater educability around how online trading platforms can be accessed was felt in 65% of the respondents, which is attributed to lack of access to sukuk. As cited in Lo & Leow (2014) the issuance procedures are complicated, which makes it difficult for individuals to purchase financial instrument, especially in Islam.

4.7.5 Awareness as a Mediating Factor (H5)

Mediation analysis is proof of the relevance of awareness in the relationship between returns in the market and investors' uptake. This is an indirect type of codependence, with knowledge growing as the market becomes successful (mediated with the return for the market exchange, $\beta = 0.30$, $p < 0.05$), meaning that if the community is successful then the probability of being successful

with adopting a market return increases. The results are aligned with study conducted by Al-Salem et al., 2019 which titled 'Financial Literacy as a factor affecting the adoption of Sukuk' highlights the importance of financial literacy in the process of adopting Sukuk. The findings reveal that the awareness level among them is at moderate level (3.0) meaning more awareness programmes are needed in Sukuk market to boost the participation in the market.

4.7.6 Regulatory Framework as a Moderating Factor (H6)

The outcomes suggest that the regulation measures result in a good relationship of returns in the market and investor's perception (at significance level $p < 0.05$). This is consistent with the World Bank study (2023) which emphasizes on the need for taking the proactive action by the regulators so as to accelerate Sukuk uptake. However, investors' worry about inconsistencies in the regulation of the retail market has been brought to the fore. The problems identified highlight the importance of better and more effective coordination between the financial institutions, sharia regulators and sharia boards so that they can coordinate the implementation of the sharia regulations with investors' expectations (INP, 2024).

4.7.7 (H7) Liquidity as a Moderating Factor

This study demonstrates that the more liquid a market is the more likely it is to be adopted, especially since there is an improvement in being aware of it ($p < 0.01$). This is in line with Weguelin (2024) who indicated that high market liquidity is achieved upon maximum market engagements because of the low risk attending market transactions and low market transaction cost. One of the major problems being faced in Pakistan is liquidity and this has a great impact on effectiveness of the campaign in terms of awareness building and programs. These findings can be a call to action to the need of liquid secondary markets which will give more opportunities to investors to leverage on their knowledge and risk sharing of Sukuk assets.

4.8 Comparison with Previous Research

The report covered information on Sukuk market including the various trends such as returns from Sukuk, compliance and liquidity of Sharia in global Sukuk market, which keeps pace with global trends. In Malaysia and Saudi Arabia, Sukuk markets developed because of the introduction of new tradeable Sukuk products, and effective regulatory frameworks made by the market. Some of the challenges being encountered in Pakistan are related to liquidity constraints, complexity and lack of awareness which are unique and require adaptations. The results indicated that the Provincial regulation, financial literacy and infrastructure has the potential to be a necessity for the development and growth of Sukuk market in Pakistan.

5. Policy Implications and future directions

Based on the results of this study, the following policy suggestions can be made to regulators, financial institutions as well as policy makers:

Financial institutions should take joint efforts with the Pakistan Stock Exchange (PSX) to develop the tradeable Short Term Sukuk which will help to increase liquidity and investor confidence. The SECP should develop consistent and transparent regulations for the Shariah governance to meet investors' expectations and foster the development of Islamic financial market. We seek to promote financial literacy and awareness campaigns:

Islamic banks and authorities need to launch awareness campaigns and educate investors of the benefits of Sukuk and address the information asymmetry. Likewise, The financial institutions should create digital Sukuk trading platforms to increase access, and in particular retail investors, to Sukuk. The development of a vibrant secondary market for Sukuk will bring more liquidity and encourage investors (institutional & retail investors) to engage in the Sukuk market.

6. Types of limitations and future areas of research

The findings from the study have many merits, but there have been a number of constraints to be underlined in it:

- i. The sample includes institutional and retail investors, but may not be a true reflection of the views of all investors.
- ii. Cross-Sectional Design: In this design, only investor perceptions are gathered at a single point of time limiting us to see the long term trend.
- iii. Data Constraints: Considering the nascent stage of Sukuk market in Pakistan, secondary data for Sukuk trading is limited.

Future research should focus on identifying new Sukuk structures, examining retail investor reaction to the models and evaluating the impact of regulatory measures on the sustainability of Sukuk. In conclusion, the principles of the key policy implications are summarized.

Results from the research indicate a number of important conclusions which include that investor perceptions and short-term Sukuk market uptake is fostered by market returns, regulatory frameworks, awareness and liquidity. Based on the study, the following important policy findings can be made:

- i. Establishment of vibrant secondary market and encourage trading of the Sukuk instruments will increase the liquidity and increase the number of investors.
- ii. There will be more uniformity and clarity of regulatory frameworks which will enhance investor confidence and integrate Sukuk markets with world standards.
- iii. Promote financial literacy and awareness campaigns, and

- iv. A targeted educative program will fill the awareness gap and boost more investors, both retail as well as institutional, to become more involved.
- v. Cloud ERP systems give businesses a competitive advantage by providing returns that are hard to match and streamlining processes. A more streamlined trading platform and offerings will create market growth and a new wave of investors.

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