

**Benefits and Risks Associated with Financing Through  
Issuance of Sukuk: Evidence from GCC Countries**

الفوائد والمخاطر المرتبطة بالتمويل من خلال إصدار الصكوك: أدلة من دول  
مجلس التعاون الخليجي

by

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**Dissertation submitted in fulfilment  
of the requirements for the degree of  
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## **Abstract**

The purpose of this thesis is to examine the benefits and the risks that are associated with the financing through Sukuk (Islamic bonds). In this regard, highlighting the benefits and limitation that are associated with financing through issuance of sukuk with focus in the GCC countries will be considered instrumental in the course of this research. Building on previous studies, the present study focuses on analysing the various types of Sukuk and compare them with other forms of funding (conventional bonds). The various risks associated with Sukuk and how they are dealt with has also been analysed.

On the empirical part, the study aimed to determine the relationship between Sukuk prices and some of the variables and risks associated with them, such as interest rates, bond prices and exchange rates. The main data which will be utilized in the course of the research obtained from various sources such as blommberg.com and financial institutions as well, the data will be subjected to regression analysis for the purposes of ensuring that the relationship is determined and the results presented. The research reached specific results and recommendations in this regard.

## ملخص

الغرض من هذه الرسالة هو دراسة الفوائد والمخاطر المرتبطة بالتمويل من خلال الصكوك (السندات الإسلامية). وفي هذا الصدد تم تسليط الضوء على الفوائد والقيود المرتبطة بالتمويل من خلال إصدار صكوك مع التركيز على دول مجلس التعاون الخليجي. اعتمد العمل البحثي على الدراسات التي تم إجراؤها مسبقاً في نفس الموضوع ، ركز البحث ايضاً على تحليل الأنواع المختلفة للصكوك ومقارنتها بأشكال التمويل الأخرى (السندات التقليدية). كما تم تحليل المخاطر المختلفة المرتبطة بالصكوك وكيفية التعامل معها.

من الناحية التجريبية ، هدفت الدراسة إلى تحديد العلاقة بين أسعار الصكوك وبعض المتغيرات والمخاطر المرتبطة بها ، مثل أسعار الفائدة وأسعار السندات وأسعار الصرف. البيانات الرئيسية التي تم استخدامها في سياق البحث تم الحصول عليها من مصادر مختلفة مثل بلومبيرج ، ومن بيانات المؤسسات المالية أيضاً ، ستخضع البيانات لتحليل الانحدار لأغراض التأكد من تحديد العلاقة وتقديم النتائج . وقد توصل البحث إلى نتائج وتوصيات محددة في هذا الصدد.

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## CHAPTER 1: INTRODUCTION

Sukuk is the type of legal instrument which comprise of the overall characteristics of a financial certificate and is commonly referred as the Sharia bonds. As per Accounting and Auditing Organisations for Islamic Financial Institutions (AAOIFI), Sukuk points out the securities of equal denomination which are associated with an organisation in their representation of individual interest. As per Paltrinieri *et al.* (2015), the portfolio regarding the eligibility for Sukuk as well as existing future assets is that it has to be included in their normal course of business. Sukuk have been developed with the conventional bonds which are required to be considered as permissible by the Muslims as the interest within the business is required to be associated with the compliant activity. Sukuk securities might consist of a particular ownership within the investment company that is required to be included with effective conventional bonds. In order to represent the ownership within the real assets, it is required to be associated with the regular payment cases which might affect the assets-based ownerships. There are different type of Sukuks which are based on their activity along with the structures of the Islamic contracts. According to Nasir and Farooq (2017), the type of Sukuk is also dependent on the project of the Sukuk and their method of financing which needs to be associated within the conventional bonds. These types of Sukuk includes Murabaha, Ijara, Istisna, Musharaka, Istithmar and others. A Sukuk is a sort of financial certificate which is primarily Islamic in nature and it is nearly comparable to the bond that are accessible in western finance.

Sharia is additionally related with the laws of Islamic religion. As the western back bonds has distinctive structure, so the issuer of Sukuk offers the bond in a conventional way together with a bunch of financiers. As stated by Aloui, Hammoudeh and Hamida (2015), the conventional shape of paying the bond structure is basically not allowable that is normally utilized by the issuer

at the time of obtaining the resources. This also incorporates the bunch of financial specialists which comprise of partial ownership. Moreover, the real contractual promise incorporates the buyback of the bonds inside long-term data such that the esteem would be elevated the most. The western debt instrument that is conventional in nature is generally comparative as Sukuk in UAE is primarily made for connecting the returns at the side obligations within the cash flow of the company. As mentioned by Elian (2015), the resources that are being acquired by an organisation within the nation basically incorporates the successful dispersion approach which would help in keeping up the financial certificate. Besides, the method of successful dispersion approach cannot be utilized as the vehicle for speculation focuses on the effectiveness of the financial instruments which would be proportionate to the Western interest payment bond. Sukuk securities might comprise of the particle ownership inside the speculation company that is required to be included with viable ordinary bonds. Proprietorship inside the genuine resources is required to be related with the normal instalment cases which might influence the resources-based proprietorships (Arundina, Omar and Kartiwi 2015). There are different type of sukuk which are based on their action beside the structures of the Islamic contracts.

The type of each financial contract is effectively dependent on the extension of the sukuk and their strategy of financing which needs to be related inside the conventional bonds. As per the Global Islamic Economic Report 2016-17, certain amount of assets are managed with the compliant manner in the year 2014. Based on the viewpoint of Alswaidan, Daynes and Pasgas (2017), the value of assets amounts to \$ 4.004 trillion among which only about \$ 342 billion are made up of certain sukuk. The short as well as medium term financial instrument provides the balance sheet of the Islamic financial institution which are required to be associated with more liquidity that are legitimized by the overall use of sukuk in the GCC countries. At first, the

contemporary sukuk were issued on the basis of the market condition and efficiency which should be associated with the issuance of the sukuk. As the sukuk market became popular at the international level, then these sukuk are required to be included with the corporate sukuk which falls under several jurisdiction. The portfolio of eligible as well as existing future assets is required to be included in their ordinary course of trade (Hassan *et al.* 2018). Sukuk have been created with the conventional bonds which are required to be considered as permissible by the Muslims as it intrigued inside the trade. As a result, sukuk must be compliant with the Sharia Law. Sukuk securities might comprise of the molecule proprietorship inside the venture company which is required to be included with compelling ordinary bonds. Speaking to the proprietorship inside the genuine resources, it is important for Sukuks to be related with the customary payment cases which might influence the resources based on possessions. As opined by Zulkhibri (2015), there are diverse classification of sukuk which are based on their activity in correspondence to the Islamic contracts. These are significantly dependent on the process of the sukuk and their strategy of financing where the financial strategies has to be related inside the conventional bonds.

### **1.1 Background of the Study**

The benefits and the risk that are associated with financing through issuance of sukuk points out the background nature which are required to be associated with the standardising and growing market. As opined by Najeeb, Bacha and Masih (2017), the Islamic fixed securities that are generally issued in the global market are required to be enhanced with the investment grade and that highlights the overall duration of one year. These are the securities which are issued by the government and that includes the conversion of local currency which are to be introduced with certain aspects. As per the Islamic financial centre, the securities with the sukuk has to be bought and held within the trading of the financial securities. The niche segment is that the virtually traded

sector which involves the process of trading that are done in the institutional level. Moreover, the size of the secondary market points out the financial securities which highlight the several prohibitions that transacts the unethical goods and the services. As stated by Hasan, Ahmad and Parveen (2019), the returns of the earnings include the effective loan contract that highlights the excessive uncertainty which are based on the chances of contracting at the secondary market. There are certain principles on which the financing through sukuk are based on, which highlights the set of several prohibitions relating to the concepts of debt financing.

Representation of sukuk highlights the aggregate share along with the undivided shares which points out the bond holders that represents the interests and principles. The investors that are related with sukuk focuses on the debt commitment because the bond issuer has not appeared as the possess guarantor of resources which highlights the costs. As the speculator do not possess the debt commitment which own the part of assets and that ought to be included with the bond holders in order to get a certain portion of the profit which are straightforwardly related with the assets. Based on the view point of Mohamed, Masih and Bacha (2015), a few of the characteristics included with sukuk primarily brings out the fact that both of the investors includes the payment terms and a sukuk speculator gets the benefit that are primarily created by the method of basic of the resources. Both bonds and sukuk are generally issued to the financial specialists where both of them consider sukuk to be more secure venture in general values. The general popularity of this specific financial instrument can be understood from the fact that sukuk has become popular in GCC countries within the year 2000 as it was already popular before in Malaysia. As influenced by Ismath Bacha and Mirakhor (2018), the GCC nations has received it within the following year which takes after the rules and control with respect to the Islamic participation and their policies. Islamic law basically Islamic law basically prohibits dealing with interest, which it calls Riba,

which is taking an additional amount of money in exchange for a loan or bond for a specified period of time.

It primarily helps the speculators for working within the region that need to be sketched out by the sharia and would get the obligations of financing. The sukuk basically speaks about the total and unified offers which would be included within the possession with significance to the substantial resources and its connection with the particular action of its investment. As per Maghyereh and Awartani (2016), the Islamic fixed securities that are generally issued within the worldwide market are required to be improved with the investment review which highlights the generally length of one year. These are the securities which are issued by the government which incorporates the change of neighbourhood money which are to be presented with certain angles. As per the Islamic financial centre, the sukuk securities are usually bought as well as held for trading in the financial securities market. As stated by Sclip *et al.* (2016), the niche section remains for all the intents and purpose traded sector which includes the method of exchanging, that has worn out the regulation level. Additionally, the measure of the secondary market focuses out the financial securities which focuses out few disallowances that transacts the unscrupulous products and the administrations. The returns of the profit incorporate the successful credit contract that highlights the over the top vulnerability which are based on the chances of contracting at the secondary market.

## **1.2 Problem Statement**

The primary problem that is associated with Sukuk is that individuals and organization has not been in a position to understand the benefits and the risks associated with its issuance hence hesitant when it comes to perceptions. The appreciation of the general interest highlights the assets



that points out the backing method which are required to be included with certain aspects. The ownership of the assets mainly involves with the bonds that points out the overall debt obligation which are to be associated with non-financial business complaints (G.G.A, 2016). The similarities with the bond mainly highlight the bonds that are sold to the investors in which they receive the payment within the day of maturity. These are intended to provide the investments which are less riskier than the equities of the companies for balancing the portfolio investment. The idea of the investors involves certain risk that are associated with the issuers along with the bonds that are sold by the brokers and the agents in their normal course of business. As opined by Naifar and Hammoudeh (2016), the disclosure of the document is to be associated with the prospectus that points out the securities which are selling in the issuer of the sukuk bonds. The trust certificates that are associated with the bonds are mainly governed by the western law which are mainly structured as per the original law. The streams of the payment also involve with the involvement of asset ownership and these are to be associated with the organisations which creates an offshore trusted certificate.

The inclusion of asset ownership incorporates the bonds basically focuses out the debt obligation which have to be related with the speculators beside the payment streams. Based on the view point of Rafay, Sadiq and Ajmal (2017), the trust certificate are basically administered by the western law which needs to be organized as per the law of the nation which is pretty much complicated in nature. The associated organisation raises the stores that got to be made with the offshore believe certified issues alongside the speculators that highlights the payment streams. The company that raises stores primarily issues they believe certificates which got to be included with the financing agreement within the GCC nations. Sukuk is additionally referred as the trust certificate which have to be related with the investors and those ought to be included with the

similar kind of bonds. Because it could be a sort of Islamic financial certificate, so it comprises of certain rules and direction which have to be taken during the method of bond profitability. As influenced by Ahmed, Islam and Ariffin (2015), it is generally acknowledged for the intrigued rate beside the resources that included within the inclusion of backing strategy. Sharia are too known as the resource backing resources which got to be included with the bonds which may be financial as well as non-financial trade complaints. Islamic law essentially disallows the interested from a certain sum of cash which ought to be utilized inside the handle of dispersing the common benefits of the assets. According to Alam, Duygun and Ariss (2016), it essentially offers assistance with the speculators for working inside the locale that have to be sketched out by the sharia and would get the obligations of financing. The sukuk essentially talks about offers which would be included inside the ownership inside the significant assets and its association with the specific activity of its venture.

The Islamic settled securities that are used in almost every part of the world are required to be progressed with the speculation audit which highlights the most part length of one year. These are the securities which are issued by the government which consolidates the alteration of neighbourhood cash which are to be displayed with certain points (Ibrahim 2015). The short as well as medium term financial instrument gives the balance sheet of the Islamic financial institution which are required to be related with more liquidity which legitimized the in general use of sukuk within the GCC nations. These are in addition depends on the expansion of the sukuk and their procedure of financing which are required to be related interior the conventional bonds. The western obligation instrument that is customary in nature is totally about the comparative nature as sukuk in the UAE is fundamentally made for interfacing the returns at the side commitments inside money stream of the company. As per Ahroum and Achchab (2017), the

assets that are being procured by an association inside the country besides consolidates the effective scattering approach which would offer assistance in keeping up of the financial certificate. As the western back bonds has unmistakable structure, so the backer of sukuk offers the bond in a routine way alongside bunch of financier.

### **1.3 Aims and Objectives**

The aims and objectives of the research which focuses on the benefits and risks that are associated with issuance of sukuk are mentioned as follows.

#### **1.3.1 Aim and objectives**

**Aim:** The primary aim of this study is to point out the benefits and the risks that are associated with financing through issuance of sukuk. The relationship between Sukuk prices and prices of other financial entities such as bonds will be analysed putting into consideration the interest rate as well as the exchange rates. In addition, the study will attempt to achieve the following objectives.

**Objective 1:** The first objective of this research is to highlight the benefits and limitation that are associated with financing through issuance of sukuk with focus in the GCC countries. The elective civil structure of the law is additionally pointed towards the situation which ought to be related during the profiting of the financial certificates. It also highlights the hazard that might be related to the resources that are included during the method of actualizing the financial certificates. Based on the view point of Lahsasna, Hassan and Ahmad (2018), the data that are utilized for the method of financing or the Islamic bonds has also been highlighted within the research by the sukuk. The appreciation of the common has intrigued highlights to the resources that focuses out the backing strategy which are required to be included with certain perspectives. The possession of the resources basically includes with the bonds that focuses out the general debt obligation which are

to be related with non-financial trade complaints. The likenesses with the bond primarily highlight that the bonds are sold to the financial specialists in which they get the instalment inside the day of development.

**Objective 2:** Studying the correlation and relationship between the sukuk on one side and the bonds on the other side, as well as the correlation between the two with the interest rate, the research will investigate whether there is a clear relationship between bond prices and the interest rate, given that the interest rate is the main component in determining the yield of bonds and the way they are priced. However, as the sukuk is an Islamic product, it should not have a relationship or affiliation with the interest rate, given that the interest is considered Riba forbidden according to the Islamic understanding.

#### **1.4 Research Questions**

Following are the research questions that have been gathered from different sources about the benefits and risks which are associated with financing through issuance of Sukuk in GCC countries and other parts of the world where it is used.

1. What are the risks associated with financing by issuance of Sukuk in parts of the world where it is used?
2. Is there any relationship between sukuk prices and bond prices?
3. Is there a relationship between sukuk prices, interest rates, and exchange rate effects?

#### **1.5 Scope of the Research**

The research is totally based on the benefits and risks that includes the issuance of finance of sukuk. The research points to set up a modern basic definition for the nature of sukuk in the

beginning, where the researcher who has never listened of sukuk might see the considerable conception behind these extraordinary instruments. At the same time, the researcher objective is to cope all the impediments, risks, challenges that might limit the sukuk from abusing their promising openings, by distinguishing and analysing these obstacles. According to Rahim and Ahmad (2015), the certificates that have the general rise to esteem of the unified ownership also incorporates the ventures within the resources. Utilizing of the Sariah guideline primarily includes the risks that are related with the financing. These guidelines ought to be included with the issuance within the GCC nations. Certain gap is shown within the Islamic bonds and the worldwide capital market which have to be related with the venture of money alongside the resources for producing the benefit. In spite of this fact, the sukuk phenomenon have been discussed numerous times during the few final years. As per Reboredo and Naifar (2017), there is still a strong goal to bring a more profound understanding and clarification to these complicated rebellious, as much as the imperious ought to interpret and dissect the current market situation. This is done to recognize the powerful challenges and dangers, as well as to recognize the energetic openings. This research is set within the objective of giving a clear comprehensive summary of the complex current circumstance of the sukuk. As sukuk are asset-based rebellious, research in this respect also gives a system for evaluating and overseeing hazard as well as tending to the legitimate and administrative issues included in SPV creation, resources acquiring and cash payments vehicle (Mukhlisin and Mustafida 2019). These contemplations shape the premise of the research in assessing the working mode of sukuk structures and the basic risks of each step of instrument.

## **1.6 Structure of the research**

Chapter 1 provides background on the research topic and presents the research aim and objectives. It also highlights the research questions. Chapter 2 reviews the literature and shows the findings of previous studies. Chapter 3 discusses the methodology employed. Chapter 4 presents the results and analyse the findings. The final chapter conclude the thesis and provides recommendations and some policy implications.

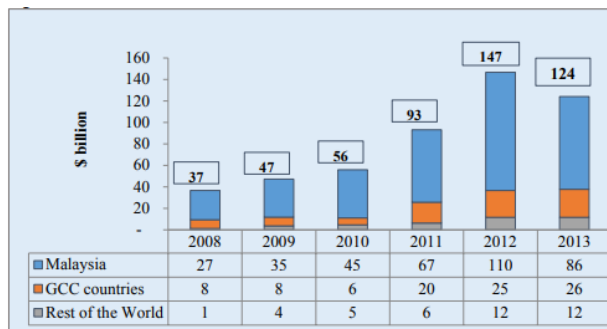
## **CHAPTER 2: LITERATURE REVIEW**

This particular chapter mainly focuses on the literature review of the research in which several articles and journals have been studied for understanding the topic and interpreting the outcomes. It includes the current knowledge and the substantive findings which have already been discovered by other authors. Both theoretical as well as methodological contribution on the topic is to be included along with summary and synthesis of the sources. This chapter also highlights the factors along with the impacts which provides benefits and the risks associated with financing through sukuk. The concept of financing along with benefits and the risks have been mentioned by the process of issuance of sukuk.

### **2.1 Sukuk in GCC and comparison with global development**

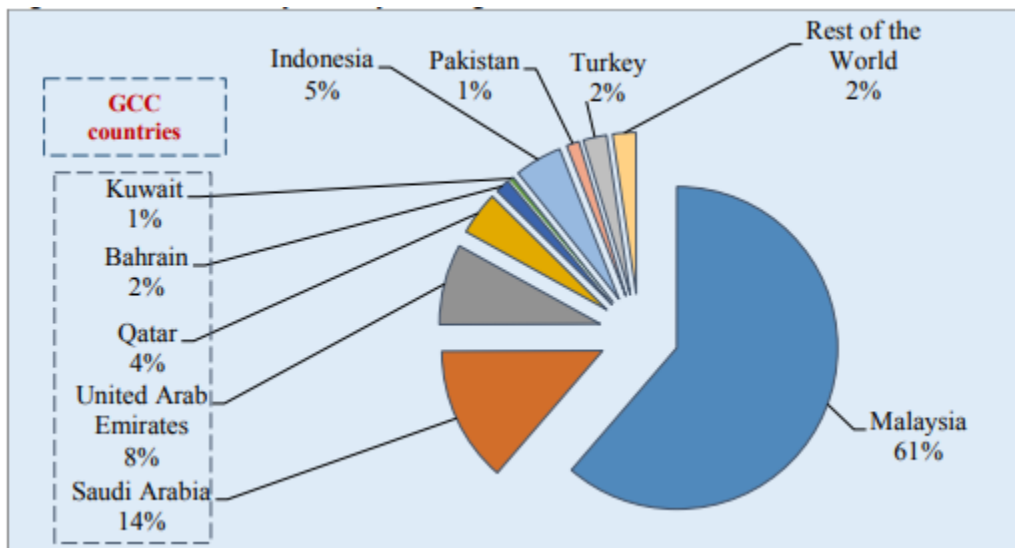
According to Taoual (2016), it is expected that the global market for Sukuk will be around \$310 billion by the end of 2020. This trend in growth in its issuance is due to a record \$147 billion in 2012. However, there was seen a downward trend in 2013 by around 15% against the last year however, it has again grown post that year. As of 2013, Malaysia which does not fall among the GCC region, accounts for more than two-third Sukuk issuance in the entire world. As per the research conducted by El Mosaid and Boutti (2014), as of 2013, Malaysian issuance of Sukuk was followed by the GCC region. As per the World Bank, there are plethora of reasons as to why Malaysia topped the list of Sukuk's issuance and is followed by the GCC region. The first and foremost reason behind such development in Malaysia along with the "rest of the world" category other than the main issuers that is, the GCC region financial markets are very diversified and falls among the best choices for investment among a plethora of investors around the world (El Mosaid and Boutti 2014). It should be noted over here that, Malaysia has always been issued Sukuk in its own domestic currency that is, Ringgit while the issuance of Sukuk by the GCC region has always

been in US Dollars. This is how Malaysia has been promoting the issuance of domestic Sukuk thereby promoting the local Sukuk market. This advantage of issuance of Sukuk in domestic currency by Malaysia had been one of the main causes of its Sukuk development success over the years where more and more investors were interested in Sukuk issuance in hard currencies and not opting for Sukuk issuance by GCC region whose currency are at peg to the Dollar. This Sukuk issuance can be well illustrated with the help of the following diagrams. The following figures contains Sukuk issuance in Malaysia, GCC countries and the rest parts of the world as of 2013 along with global issuance of Sukuk as on 2018.



**Figure. 1: Sukuk Issuance.**

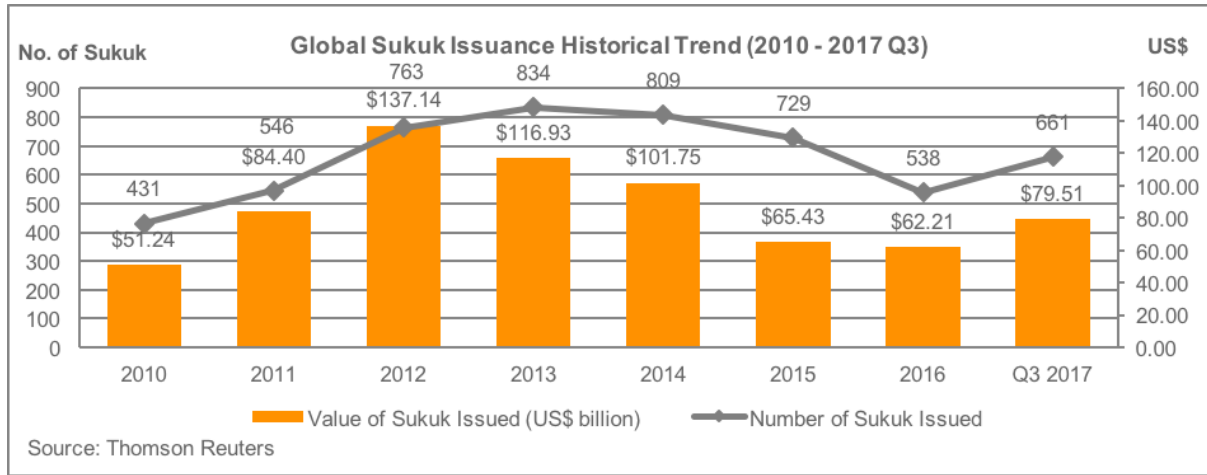
(Source: Documents.worldbank.org 2014)





**Figure 2: Sukuk market according to obligor country.**

(Source: Documents.worldbank.org 2014)

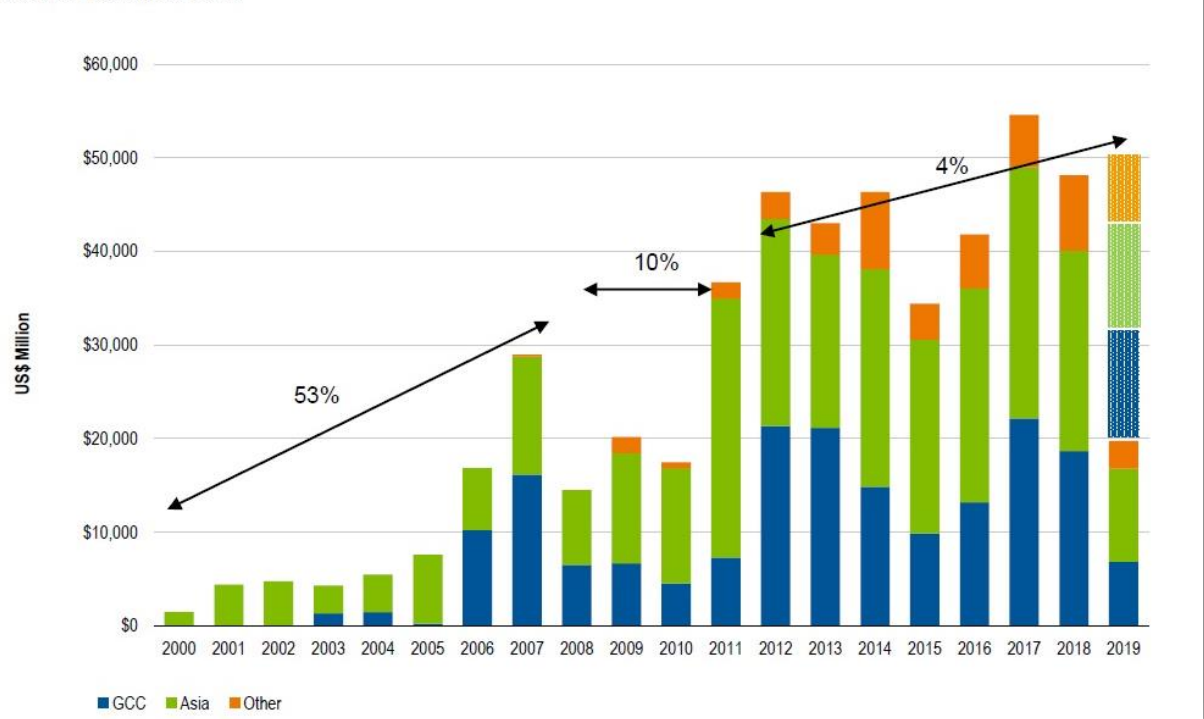


**Figure 3: Historical trend in global Sukuk issuance**

(Source: Grassa and Miniaoui 2018)

## Over US\$477 Billion to Date

As of 31 December 2018



**Figure 4: Growth in global Sukuk issuance**

(Source: Mohd-Rashid and Tajuddin 2019)

However, this trend of Malaysian dominance has not continued for long in the Sukuk development and issuance markets. Post 2013 and predominantly in 2014, the GCC countries along with other countries around the world have started to develop and promote Sukuk as a financing tool in their markets as well. Countries like Turkey, Pakistan, Indonesia, Hong Kong, Luxembourg, China, South Africa, UK and many others have started to develop and promote a well-established market for issuance of Sukuk where many of these countries have already issued their first Sukuk. The GCC countries have taken special steps to develop this financing tool in their countries. One of the prominent examples can be seen of “Islamic Development Bank” which has already listed \$1

billion “Green Sukuk” with the Nasdaq Dubai as on December, 2019 and it is expected that total issuance of Sukuk could be as big as \$160 billion to \$170 billion as of 2020. Rest of world is not lagging behind in terms of development and issuance of Sukuk either. Countries like Indonesia, Turkey, Malaysia and many others have taken active steps in the development and issuance of this financial tool. Apart from issuance, there has been a change of trend relating to issuance of Sukuk. Now many GCC countries like Saudi Arabia have walked in the same route that Malaysia have walked years before to take effective steps for further development and issuance of Sukuk that is issuance of Sukuk in terms of Domestic currency instead of US Dollars.

## **2.2 Different types of Sukuk**

The main types of Sukuks differentiated according to their characteristics or structures are as follows:

**Mudarabah Sukuk:** This is a type of investment Sukuk. Here, the holders of Mudarabah Sukuk provides the much-needed capital to the issuers of such Sukuks in consideration for equal denominated shares within the Mudarabah equity. Here, the ownership can be transferred easily in the securities market.

**Musharakah sukuk:** It is almost like the Mudarabah Sukuk and hence it is also a type of investment Sukuk (Lahsasna, Hassan and Ahmad 2018). The only difference which exists among this and “Mudarabah Sukuk” is that there is a difference in the relationship which exists among the issuers and holders of such Sukuk’s. Here, the issuing party forms a committee which are to be referred for taking the investment decisions.

**Murabahah Sukuk:** This is such a Sukuk which cannot be traded legally in any secondary market as it represents a debt. Here the seller of the Murabahah commodity is the issuer of the certificate. It is a relationship of between the seller and buyer of that commodity.

**Ijarah Sukuk:** It is a hybrid security that is a mixture of financial and operational lease. There are certain ownership risks associated with this Sukuk like capital maintenance obligation.

**Salam Sukuk:** These are the certificates of equal denomination which are used for mobilizing the Salam Capital. The seller of such goods is the issuer of the certificates.

**Istisna'a Sukuk:** These are equal value certificates which are used to mobilize the funds which are used to produce goods owned by such Sukuk certificate holders.

### **2.3 Risk associated with Sukuk**

The main risks which are associated with Sukuk structures are as follows:

**Market risk:** The fixed rate Sukuk are normally exposed to this risk in the similar fashion as a regular bond is gets exposed to risks relating to interest rates.

**Foreign Exchange rate risk:** These risks are always associated with normal bonds and Sukuk's are no exception. Such risk can crop up if there is a divergence in terms of fluctuations in exchange rates between the currency unit in which the Sukuk has been issued and the currency unit in which the assets purchased out of such Sukuk pool.

**Counterparty and Credit risk:** Counterparty or Credit risks is the risk where the loan or underlying asset becomes irrecoverable (Rodoni and Setiawan 2016). However, the Counterparty risk or credit risk in case of Sukuk's issuance is very less as compared to regular bonds.

**Default risk:** In case of ijarah agreements if the obligor fails to pay off the rentals, then the holder of the certificate can nullify the contract by exercising the rights under the contract.

**Shariah compliance risk:** This is a risk of loss of value of the asset because of breach of the fiduciary responsibilities of the issuer respect to the Shariah compliance and many more.

## **2.4 Similarities and difference between Sukuk and regular bonds**

The similarities which exists among the Sukuk and regular bonds are as follows:

- Sukuk's as well as the bond are both issued to investors who are entitled to receive the payments till the maturity of the bonds as well as the Sukuk's.
- Both the Sukuk's as well as the bonds are issued to raise the much-needed capital with less risk incurred than equities.
- Sukuk's as well as bonds both must issue prospectus or a disclosure documents before their issue (Maghyereh and Awartani 2016).
- Credit worthiness is checked in both cases for the issuers by a credit rating agency.
- In the first instance, both the Sukuk as well as the bonds are issued by their issuers and later can be traded on stock exchanges or an OTC market.

The differences which exists among the Sukuk and regular bonds are as follows:

Bonds portrays a debt obligation, while Sukuk's portrays partial ownership of the asset.

- ❖ The underlying assets in case of Sukuk should be Shariah compliant, while there are no specific compliance requirements in case of bonds only they have to abide by the laws of the specific countries of its issuance.
- ❖ The pricing in case of bonds are based on the credit rating of the issuer, while the face value of the Sukuk is based on the backing asset.

- ❖ The value of Sukuk's may increase with the increase in value of the assets but there is no increase in value in case of bonds as it relies on fixed interest.
- ❖ In case of sale of bonds, there is a sale of debt, while in case of sale of a Sukuk, there is a transfer of assets backing such Sukuk's.
- ❖ The investors who invests in bonds are guaranteed of their initial investment, while investors in Sukuk's takes the risk of such underlying assets and are not guaranteed the initial investment.
- ❖ In case of issuance of bonds underwriters are required, while there is no such requirement in case of issuance of Sukuk's

## **2.5 Concept of financing through issuance of sukuk**

The process of providing the funds for the activities in the business along with making certain purchases and investing is coined as financing. It includes financial institutions such as the banks and others which provides the total amount of capital to a business for starting their business activity. This helps the business in achieving their goals, objectives along with the process of managing the activity. As per the view point of Saad, Haniff and Ali (2016), sukuk are the certificates which are proportionate to the bonds or the Islamic bonds. These bonds are basically alluded within the GCC nations together with highlights the large nature of the bonds. The assets that are being obtained by an affiliation inside the country as well joins the practical scattering approach which would offer assistance in keeping up of the financial certificate. Furthermore, it cannot be utilized as the vehicle for hypothesis excluding those areas that focuses on the instrument of money related devices which would be nearly proportionate to Western interest payment bond. The ordinary shape of paying the bond structure is essentially not sensible that is fundamentally utilized by the underwriter at the time of procuring of assets (Amrani and Hamza 2017). This in

addition, consolidates the assembling of speculators which comprises of fractional proprietorship. On the contrary, the genuine legally binding promise consolidates the buyback of the bonds interior with respect to the long run data whose regard would be useful at a standard level. The western debt instrument that is customary in nature is totally similar to the sukuk in UAE and it is basically made for interfacing the returns at the side obligations inside the cash stream of the company.

The essential condition of issuance of Sukuk is the presence of resources on the adjust sheet of the government, the financial specialist, the corporate body, the managing of an account and budgetary institution or any substance which needs to mobilize the money related assets. The recognizable proof of appropriate resources is the primary, and arguably most fundamental, step within the handle of issuing Sukuk certificates (Yesuf 2016). Shariah contemplations manage the pool of resources which is not supposed to be formed of obligations from Islamic financial contracts. Islamic law essentially forbids the interested form of a certain sum of cash which have to be utilized inside the method of dispersing the general benefits of the assets. It essentially offers to help the examiners for working inside the zone that got to be laid out by the sharia and would get the commitments of financing. The sukuk fundamentally talks about the full and bound together offers which would be included inside the ownership under the unmistakable assets that it associated with the specific activity of its investment. As per Rahmany (2018), the believe certificate are fundamentally managed by the western law which have to be organized as per the law of the country that is much more complicated in nature. The related affiliation raises the stores that got to be made with the seaward accept certified issues in conjunction with the speculators that highlights the portion streams. The company that raises the stores essentially issues these accept certificates which need to be included with the subsidizing attestation inside the GCC

countries. Moreover, the type of Sukuk has to be included with the proper classification of the assets which includes the imperative note that points out the issuance of trust certificates.

Sukuk has been characterized by the Islamic Development Bank as identical of ordinary bonds, within the Islamic Financial framework. Aloui, Hammoudeh and ben Hamida (2015) have mentioned that sukuk donates the financial specialist with a share of the resources, which commensurate with cash streams and dangers. Hence, the disobedient follow to Islamic financial principles has caused the burden for intrigued instalments. The Islamic Financial Services Board gave an important satisfactory definition for sukuk, where it was characterized as “Islamic bonds”. These bonds are regarded as certificates with each sukuk speaking to a relative unified possession right in substantial resources, or a pool of overwhelmingly substantial resources, or a trade wander. Be that as it may, Sukuk is not at all like ordinary bonds, which is supposed to be given as a possession of obligation. These resources may be in a particular venture or speculation action in agreement with Shariah rules and standards (Azman and Ali 2016). It was taken after by the issuance of coasting rate Ijara Sukuk as well as pooled Sukuk by both corporate bodies and sovereigns in a few nations. These Sukuk are based on Salam, Ijarah, Istisna, Istisna-cum-Ijarah and on the premise of pooled portfolios. The Sukuk market has developed amid the past three premises for a long time which began with Bahrain issuing residential imperial fixed-rate Ijara and Salam Sukuk. The show measure of the market of the Sukuk is assessed to be over 4 billion dollars developing at rate, greater than 90%. This gauge does not incorporate the sum of the Malaysian household Islamic obligation issues and the Bahraini Salam Sukuk issues. As per the viewpoint of Borhan and Ahmad (2018), the Salam Sukuk of Bahrain are month to month issues and are non-tradable. As a result, distant 40 issues of these Salam Sukuk have been made where each one was oversubscribed. The small number of issues had restrained general liquidity within the markets as



financial specialists were slanted to hold on to their speculation. With the developing number of bigger corporate issues being recorded within the investment portfolios.

As a part of an Islamic capital market, sukuk provides the main objectives which are required to be associated with the collection of the capitals in the Sharia. It is required to be associated with the introduction of the relationship that makes the issuance and the sale of bonds within the similar kind of bonds in the capital market. On the other hand, similar securities help in raising the long-term capital which points out the maturity of the debt capital markets from the money market. Bo, Ali and Saiti (2016) have mentioned that trading with the short-term debt instrument are divided into capital markets and equity capital markets which points out the tenor of less a certain period. The market of sukuk falls within the debt capital market as they are highlighted with the return from fixed income sukuk holder. Moreover, the capital market is divided into two different segment which are primary market and secondary market, which are required to be associated with the debt instrument. The investors that are associated with the primary markets buys the securities which are issued for the first time and it is also important for overall development of an economy. Kartiwi *et al.* (2018) have opined that the secondary market of sukuk might lack of short term investment which are the biggest challenges that are faced and these challenges are required to be faced with misgiving the foundation of the liquidity risk. The liquidity of Islamic finance faces some of the problems which might be the lack of assets that are available in the market. Investment in the secondary market includes the assets that are required to be associated with the industry professionals. It can also be seen that the largest factors that affects the investments mainly pushes down the yield of the sukuk and slowing the long-term growth of the industry (Elhaj *et al.* 2016). Creating the liquidity platform of the banks mainly welcomes the attempt to address the issues that are faced by the financial institutions.

The trust certificate is essentially managed by the western law which ought to be organized as per the law of the country, which is effective, yet it has a complicated nature. The related affiliation raises the stores that got to be made with the seaward accept certified issues in conjunction with the theorists that highlights the portion streams (Musari 2016). It can also be seen that the biggest components that influences the ventures primarily pushes down the surrender of the sukuk and abates the long term development of the industry. While making the liquidity stage, the banks basically invites the endeavour to address the issues that are confronted by the financial institutions. The company that raises saves fundamentally issues the accept certificates which ought to be included with the subsidizing attestation inside the GCC countries. Islamic law essentially forbids the charmed from a certain entirety of cash which ought to be utilized inside the method of scattering the in general benefits of the resources (Ghani 2018). It fundamentally offer help to the examiners for working inside the zone that ought to be laid out by the sharia and would get the commitments of financing. However, Islamic financial framework is attempting to overcome this impediment since it expressed: ‘The Malaysia-based International Islamic Liquidity Management Corp started attempting to fill that crevice final year with issues of three-month sukuk’ and it presently has about \$1.35 billion. The Jeddah-based Islamic Improvement Bank points to implement the issuance of short-term sukuk this year. Besides, the capital market is separated into two distinctive section which are primary market and secondary advertise which are required to be related with the debt instrument.

The financial specialists that are related with the primary markets buys the securities which are issues for the primary time and it is additionally imperative for in general advancement of an economy. The secondary market of sukuk might need of brief term speculation which are the greatest challenges that are confronted and these are required to be confronted with second thought

the establishment of the liquidity risk (ULUSOY and Mehmet 2018). The liquidity of Islamic fund faces a few of the problems which may be the need of resources that are accessible within the market. Speculation within the secondary advertise incorporates the resources that are required to be related with the industry experts. The sukuk basically talks to the entire and bound together offers which would be included inside the ownership under the unmistakable assets and its association with the specific activity of its investment. As a portion of an Islamic capital market, sukuk gives the most goals which are required to be related with the collection of the capitals within the Sharia. It is required to be associated with the presentation of the relationship that produces the issuance and the deal of bonds inside the comparable kind of bonds within the capital market. On the other hand, comparative securities offer assistance in raising the long term capital which focuses out the development of the debt capital markets from the money market. Zain, Abideen and Ali (2017) have stated that exchanging with the brief term debt instrument are separated into capital markets and value capital markets which focuses out the tenor of less a certain period. The market of sukuk falls inside the debt capital advertise as they are highlighted with the return from settled income sukuk holder. It can moreover be seen that the biggest variables that influences the investments basically pushes down the surrender of the sukuk, slowing the long term development of the industry. Making the liquidity stage of the banks basically invites the attempt to address the issues that are confronted by the financial institutions. It moreover highlights the risk that might address the assets that are included during the strategy of actualizing the financial certificates. The information that are utilized for the strategy of financing the Islamic bonds has also been highlighted inside the research of the sukuk. Uddin *et al.* (2015) have opined that the appreciation of the common charmed highlights the assets that centres out the backing procedure which are required to be included with certain points of view. These are in expansion

depends on the extension of the sukuk and their strategy of financing which are required to be related inside the conventional bonds.

## **2.6 Benefits of financing through issuance of sukuk**

The recent study that have been compiled has revealed that the issuance of sukuk within the year 2001 to 2015 has reached the amount \$ 767 billion and this information is revealed by the International Islamic Financial Market. It has also been reported that more than 96 % of the total issuance of sukuk are contributed from the GCC countries. As per the view point of Awaludin, Beik and Ismal (2016), the global list of the countries is being led by Malaysia that mainly issues around 56 % of total sukuk all around the world. This is followed by the United Arab Emirates by 26 % and Indonesia by 6 % of the total issuance of sukuk. The Sharia compliant debt instrument mainly points out the line that is required to be associated with the principles and the guidelines by the governing Islamic scholars. Sukuk is the instrument that mainly serves for the alternative of the conventional bonds which are required to be structured for generating the overall returns for the available investors. The sukuk instrument mainly offers the depositors rather than offering to interest holders which is prohibitive in nature (Ashidiqi and Arundina 2017). As these instrument are attractive in nature, broad range of investors are quite attracted towards it for investing in Sharia compliant instruments. Particularly in sukuk, the income from the profit are fixed in nature which requires the investors for the predefined intervals and that highlights the enjoyment of steady cash flow. It also provides some of the security along with fastest growing economies within the GCC countries which is to be represented by the traditional bonds and funds. There is no such lock in period of these conventional bonds as these are complied with the other kind of investments. As mentioned in the above part that sukuk were mostly issued in the period between 2000 and 2015

which highlights around 61 % of the total sukuk (Duqi and Al-Tamimi 2019). These are also much safer than the conventional bonds that are available in the current market condition.

The use of sukuk within the current financial condition primarily help in understanding the economic condition by studying the method of making as well as creating certain possibilities by manipulating the others. Generally, the Islamic fund is based on the execution, the standards of equity and the reasonableness for superior accomplishment by ignoring the Riba. As per Warsame and Ileri (2016), the financial specialists that partners with secondary market is related with the speculators that looks into the market in a more efficient way which is simple for liquidation. The financial specialists that are displayed within the secondary markets basically focuses out the ventures that might get sell to discover the sukuk a great deal. The secondary market of Islamic securities also incorporates the fetched of the certificates which basically produced the benefit which must be returned into a speedy rate of interest. Sukuk plays an imperative part within the preparation of financing which act as an improvement in the Islamic market at the side of banking system. According to Elhaj, Muhamed and Ramli (2018), compliance with Sharia offer assistance in boosting the standard that would be advantageous on the society at the side of economic status. This also gives wide range of financing ventures that focuses out the open products which might not be conceivable for performing a few financial exercises. Sukuk idealize for financing as they can be embedded into the intrigued based obligation without falling into the generally esteem. It also makes sukuk a critical road as to highlight the riches redistribution at the side of social equity that have been accomplished inside a certain period of time.

As these instruments are appealing in nature, wide extend of speculators are pulled towards it, for contributing in Sharia compliant instruments. Especially in sukuk, the pay from the benefit are settled in nature which needs the financial specialists for the predefined interims that highlights

the satisfaction of consistent cash flow (Talahma 2015). It also provides a few of the securities at the side of quickest growing economies inside the GCC nations which is to be spoken by the conventional bonds and funds. There is no such lock in period of these ordinary bonds as these are complied with the other kind of speculations. As specified in the above portion, sukuk are basically issued within the period of 2001 and 2015 which highlights around 61 % of the overall sukuk. These are much more secure than the conventional bonds that are accessible within the current market condition. On the other hand, it has been detailed that more than 96 % of the entire issuance of sukuk begun in the GCC nations (Amaliah and Aspiranti 2017). The worldwide list of the nations is being driven by the Malaysian economy that basically issues around 56 % of total sukuk all around the world. This value is usually taken after by the United Arab Emirates by 26 % and Indonesia by 6 % of the entire issuance of sukuk. The Sharia compliant obligation instrument basically focuses out the line that is required to be related with the standards and the rules by the administering Islamic researchers. Sukuk is the instrument that basically serves for the elective of the conventional bonds which are required to be organized for producing the general returns for the accessible speculators. The sukuk instrument basically offers the contributors instead of offering to interest that are denied in nature.

It also includes another crucial factor that saves the sukuk securities along with the assets as they are anchored with the actual assets which uses the money in special investments. It is important for the investors that sukuk securities are generally preferred over the choice of fixed deposits which raises the overall rate of economic profit. This type of bond can offer a return of about 5 % per annum for the same time and provides the inherent profit risk (Brugnoni *et al.* 2017). Other risk, such as liquidity risk and the default risk are to be provided with these risks which somehow clears the sense of compliment for each other. Sukuk are required to be added to the

investment portfolio which mainly measures the risk as this might outsize for certain period. The probability of the risk that are associated with the bonds might be low as these bonds have gained a popularity due to the rapid growth of the Islamic industry. According to Rauf (2016), investments in the GCC countries is also important and it is based on the old rule of thumb which points out that higher the rate of risk, higher is the rate of return. Therefore, the overall popularity of sukuk is pointed towards the attractive investment which is currently growing worldwide. These are safer than the conventional bonds as these are backed up by the underlying assets and might be the part of genuine investment portfolio.

The advantage that are associated with sukuk includes the diversification of fund sources in which sukuk bonds are the main sources for the revenue of a project that are mainly undertaken by the government as well as corporate bodies. The holders of the sukuk are generally provided with adequate amount of liquidity which allows themselves to trade freely in the secondary market (Paltrinieri *et al.* 2019). Both creation and enhancement of the profiles are made in the international market which belongs to the international rating agencies for boosting up their profiles. Development of Muslim countries in their overall infrastructure is used for construction of the airports and biogas plants. This act as the key to the success of the mega projects such as the above mentioned instances. Price benchmarking is also another type of advantage that is provided by issuing of sukuk in which the overall tradability allows to set a price as the indicator in the secondary market. Moreover, it also matures with the horizon that allows the investors to be more confident about their overall security. It also allows with easy transaction and clear settlement within the maturity date. The first instrument of the financial market is the sukuk which points out the exchange organisation that are supposed to be associated with the preparation and development of the instruments (Sillah 2018). The common instrument with the fixed earnings is to be

highlighted with the economic report that might include the risk of the investments. The joint investment funds are to be associated with the effective response that allows the investors to invest in the bonds which would provide the benefits to the economy.

Other risk such as liquidity risk and the default risk are to be included with these risks which some way or another clears the sense of admiration for each other. Sukuk are required to be included in the investment portfolio which primarily measures the chance of getting selected as this might overweight for certain time. The likelihood of the chance that are related with the bonds can be low as these are developed with the popularity for the quick growing Islamic industry. As opined by Muhmad, S.N. and Muhmad (2018), investments within the GCC nations is additionally critical and based on the old rule of thumb which focuses out that higher the rate of hazard, more is the rate of return. Subsequently, the in general popularity of sukuk is pointed towards the appealing investment which is significantly developing around the world. These are safer than the ordinary bonds as these are sponsored up by the basic resources with respect to the portion of genuine investment portfolio. As a result, this incorporates another vital factor that spares the sukuk securities along with the resources as they are tied down with the real resources which employments the money in extraordinary ventures. It is vital for the investors that sukuk securities are largely favoured over the choice of settled stores that are going to be upgraded with the general rate of benefit. Bhuiyan *et al.* (2018) have stated that this type of bond can offer up to a return of 5 % per annum for the same time period and nearly gives the inalienable benefit chance. Later it was uncovered by the International Islamic Financial Market that the issuance of sukuk inside the year 2001 to 2015 has come to the sum \$ 767 billion.

Price benchmarking is additionally another type of advantage that is given by issuing of sukuk in which the overall tradability permits to set a price as the pointer within the secondary



market. Besides, it also develops with the skyline that permits the speculators for certain price which is almost their overall security. It moreover permits with simple exchange and clear settlement inside the maturity date (Qizam and Fong 2019). The primary instrument of the financial market is the sukuk which focuses out the trade association which are to be related with arrangement of the advancement of instruments. The common instrument with the settled profit is to be highlighted with the financial report that might incorporate the risk of the ventures. The joint investment funds are to be related with the successful reaction that permits the speculators to contribute on the bonds which would give the benefits to the economy. The advantage that are related with sukuk incorporates the expansion of support sources in which sukuk bonds are the most sources for the income of a venture that are primarily embraced by the government as well as corporate bodies (Naifar 2018). The holders of the sukuk are generally given with satisfactory amount of liquidity which permits themselves to exchange unreservedly within the secondary market. Both creation and improvement of the profiles are made within the universal advertise which has a place to the worldwide rating offices for boosting up their profiles. Development of Muslim nations in their general foundation is utilized for development of the airplane terminals and biogas plants. This act as the key to the success of the mega projects such as the above specified instances.

## **2.7 Risks associated with financing through issuance of sukuk**

There are different types of risk that are associated with financing through issuance of sukuk as these are mentioned within the modern economic literature. Sukuk securities are permitted with the viewpoint of sharia and the assets which might not be accepted by the Islamic people. The overall validity of sukuk are not dependent on the value of the assets as these are to be associated with the sale of bonds in the secondary markets (Melzatia and Doktoralina 2018).

The possibility of increasing the value in the original assets is to highlight the bonds in the original debts that requires the assistance from sale of debts. The similarities between the sukuk and a bond is to highlight their possibilities to liquidate in the secondary market which might affect their valuation at the end of the year. The credit ranking situation of the bonds is mainly done by the ranking institutions which recently developed the designer and the offerings that are offered to them. Some of the scholars have opined that the increase in the liquidity of the originator mainly influences the total rate of return from the bonds which are mainly issued to the public. The confidential contract to the bonds would be soon replaced by the cash as these are directly associated with the originator corporation and that must be included with such assets. There is another solution through which the cost of financing is to be reduced and among that the increase in total amount of credit might hamper the design and offerings (Abd Rahim and Ahmad 2016). The possibility of turning the assets into securities might help in their development which also focused in their developed economy. Moreover, the secondary market is generally provided for trading with sukuk and increase its production with liquidation.

Funds that are generally raised, incorporates the vital activities that basically makes a difference in the general framework of the project. Moreover, selecting and managing the stores offer assistance in highlighting the key components that would be advantageous for the financial instrument and might drive to mismanagement. According to Kartiwi *et al.* (2018), the Islamic capital market highlights the subsidizing scale which also focuses out the in general length of assignment of financing with sukuk. The ordinary financing strategy fundamentally focuses out the reserves that are utilized for the method of financing. It is additionally considered as one kind of betting in prior days but now it has been considered as one of the foremost helpful way of instalment. The financial instrument of Islamic bonds that are suited with the administration of the

stores regularly offers them on the secondary markets and those got to be related with the liquidity of the assets. It additionally gives the broad financing ventures that centres out the open items which might not be conceivable for performing a couple of financial exercises. Based on the view point of Godlewski, Turk-Ariss and Weill (2016), sukuk are ideological for financing as these can be inserted into the charmed based commitment without falling the by and huge regard. It as well makes sukuk a critical road as to highlight the wealth redistribution in conjunction with the social value that have been fulfilled inside a certain period. The utilization of sukuk inside the current financial condition fundamentally offer help to the financial things by creating the strategy of making as well as creating certain achievability by controlling the other parameters.

The credit ranking circumstance of the bonds is basically done by the ranking institutions which recently credited the creator and the offerings that are offered to them. A few of the researchers have opined that the increment within the liquidity of the originator basically impacts the overall rate of return from the bonds which are basically issued to the public. The confidential contract to the bonds would be before long replaced by the cash as these are specifically related with the originator organization which have to be included with such resources (Ahroum *et al.* 2018). There is another arrangement through which the cost of financing is to be diminished and among that the increment in add up to sum of credit might obstruct the plan and offerings. The possibility of turning the assets into securities might offer assistance in their advancement which also centred in their developed economy. In addition, the secondary market is generally given for exchanging with sukuk and increment its production with liquidation. There are different sorts of risk that are related with financing through issuance of sukuk as these are specified inside the present-day economic literature. Sukuk securities are allowed with the perspective of Sharia and the resources which might not be acknowledged by the Islamic individuals. The general validity

of sukuk are not subordinate on the esteem of the resources as these are to be related with the deal of bonds within the secondary markets. The possibility of increasing the esteem within the original resources is to highlight the bonds within the original debts that requires the help from sale of debts (Awalludin and Al-Aidaros 2015). The discoveries of the investigate focuses out the clients from the Islamic banks that are profoundly persuaded for the socio financial components. The likenesses between the sukuk and a bond is to highlight their conceivable outcomes to sell within the secondary market which might influence their valuation at the end of the year.

The findings of the research points out the clients from the Islamic banks that are highly motivated for the socio economic factors. The overall profitability of Islamic as well as the conventional banks is determined by the use of accounting ratios which help in finding the relationship between the two components in accounting. The rapid growth and growing population of sukuk as well as Islamic capital are still under research as they severely laced by some empirical analysis. The contribution among the industry players might be the reason among the sukuk for maintaining the equal value for the conventional bonds which points out the premium nature. There are different types of risks that are associated with sukuk which would be explained in the next parts.

### **2.7.1 Bond Associated risks**

These are the risks that are directly associated with the bonds and considered to be safer than the financial instrument. The risk of the return is a type of risk which is yielded by the bonds and points out the inverse relation along with interest rate movement. As the rates of the interest grows in the market, it decreases the prices in the market that highlights the inverse relationship among each other. As long as the maturity of the bonds exists, the higher is the potential rate of interest for maintaining the interest rate risk. According to Al-Sawwa and Ghi (2015), the risk of

default is also associated with the issuer in which they might not be able to make regular payments which help in repaying the principle amount with some of the financial institutions. It also evaluates in the credibility of bond users as most of them rely on the investors and rating agencies. The downgrade risk is downgraded by the bond price which might drop severely within a smaller period of time. The role of the rating agencies is also to be associated with the recent financial crisis that might affect the valuation of the bonds along with facing some of the serious financial problems. The risk that is associated with the risk of inflation also points out the investors which bears the risk of the inflation due to the fixed income. In addition to this, bonds are also associated with the liquidity risk that points out that bonds are less liquid than the stocks. Investors of the bond faces some of their trade securities which are required to be associated with the liquid nature for the lack of potential buyers. As influenced by Ahmed, Islam and Alabdullah (2018), the risk of the foreign exchange is also directly associated with the bonds as is it mainly issued with the foreign currencies which has unfavourable currency fluctuations. This mainly help in decreasing the initial value of the investment for the investors.

The part of the rating agencies is additionally to be related with the recent financial crisis that might influence the valuation of the bonds together with confronting a few of the genuine financial problems. The risk that is related with the chance of swelling too focuses out the investors which bears the chance of the expansion due to the fixed income (Ryandono 2018). In expansion to this, bonds are also related with the liquidity risk that focuses out that bonds are less liquid than the stocks. Investors of the bond faces a few of their trade securities which are required to be related with the liquid nature for the need of potential buyers. As the rates of the interest develops within the market, it decreases the costs within the market that highlights the reverse relationship among each other. As long as the development of the bonds exists, the higher is the potential rate

of intrigued for keeping up the interest rate risk. The hazard of default is additionally associated with the guarantor in which they might not be able to create regular payments which offer assistance in reimbursing the guideline amount with a few of the financial institutions (Billah 2019). It moreover assesses within the validity of bond clients as most of them depend on the financial specialists and rating offices. The diminishing risk is minimized by the bond cost which might drop seriously inside a littler period of time.

### **2.7.2 Sukuk associated risk**

There are also similar kind of risk that are associated with the sukuk in which the interest rate risk is also present. This is almost similar to the fixed rate of conventional bonds which faces most of the risk as it is directly available to the interest rates for availability in the secondary market. The risk of reinvestment is also applicable for the fixed income bearer sukuk which are almost similar to the certificates of the conventional debts (Saad 2019). The Sharia compliant instrument are based on the real profits which are directly associated with the underlying assets and these types of risk can only be reduced by avoidance. The recent criticism of the modern sukuk is to provoke the confusion that are required to be associated with the Islamic capital market. Most of the issuance of sukuk refers to the conventional bonds that requires the extension of the Sharia ruling and might not consider the Islamic financial instrument. The conventional bond holders generally receive the payment which are to be associated with the investment and the percentage is to be determined from the principal amount. The payment of sukuk is required to reflect the actual payment which includes the returns from the underlying assets and that can only be managed by expecting the returns from the projects. The promise returns from the equal market interest mainly attracts the investors which allows the distribution of the ratios within the sukuk holders and the appointed managers (Mancini 2015). The actual problem that arises with the expected ones

includes the effective higher percentage of profit and the bonus which is used for better performance. Therefore, when the current market is low then the managers receives the premium amount which would highlight the false incentives that affects the interest rates.

The conventional bond holders for the most part gets the payment which are to be related with the investment and the rate is to be decided from the principal sum. As per Thajudeen (2017), the payment of sukuk is required to reflect the genuine payment which incorporates the returns from the underlying assets which can as be overseen by anticipating the returns from the ventures. The guarantee returns from the break even with market interest primarily pulls in the financial specialists which permits the distribution of the proportions inside the sukuk holders and the designated supervisors. The real issue that emerges with the anticipated ones incorporates the successful higher rate of benefit and the reward is utilized for a better performance. The risk of reinvestment is additionally appropriate for the fixed income bearer sukuk which are nearly comparable to the certificates of the routine obligations. The Sharia compliant instrument are based on the real profits which are specifically related with the fundamental of the basic of the resources and these sorts of chance can be decreased by only evasion. As opined by Sukmana (2019), the later feedback of the present day sukuk is to incite the confusion that are required to be related with the Islamic capital market. Most of the issuance of sukuk refers to the routine bonds that requires the expansion of the Sharia administering and might not consider the Islamic financial instrument.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter focuses on the research methodologies that have been followed in the research. It includes the philosophy that deals with the information that is to be collected from the research along with holding the significant valuation data. The approach of the research will be pointing out the methods that helps within the overall research. Research Design have also been discussed in the study that focuses on the practical outlook by which, the research has followed. The process of data collected, and the sampling methods have also been mentioned in this chapter which focuses on how the data have been derived or extracted from the sources. Two different approaches have been followed aimed at analysing the risks and benefits associated with Sukuk. Benefits of financing through Sukuk will be discussed using a thematic analysis where different benefits of Sukuk will be theoretically discussed based on the information gathered from existing literatures. To analyse the risks associated with Sukuk, the method of quantitative data analysis has been applied. The risks of Sukuk has been analysed for three selected companies in GCC.

### **3.2 Data collection and Content Analysis**

Content analysis is a secondary data collection tool that was employed to evaluate and understand the current situation of the Sukuk benefits and risks in the UAE financial market. Secondary data gave a clear understanding of the nature of financial understanding of Sukuk both theoretical and practical part. Some previously published articles and publication were used that gave us a better understanding of Sukuk. In this study, the data from secondary sources was the one that researchers relied on mostly. This kind of data was retrieved from publication, which included, blomberg.com



organizations' reports, books, newspapers, magazines, and peer-reviewed journals that all had information related to risks and benefits of Sukuk. After reading these sources, researcher was able to reconstruct knowledge about sukuk financing and risks. The method relied on because it offered accurate, reliable, and adequate information about Sukuk financial model applications.

For the empirical study, we obtained data for three Emirati companies, including data prices of sukuk, bond prices, interest rates and the exchange rate against currencies for the periods of the study.

We have selected daily data with total observation of 975 for two companies (First Abu Dhabi bank and Abu Dhabi national Energy ) starting from 28<sup>th</sup> May 2015 till 28<sup>th</sup> May 2020. And 820 observations for the third company (Emirates NBD) starting from 23<sup>rd</sup> June 2016 till 28<sup>th</sup> May 2020.

### Regression Analysis

Following Adel (2017), we employ OLS regressions to examine the relationship between Sukuk price (dependent variable) and selected explanatory variables including conventional bond prices, LIBOR rates and exchange rates for three companies including Emirates NBD , First Abu Dhabi bank and Abu Dhabi National Energy Company.

Formally, the regression model to be estimated can be written as follows:

$$y_t = \beta_0 + \beta_1 x_{1,t} + \beta_2 x_{2,t} + \beta_3 x_{3,t} + \varepsilon_t$$

where  $y_t$  is the dependent variable, Sukuk price,  $x_1, x_2, x_3$  are the explanatory variables conventional bond prices, exchange rates, and LIBOR rates, respectively.  $\beta_0$  is the intercept and  $\beta_1, \beta_2, \beta_3$  are the regression coefficients associated with  $x_1, x_2, x_3$ , to be estimated using OLS.  $\varepsilon_t$  is the error term.

The above regression model will be repeated for the three selected companies (First Abu Dhabi bank , Emirates NBD and Abu Dhabi First energy).

### **3.3 Research Design**

The plan of this research fundamentally plans the unmistakable sorts of outcomes which are to be related with the research. Coordination of components in a coherent way as well as reliable way is to be related with the study of n analyst. The issues that are related with the research in addition to the issuance of sukuk has to be recognized in this portion. These sukuks are then needed to be included with certain processes. The research approach fundamentally centres out the copy or the blueprint of data collection adjacent to the measures. These data are additionally to be inspected with the data that have been collected. Different sorts of research arrangements appear inside the study which centres out the practical knowledge for researching around the possibility of benefits and risk of sukuk (Arundina, Kartiwi and Omar 2016). Exploratory research plan, exploratory research arrange, and realistic research arrange are there three essential sorts of research arrange which are broadly utilized and open to any examiner. The design of the research is to be persistent which focuses on the particular circumstances that associated with issuance of sukuk.

### **3.4 Data analysis method**

The information that is to be collected from the secondary sources is to be dissected in a way of subjective examination. This basically centres on the subjects which is required to be created using secondary assets and the data which have been used for the reason of the study. In this research, two sorts of data analysis strategies are basically utilized which are qualitative research and quantitative. Quantitative research basically goes with the essential research which

incorporates the overview questions, and the respondents are required to reply them. In quantitative research, quality information is to be utilized and in secondary sources subjects are to be set up and examined. The study will be created utilizing the secondary data.

### **3.5 Ethical consideration**

It is one of the crucial portions of the research which have to be taken after in a particular way and ought to be considered throughout the study. All the respondents that have been included inside the research are not compelled for collecting the data. All the data that have been collected from the respondents are based on their will and none of them are compelled to do so. The data that have been collected are kept in a secure place at the side of making a difference from Data Protection Act. All fundamental data for the paper have been collected in a moral way along with considering their esteem for the research topic. All the particular owners of the secondary information have been recognized in an appropriate way. In this respect, the authenticity of the information source should be clarified as per the research work. Each research work is subject to certain moral issues which guarantees that uniqueness of the research work. The dissertation must be free from plagiarism and written with respect to guidelines.

### **3.6 Summary**

This chapter centres out the research methodology which highlights the methodologies that have been considered for the research. This investigate is based on positivism approach which recommends that the research gives the positive data around the benefits and chance related with sukuk. The point by point plan of procedure for collecting data is to be related with examination. These data are to be pointed by the translation of the results of research. The research arrange essentially centres out the copy or the blue print of collection adjacent to the measures. These arrangements are to be inspected with the data that have been collected. The data collected for the

research is from secondary sources which suggests points are to be made for certain points of view which is required to be inspected. As the paper is related to issuance of sukuku, it maintains all the ethical considerations and security of respondents. All the data have been taken for analysis is interpreted in a specific way. Journals and article reviews on business and economy can be used to illustrate the analysis of the research paper.

## CHAPTER 4: RESULTS AND DISCUSSION

This chapter summarizes results obtained from the statistical analysis. For determining risk factors related to Sukuk price, the factors that are taken into consideration are conventional bond price, exchange rate between USD and AED and Libor rate. Daily data from June 2016 to May 2020 have been collected for the three selected companies. The three companies that have been selected for analysis are Emirates NBD Bank, Abu Dhabi National Energy Company and First Abu Dhabi Bank. Separate analysis has been conducted for the three companies. Data has been analyzed using of descriptive statistics, correlation and regression technique.

**Table 1: Sukuk and Conventional Bonds**

<b>Issuer</b>	<b>bond type</b>	<b>date of Issue</b>	<b>volume</b>	<b>currency</b>	<b>date of maturity</b>	<b>coupon</b>
<b>FAB</b>	conventional	10-Dec-2012	421,096,079	Malaysian Ringgit	09-Dec-2027	4.75
<b>FAB</b>	Sukuk	11-May-2015	75,761,029	Hong Kong Dollar	11-May-2022	2.35
<b>Emirates NBD</b>	conventional	23-Jun-2016	367,290,000	U.S. Dollar	23-Jun-2021	3.1451
<b>Emirates NBD</b>	Sukuk	31-May-2016	3,672,900,000	U.S. Dollar	31-May-2021	3.54
<b>Abu Dhabi First energy</b>	conventional	05-Mar-2012	550,342,324	Malaysian Ringgit	03-Mar-2022	3.474
<b>Abu Dhabi First energy</b>	Sukuk	12-Dec-2012	4,591,125,000	U.S. Dollar	12-Jan-2023	3.625

## 4.1 Emirates NBD Bank

The speculation motivation behind the Dynamic Liquid Fund is to give professional, institutional and high total assets financial specialists with an expertly overseen methods for taking an interest in Shari'a consistent liquid financial resources. The essential speculation goal of the Dynamic Liquid Fund is to accomplish a higher benefit return than customary Shari'a agreeable bank stores of comparable liquidity, dominantly from an expanded arrangement of Shari'a consistent currency showcase instruments normally using cooperatives putting resources into such instruments. The Dynamic Liquidity Fund will look for after some time to procure a broadened arrangement of aggregate speculation conspires and direct venture, including however not restricted to, interests in Murabaha and Sukuk, prevalently by means of instruments accessible in the GCC and MENA markets.

### 4.1.1 Descriptive statistics

**Table 2: Descriptive statistics**

		Statistics			
		Conventional_bond_price	Sukuk_price	USD_AED	Libor_Rate
N	Valid	820	820	820	820
	Missing	0	0	0	0
Mean		99.978596	100.281976	3.672974	1.931287
Std. Error of Mean		.0012070	.0314845	.0000055	.0197106
Median		99.968000	100.561000	3.673000	2.001500
Mode		99.9570	100.7830 <sup>a</sup>	3.6730	1.3170 <sup>a</sup>
Std. Deviation		.0345639	.9015794	.0001581	.5644260
Variance		.001	.813	.000	.319

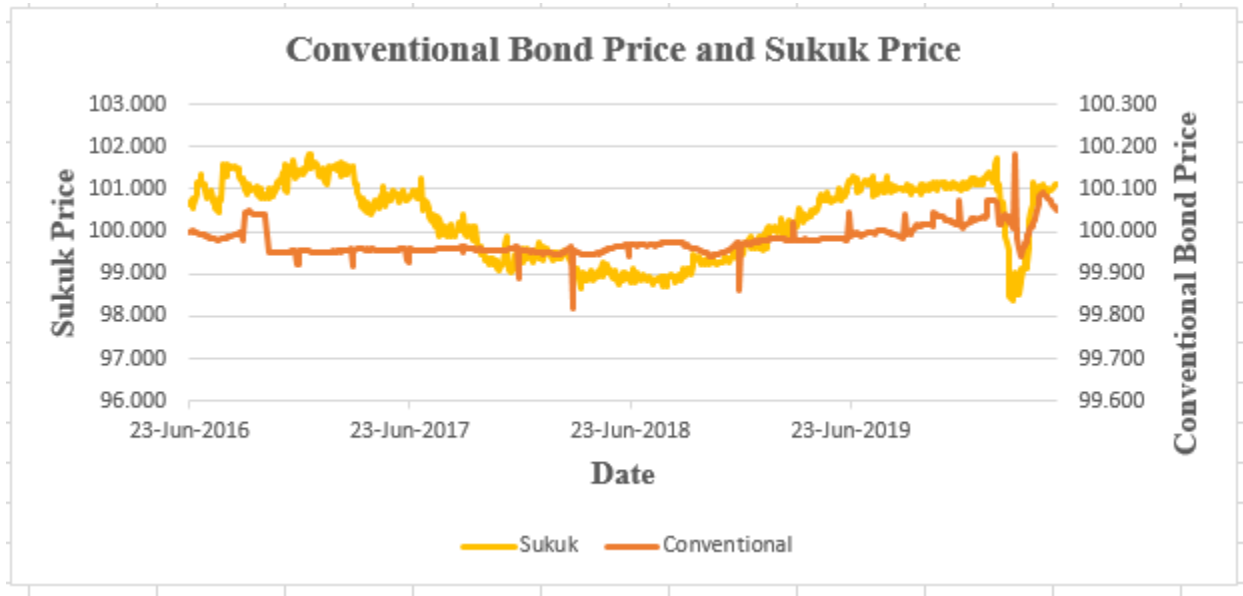
Skewness	.962	-.292	-6.017	-.304
Std. Error of Skewness	.085	.085	.085	.085
Kurtosis	3.238	-1.373	34.290	-1.042
Std. Error of Kurtosis	.171	.171	.171	.171
Range	.3670	3.4320	.0010	2.4000
Minimum	99.8160	98.3700	3.6720	.4240
Maximum	100.1830	101.8020	3.6730	2.8240
Sum	81982.4490	82231.2200	3011.8390	1583.6550
a. Multiple modes exist. The smallest value is shown				

In Emirates NBD Bank, the mean price of conventional bond is 99.98. The mean price implies average price of conventional bond for the bank within the selected time period is 99.98. Standard deviation of conventional bond price is 0.0346. Standard deviation is very less compared to average bond price implying price conventional bond price remains almost stable for the selected period. The maximum and minimum price for conventional bond are 100.18 and 99.82 respectively.

In case of Sukuk price, the mean is 100.28 implying the average Sukuk price for the selected period is 100.28. For the Sukuk price series, the standard deviation is 0.9016. The standard deviation is very small in relation to mean implying like conventional bond, Sukuk price remain stable (Holcomb 2016). The minimum and maximum Sukuk price within the period are 98.37 and 101.8020 respectively.

For UAD/AED exchange rate the mean exchange rate is 3.67. Standard deviation of the exchange rate is 0.00016. The very small standard deviation indicate exchange rate between USD and UAE does not vary much within this period. The highest and the lowest exchange rate are 3.6730 and 3.6720 respectively.

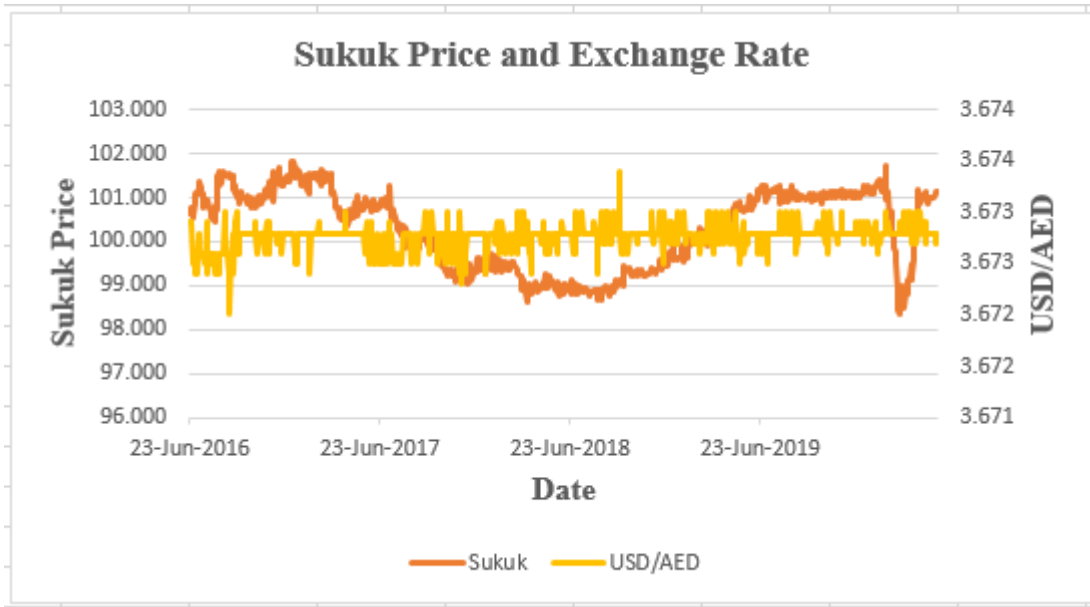
In case of Libor rate, the mean Libor rate is 1.9313. This implies the average Libor rate in the last five years is 1.9313. Standard deviation of the Libor rate is 0.5644. Since standard deviation is lower than mean, the series can be considered as stable. The maximum and minimum Libor rate are 2.8240 and 0.4240 respectively.



**Figure 5 : Relation between Sukuk Price and Conventional Bond Price**

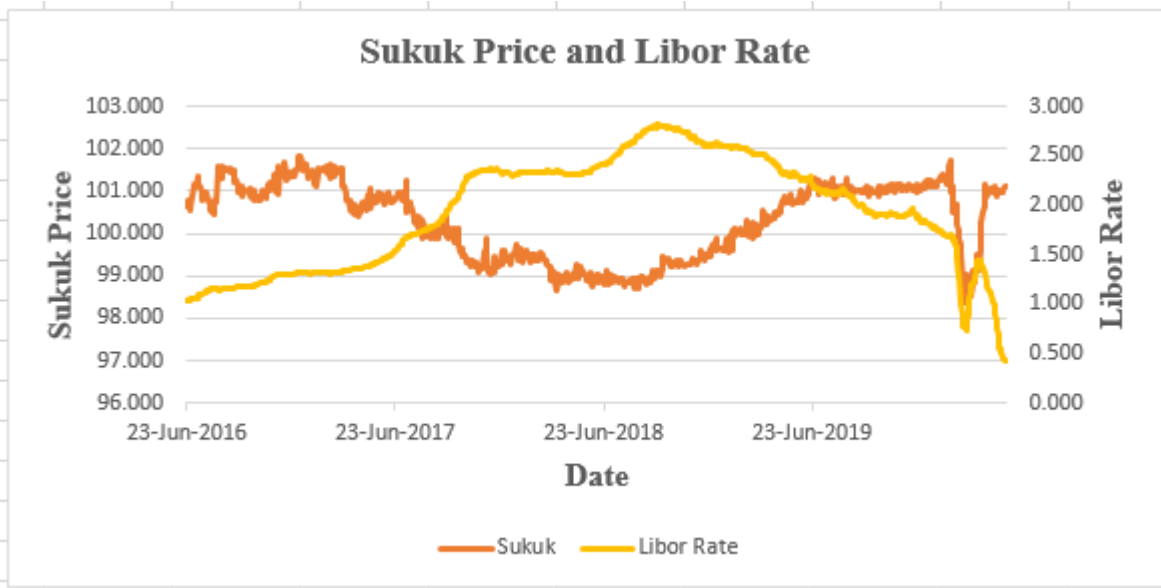
Price of Sukuk and price of conventional bonds as issued by Emirates NBD Bank show similar trend pattern showing a positive association between the two.





**Figure 6: Relation between Sukuk Price and Exchange Rate**

From the above figure it has been observed that the movement of USD/AED exchange rate has no clear pattern of relation. It can therefore be said that there is no relation between exchange rate and price of Sukuk issued by Emirates NBD Bank.



### Figure 7: Relation between Sukuk Price and Libor Rate

The above figure describes trend movement in Sukuk price and that of Libor rate. The two series moves in the opposite direction implying that Sukuk price and Libor rate are negatively associated.

#### 4.1.2 Correlation analysis

Correlation Analysis is an association quantifier of the connection that exists between the two quantitative factors. A high degree of connection indicates that the factors have a solid relationship with one another, while a weak connection implies that the factors are not really related. As such, it was applied as the way toward examining the quality of that relationship with accessible measurable information gathered from the three UAE financial organizations. There exists a careful association with the straight relapse examination of the factual methodology utilized to display the relationship between a dependent variable, and independent variables of the research.

**Table 3: Correlation Matrix**

		Correlations			
		Conventio nal_bond_ price	Sukuk_p rice	USD_U AE	LIbor_R ate
Conventional_bond_p rice	Pearson Correlation	1	.396**	.010	-.328**
	Sig. (2-tailed)		.000	.771	.000
	N	820	820	820	820
Sukuk_price	Pearson Correlation	.396**	1	-.023	-.643**
	Sig. (2-tailed)	.000		.506	.000
	N	820	820	820	820
USD_AED	Pearson Correlation	.010	-.023	1	.087*
	Sig. (2-tailed)	.771	.506		.013
	N	820	820	820	820

Llibor_Rate	Pearson Correlation	-.328**	-.643**	.087*	1
	Sig. (2-tailed)	.000	.000	.013	
	N	820	820	820	820
	**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).					

The correlation coefficient between Sukuk price and conventional bond price is 0.396. The positive correlation implies a positive association between Sukuk price and that of conventional bond price. For USD/AED exchange rate, the correlation coefficient between Sukuk price and exchange rate is -0.023. The correlation coefficient is negative implying an inverse association between Sukuk price and exchange rate with inverse association and the value almost zero, the relationship can be neglected as it has a less impact. For Libor rate the correlation coefficient is -0.643. The correlation coefficient is negative implying Sukuk price of Emirates NBD bank is inversely associated Libor rate (Schober, Boer and Schwarte 2018). The correlation coefficient between Sukuk price and conventional bond and that between Sukuk price and Libor rate are statistically significant at 5% significance level. The correlation coefficient between Sukuk price and exchange rate is not statistically significant.

#### 4.1.3 Regression analysis

Regression analysis is a ground-breaking measurable research component that permits the researcher to examine at the relationship between at multiple factors of interest in relation to Sukuk focusing on the risks and benefits associated. While there are numerous sorts of regression analysis, the baseline is that they all focus on the impact of at least one autonomous factor on a dependent variable.

Regression analysis in this context was used as a tool for analyzing which factors influence a subject of interest. Regression analysis has been helpful towards playing out the role of a researcher which is to certainly figure out which variables matter most, which elements can be overlooked, and how these elements impact one another.

**Table 4: Regression Result: Determinants of Sukuk Prices (Emirates NBD)**

Variables Entered/Removed <sup>a</sup>			
Model	Variables Entered	Variables Removed	Method
1	Llbor_Rate, USD_AED, Conventional_bond_price <sup>b</sup>	.	Enter
a. Dependent Variable: Sukuk_price			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.673 <sup>a</sup>	.453	.451	.6681632

a. Predictors: (Constant), Libor\_Rate, USD\_UAE, Conventional\_bond\_price

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	301.424	3	100.475	225.056	.000 <sup>b</sup>
	Residual	364.297	816	.446		
	Total	665.720	819			

a. Dependent Variable: Sukuk\_price

b. Predictors: (Constant), Libor\_Rate, USD\_UAE, Conventional\_bond\_price

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-953.019	546.790		-1.743	.082
	Conventional_bond_price	5.386	.716	.206	7.525	.000
	USD_AED	140.642	148.391	.025	.948	.344
	Libor_Rate	-.923	.044	-.578	-20.968	.000

a. Dependent Variable: Sukuk\_price

The value of R square or coefficient of determination in the model is 0.68. This implies conventional bond, exchange rate and Libor rate explain 68 percent variation in the Sukuk price. From the ANOVA table, the p-value of F-statistic is 0.000 indicating that the overall model is significance. The regression coefficient for conventional bond price is 5.386. The coefficient is

positive and statistically significant at less than 1% (p-value=0.000) implying there exists a positive relation between conventional bond price and Sukuk price. The results in this case are consistent with what Razak, Saiti and Dinc (2019) found in their research. For UAD/AED exchange rate, the coefficient is 140.642 but statistically not different from zero. This suggests that there is no relationship between UAD/AED exchange rate and Sukuk price in the case of Emirates NBD.. For Libor rates, the coefficient on LIBOR is -0.923 and statistically significant at less than 1% (p-value =0.000) This suggests Libor rate has negative relationship with Sukuk price implying an increase in Libor rate lowers Sukuk price while a decrease in Libor rate increases Sukuk price. There is an association between the convention bond price and Libor rate since the associated p values equates to 0.000. There being a consistence with what was found by Greenland and other researchers (2016), when the p-value is less than the significance level of 5%, the two variables ends up being of great statistical significance. The exchange rate p-value in this context is 0.344 which exceeds the significant value which implies that statistically it is not significant.

## 4.2 Abu Dhabi National Energy Company.

### 4.2.1 Descriptive statistics

**Table 5: Descriptive statistics**

		<b>Conventional_Bond_price</b>	<b>Sukuk_price</b>	<b>USD_AED</b>	<b>Libor_rate</b>
N	Valid	1224	1224	1224	1224
	Missing	0	0	0	0
Mean		100.139131	100.154536	3.672864	1.508414

Std. Error of Mean	.0642176	.0206429	.0000098	.0220292
Median	100.612000	100.074000	3.673000	1.353500
Mode	101.4130 <sup>a</sup>	99.8540 <sup>a</sup>	3.6730	1.3170 <sup>a</sup>
Std. Deviation	2.2466974	.7222060	.0003434	.7707063
Variance	5.048	.522	.000	.594
Skewness	-.505	.082	-2.121	.068
Std. Error of Skewness	.070	.070	.070	.070
Kurtosis	.324	.608	2.502	-1.355
Std. Error of Kurtosis	.140	.140	.140	.140
Range	13.7940	4.5320	.0010	2.5380
Minimum	90.9170	97.9760	3.6720	.2860
Maximum	104.7110	102.5080	3.6730	2.8240
Sum	122570.2960	122589.1520	4495.5850	1846.2990

a. Multiple modes exist. The smallest value is shown

For Abu Dhabi National Energy Company, the mean price of conventional bond is 100.14. The mean price implies average price of conventional bond for the company within the selected time period is 100.14. Standard deviation of conventional bond price is 2.2466. Standard deviation is very less compared to average bond price implying price conventional bond price remains almost stable for the selected period. The maximum and minimum price for conventional bond are 104.7110 and 90.9170 respectively.

In case of Sukuk price of the company, the mean is 100.15 implying the average Sukuk price for the selected period is 100.15. For the Sukuk price series, the standard deviation is 0.7222. The standard deviation is very small in relation to mean implying like conventional bond, Sukuk

price remain stable. The minimum and maximum Sukuk price within the period are 97.98 and 102.51 respectively.

For USD/AED exchange rate the mean exchange rate is 3.67. Standard deviation of the exchange rate is 0.00016. The very small standard deviation indicate exchange rate between USD and UAE does not vary much within this period (Mooi, Sarstedt and Mooi-Reci 2018). The highest and the lowest exchange rate are 3.6730 and 3.6720 respectively.

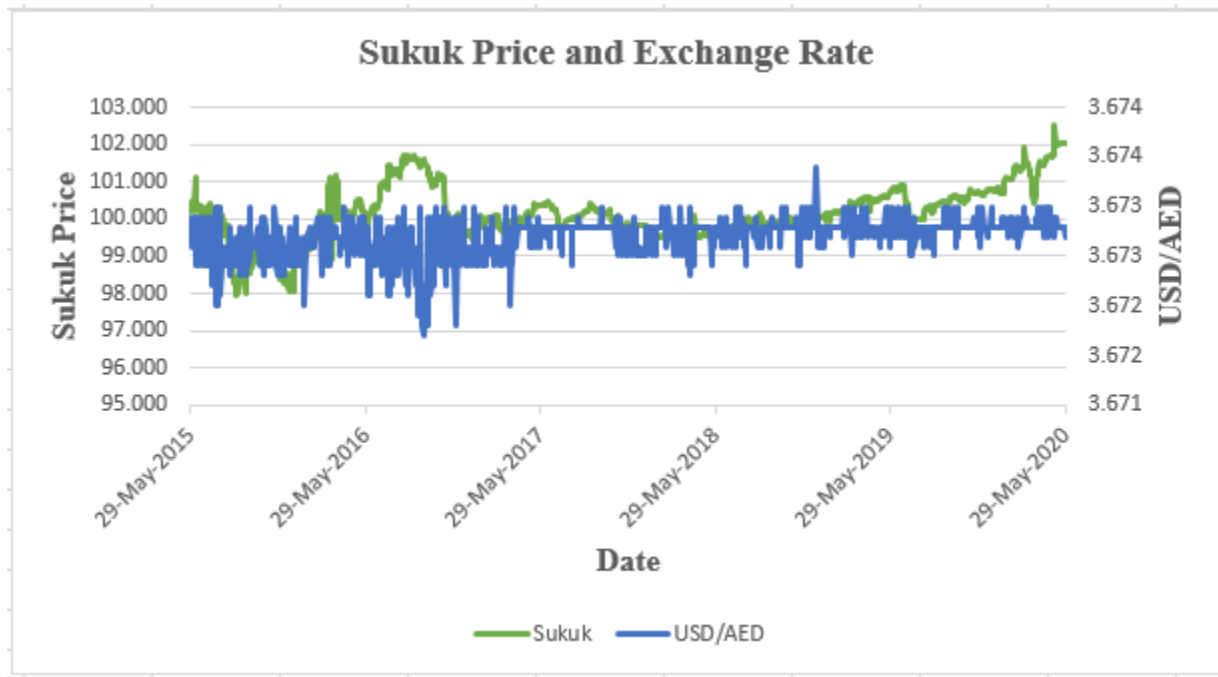
In case of Libor rate, the mean Libor rate is 1.9313. This implies the average Libor rate in the last five years is 1.9313. Standard deviation of the Libor rate is 0.5644. Since standard deviation is lower than mean, the series can be considered as stable. The maximum and minimum Libor rate are 2.8240 and 0.4240 respectively.



**Figure 8: Relation between Sukuk price and Bond Price**

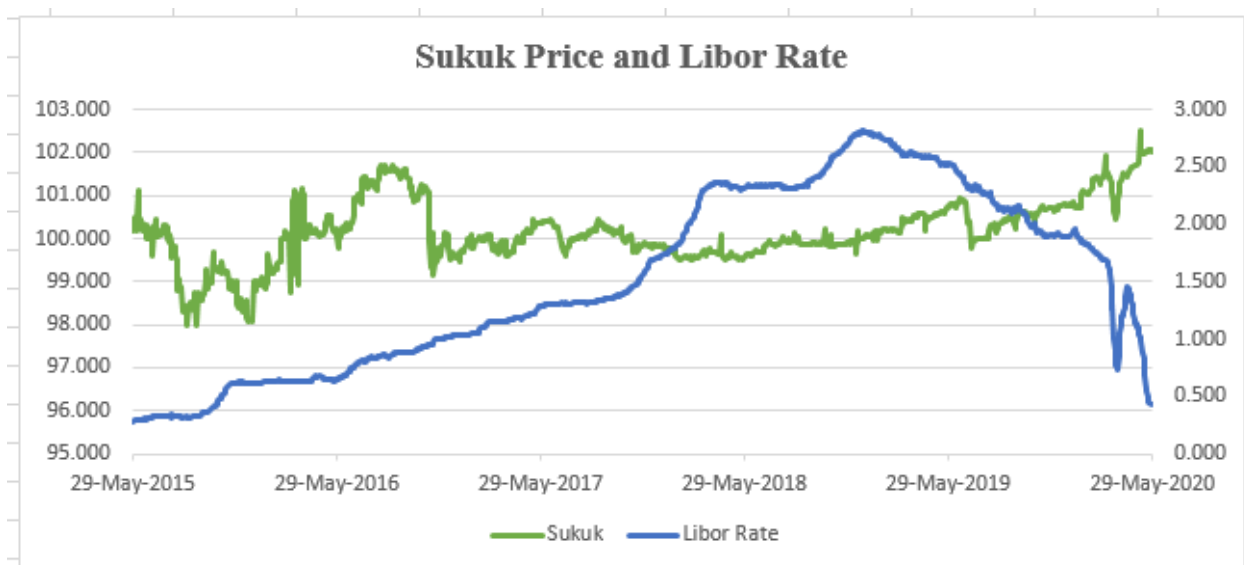


As depicted in the above figure the movement of Sukuk and Conventional bond prices as issued by Abu Dhabi National Energy Company, the two series move almost in same direction. This suggests a positive relation between Sukuk Price and Conventional bon price.



**Figure 9: Relation between Sukuk Price and Exchange Rate**

The trend movement of Sukuk Price and USD/AED exchange rate indicates no clear pattern of relation is visible between the two. This implies there is no clear relationship can be depicted between the two.



**Figure 10: Relation between Sukuk Price and Libor Rate**

The figure above describes trend movement in price of Sukuk as issues by Abu Dhabi National Energy company and that of Libor rate. The two series moves in the opposite direction implying that Sukuk price and Libor rate are negatively associated.

#### 4.2.2 Correlation analysis

**Table 6: Correlation Matrix**

		Correlations			
		Conventio nal_Bond_ price	Sukuk_p rice	USD_A ED	Libor_ rate
Conventional_Bond_ price	Pearson Correlation	1	.606**	.195**	.151**
	Sig. (2-tailed)		.000	.000	.000
	N	1224	1224	1224	1224
Sukuk_price	Pearson Correlation	.606**	1	.087**	.087**
	Sig. (2-tailed)	.000		.002	.002
	N	1224	1224	1224	1224
USD_AED	Pearson Correlation	.195**	.087**	1	.381**

	Sig. (2-tailed)	.000	.002		.000
	N	1224	1224	1224	1224
Libor_rate	Pearson	.151 **	.087 **	.381 **	1
	Correlation				
	Sig. (2-tailed)	.000	.002	.000	
	N	1224	1224	1224	1224
**. Correlation is significant at the 0.01 level (2-tailed).					

The above correlation matrix shows degrees of association between Sukuk price of the company and that of conventional bond price, exchange rate and Libor rate. The correlation coefficient between Sukuk price and conventional bond price is 0.606. The correlation coefficient is positive and greater than 0.60 implying there exists strong positive association between Sukuk price and conventional bond price of the company. For USD/AED exchange rate, the correlation coefficient between Sukuk price and exchange rate is 0.087. The correlation coefficient is positive implying a positive association between Sukuk price and exchange rate. The association however is very weak since the value of correlation coefficient is close to zero). For Libor rate the correlation coefficient is 0.087. The correlation coefficient is positive and close to 0 implying Sukuk price of the company has a weak positive association with Libor rate. The correlation coefficient between Sukuk price and all the three determinants are statistically significant corresponding to 5% level of significance.

#### 4.2.3 Regression Analysis

Using the regression model equation  $mode = a + b_1(Variable) + b_2(variable) + \varphi$  (error term), the tables below were derived, showing the predictions

**Table 7: Regression Result: Determinants of Sukuk Prices (Abu Dhabi National Energy Company)**

Variables Entered/Removed <sup>a</sup>			
Model	Variables Entered	Variables Removed	Method
1	Libor_rate, Conventional_Bond_price, USD_AED <sup>b</sup>	.	Enter

a. Dependent Variable: Sukuk\_price  
b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.607 <sup>a</sup>	.369	.367	.5745076

a. Predictors: (Constant), Libor\_rate, Conventional\_Bond\_price, USD\_AED

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	235.222	3	78.407	237.556	.000 <sup>b</sup>
	Residual	402.672	1220	.330		
	Total	637.894	1223			

a. Dependent Variable: Sukuk\_price  
b. Predictors: (Constant), Libor\_rate, Conventional\_Bond\_price, USD\_UAE

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	357.134	192.067		1.859	.063
	Conventional_Bond_price	.197	.007	.612	26.296	.000
	USD_AED	-75.334	52.327	-.036	-1.440	.150
	Libor_rate	.008	.023	.008	.344	.731

a. Dependent Variable: Sukuk\_price

R-square value of the regression model is 0.61. The R-square value determines explanatory power of the model. From the R-square value, it can be said that the three factors together account for 61 percent variation of the model. Overall significance of the model is determined from significant F statistics. From the ANOVA table, significant value of F statistics is obtained as 0.000. Since the significant F value is less than 5% significant value, the overall model is statistically significant. The regression coefficient for conventional bond price is 0.197. The coefficient is positive implying there exists a positive relation between conventional bond price and Sukuk price. That means as conventional bond price increases, Sukuk price increases as well, Since the p-value is less than statistical significance level at 5%, the variable is statistically significant. In consistence with what was found by Johnson and Bhattacharyya (2019), for UAD/AED exchange rate, the coefficient is -75.334 but statistically not significant (p-value=0.150). in line with the findings of Greenland, et al. (2016), this suggests that that there is no relationship between the two variables. Similarly, the regression coefficient on LIBOR rates is 0.008 and statistically not different from zero (p-value-0.730). Though there is a relationship between these variables, there is slight effect on the Sukuk prices from the Libor rate. This implies

that where there is a change, either positive or negative, in the Libor rate a change is as well experienced in the Sukuk prices.

### 4.3 First Abu Dhabi Bank

#### 4.3.1 Descriptive statistics

**Table 8: Descriptive Statistics**

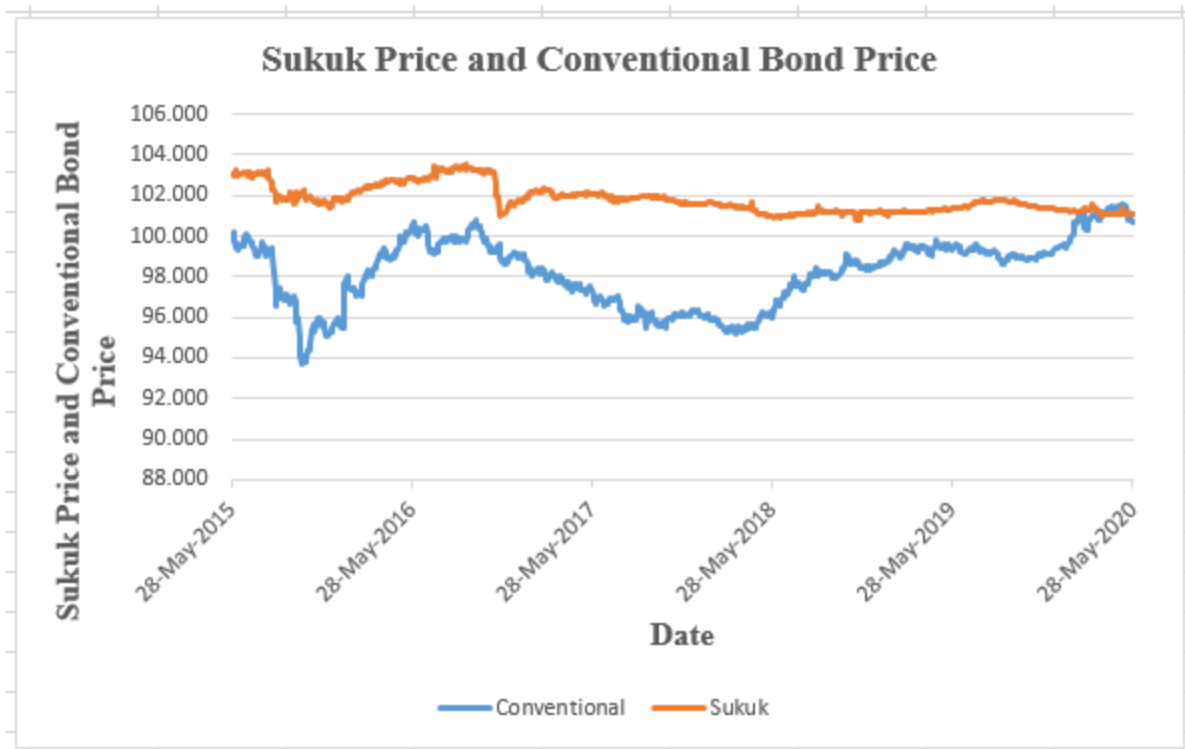
		<b>Conventional_Bond_Price</b>	<b>Sukuk_Price</b>	<b>USD_AED</b>	<b>Libor_rate</b>
N	Valid	975	975	975	975
	Missing	0	0	0	0
Mean		98.215904	101.814105	3.672907	1.765393
Std. Error of Mean		.0546842	.0214519	.0000093	.0206383
Median		98.668000	101.672000	3.673000	1.827000
Mode		95.9220 <sup>a</sup>	101.1770 <sup>a</sup>	3.6730	1.3170 <sup>a</sup>
Std. Deviation		1.7075137	.6698360	.0002910	.6444295
Variance		2.916	.449	.000	.415
Skewness		-.321	.881	-2.800	-.077
Std. Error of Skewness		.078	.078	.078	.078
Kurtosis		-.781	-.231	5.853	-1.355
Std. Error of Kurtosis		.156	.156	.156	.156
Range		7.8320	2.7130	.0010	2.4000
Minimum		93.7080	100.8140	3.6720	.4240
Maximum		101.5400	103.5270	3.6730	2.8240
Sum		95760.5060	99268.7520	3581.0840	1721.2581
a. Multiple modes exist. The smallest value is shown					

For the First Abu Dhabi Bank, the mean price of conventional bond is 98.21. The mean price implies average price of conventional bond for the bank within the selected time period is 98.21 (Choi *et al.* 2020). Standard deviation of conventional bond price is 1.7075. The smaller value of standard deviation implies conventional bond prices do not fluctuate much within the selected period. The maximum and minimum price for conventional bond are 101.54 and 93.70 respectively.

In case of Sukuk price, the mean is 101.81 implying the average Sukuk price for the selected period is 100.81. For the Sukuk price series, the standard deviation is 0.6444. The standard deviation is very small in relation to mean implying like conventional bond, Sukuk price remain stable for within the sample period range. The minimum and maximum Sukuk price within the period are 100.81 and 103.53 respectively.

For UAD/AED exchange rate the mean exchange rate is 3.67. Standard deviation of the exchange rate is 0.00016. The very small standard deviation indicate exchange rate between USD and UAE does not vary much within this period. The highest and the lowest exchange rate are 3.6730 and 3.6720 respectively.

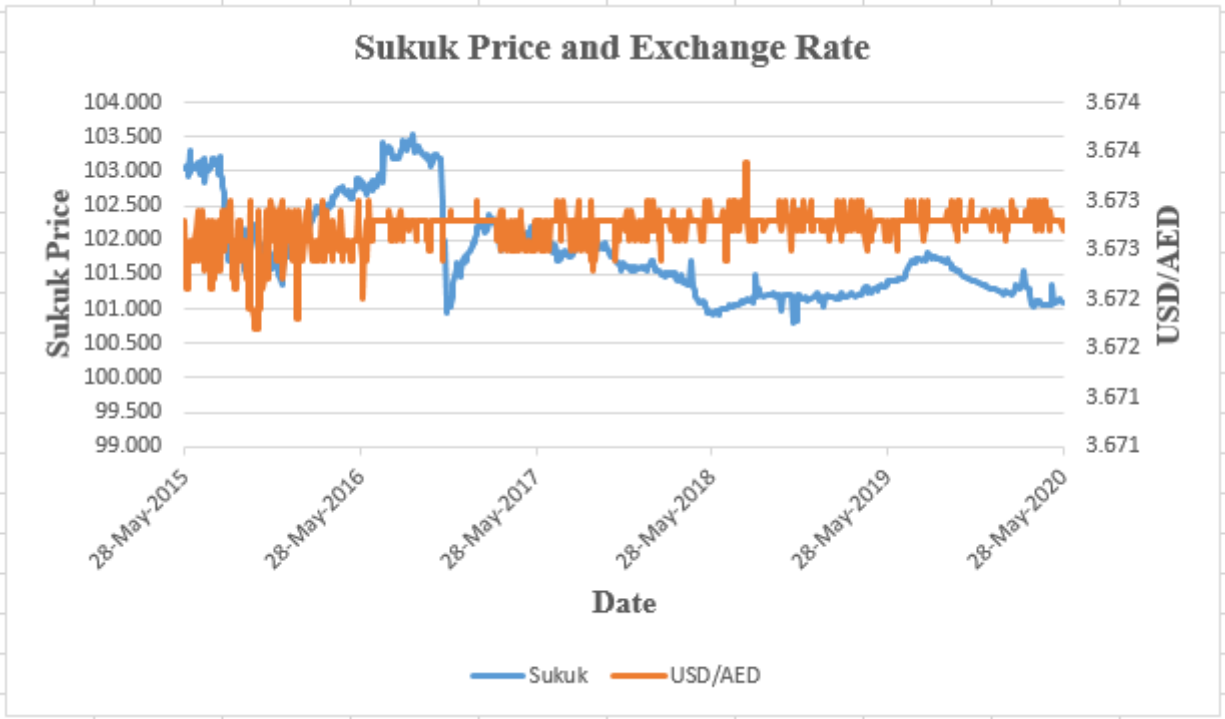
In case of Libor rate, the mean Libor rate is 1.9313. This implies the average Libor rate in the last five years is 1.9313. Standard deviation of the Libor rate is 0.5644. Since standard deviation is lower than mean, the series can be considered as stable. The maximum and minimum Libor rate are 2.8240 and 0.4240 respectively.



**Figure 11: Relation between Sukuk price and Bond Price**

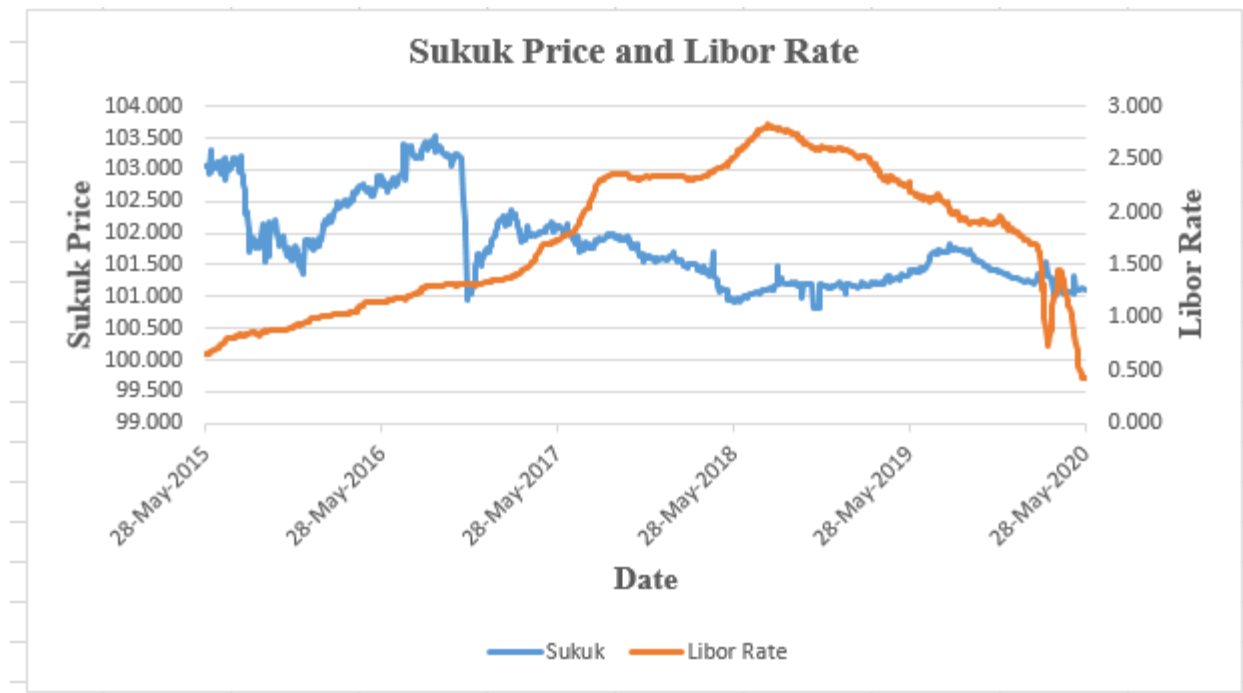
As shown from the above graph, the price of Sukuk as issued by The First Abu Dhabi Bank has moved in same direction as the conventional bond prices. This indicates there is a positive relation between Sukuk price and that of conventional bond price.





**Figure 12: Relation between Sukuk Price and Exchange Rate**

From the trend movement of Sukuk Price and Exchange Rate, there is no clear pattern of relation is visible between the two. This implies there is no clear relationship can be depicted between the two.



**Figure 13: Relation between Sukuk Price and Libor Rate**

The figure above describes trend movement in Sukuk price and that of Libor rate. The two series moves in the opposite direction implying that Sukuk price and Libor rate are negatively associated.

The following table presents a brief description of Sukuk and Conventional Bonds as issued by the selected organization which helps in comparing the results of this study and the market-research and data situations.

#### 4.3.2 Correlation Analysis

A high Connection implies that at least two factors have a solid relationship with one another, while a frail Relationship implies that the factors are not really related. At the end of the day, it is the way toward examining the quality of that relationship with accessible information.

**Table 9: Correlation matrix**

		Conventio nal_Bond_ Price	Sukuk_P rice	USD_U AE	Libor_ rate
Conventional_Bond_ Price	Pearson Correlation	1	.179**	.125**	-.274**
	Sig. (2-tailed)		.000	.000	.000
	N	975	975	975	975
Sukuk_Price	Pearson Correlation	.179**	1	-.244**	-.620**
	Sig. (2-tailed)	.000		.000	.000
	N	975	975	975	975
USD_UAE	Pearson Correlation	.125**	-.244**	1	.356**
	Sig. (2-tailed)	.000	.000		.000
	N	975	975	975	975
Libor_rate	Pearson Correlation	-.274**	-.620**	.356**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	975	975	975	975

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The correlation coefficient between Sukuk price and conventional bond price is 0.179. The positive correlation implies a positive association between Sukuk price and that of conventional bond price. The value of correlation coefficient is very small implying a weak association between Sukuk price and conventional bond price. For USD/AED exchange rate, the correlation coefficient between Sukuk price and exchange rate is -0.244. The correlation coefficient is negative implying an inverse association between Sukuk price and exchange rate (Zweig and Sherma 2016). The correlation coefficient is less than 0.4 implying a weak association between the two. For Libor rate the correlation coefficient is -0.620. The correlation coefficient is negative implying Sukuk price of is inversely associated with Libor rate. The obtained value of correlation coefficient however is

greater than 0.62 meaning strong degree of association between Sukuk price and that of Libor rate. The correlation coefficient between Sukuk price and all the three determinants are statistically significant corresponding to 5% level of significance.

#### 4.3.3 Regression Analysis

**Table 10: Regression Result: Determinants of Sukuk prices (First Abu Dhabi Bank)**

Variables Entered/Removed <sup>a</sup>			
Model	Variables Entered	Variables Removed	Method
1	Libor_rate, Conventional_Bond_Price, USD_UAE <sup>b</sup>	.	Enter
a. Dependent Variable: Sukuk_Price			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.621 <sup>a</sup>	.385	.384	.5258995
a. Predictors: (Constant), Libor_rate, Conventional_Bond_Price, USD_UAE				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	168.465	3	56.155	203.040	.000 <sup>b</sup>

	Residual	268.550	971	.277		
	Total	437.015	974			
a. Dependent Variable: Sukuk_Price						
b. Predictors: (Constant), Libor_rate, Conventional_Bond_Price, USD_UAE						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	363.536	234.578		1.550	.122
	Conventional_Bond_Price	.007	.011	.017	.625	.532
	USD_UAE	-71.132	63.942	-.031	-1.112	.266
	Libor_rate	-.628	.030	-.605	-21.090	.000
a. Dependent Variable: Sukuk_Price						

The value of R-square or coefficient of determination in the model is 0.62. This implies conventional bond exchange rate and Libor rate explain 62 percent variation in the Sukuk price. Rest of the variations in the Sukuk price have caused because of factors except the three. From the ANOVA table, the p-value of F-statistic is 0.000 indicating that the overall model is significant. The coefficient on conventional bond prices is positive implying there is a positive relation between conventional bond price and Sukuk price, however, the relationship is not statistically significant (p-value = .532). The regression coefficient is very small implying conventional bond price has a negligible impact on Sukuk price. For USD/AED exchange rate, the coefficient is -71.132. From the coefficient it can be said that as USD/AED exchange rate increases Sukuk price

falls which is an inverse relationship. This suggests a depreciation of UAE against USD increase Sukuk price while an appreciation of UAE against USD lowers Sukuk price, however, the relationship is not statistically significant since the p value is more than the significant level of 5%. For Libor rate, the regression coefficient is -0.628. This suggests Libor rate has an adverse effect on Sukuk price implying an increase in Libor rate lowers Sukuk price while a decrease in Libor rate increases Sukuk price. The inverse relation between Sukuk price and Libor rate hold because of inverse association between interest rate and bond price (Rahman *et al.* 2017). The associated p values for conventional bond price and USD/AED exchange rate are 0.532 and 0.266 respectively. p values for both the variables are greater than the significance level suggesting acceptance of null hypothesis not statistically significant relation between Sukuk price and the two variables. However, in case of Libor rate the associated p-value is 0.000. As the p-value is less than the significant level the variable is statistically significant.

The absence of a significant relationship between the two variables (sukuk price and conventional bond price ) of this bank can be explained by the divergence between the date of issuance of the bonds and their maturity date as well as the currency of the issue.

## Summary

From the above analysis of the results, it is evident that there are significant and insignificant relationships with regard to the price of the sukuk compared to the bond prices. This makes it clear that there is a relationship between the two variables for both companies ENBD and Abu Dhabi National Energy Company. Inverse and forward relationships are both experienced in the course of the study.

With regard to the relationship between the interest rate and the price of the sukuk, it is evident from the results that there is a positive relationship (for two companies out of three), in contrast to what Adel (2017) as well as Mohamed, Masih and Bacha (2015) found in the case of Malaysia. This is also in line with the earlier mentioned aspect in the research objectives, which is the existence of a relationship between the Libor rate and the sukuk prices. It is also evident that there is no relation between the exchange rate variable and sukuk price and this mainly because of the peg of UAE currency with USD.

## **CHAPTER 5: CONCLUSION**

### **5.1 Introduction**

The issuance of Sukuk has been increasing day by day not only in GCC countries but also in Asian countries and rest of the world. In regard to growing importance of Sukuk in the GCC countries, the paper focuses in discussing the benefits and risks associated with Sukuk. The two primary research objectives include to find out the benefits of financing through Sukuk and the risks associated with financing through Sukuk. Two different approaches have been followed to analyse the risks and benefits associated with Sukuk in GCC countries. Benefits of financing through Sukuk have been discussed using a thematic analysis where different benefits of Sukuk issuance have been theoretically discussed based on the information gathered from existing literatures. In order to analyse the risks associated with Sukuk, the method of quantitative data analysis has been applied. The risks of Sukuk has been analysed for three selected companies in GCC.

### **5.2 Conclusions**

Accounting and Auditing Organisations for Islamic Financial Institutions (AAOIFI) have characterized the term that focuses out the securities of rise to group which are related with an association in their representation of individual interest. Sukuk have been created with the customary bonds which are required to be considered as allowable by the Muslims as the intrigued inside the trade is required to be related with the compliant activity. Representing the proprietorship inside the genuine resources is required to be related with the customary payment cases which might influence the resources-based ownerships. These sorts of sukuk incorporates Murabaha, Ijara, Istisna, Musharaka, Istithmar and others. A Sukuk could be a sort of financial certificate which is fundamentally Islamic in nature and it is about comparable to the bond that are available in western finance. This moreover consolidates the bunch of financial specialists which



include of halfway ownership. The western debt instrument that is routine in nature is totally about comparative as sukuk in UAE and it is basically made for interfacing the returns at the side obligations inside the cash stream of the company. Sukuk securities might include of the molecule possession interior the hypothesis company which is required to be included with practical ordinary bonds. There are distinctive sorts of sukuk which are based on their activity next to the structures of the Islamic contracts. These are in addition depends on the expansion of the sukuk and their procedure of financing which are required to be related interior the ordinary bonds.

The sum of resources sums to \$ 4.004 trillion and among which \$ 342 billion are made up of certain sukuk. The brief as well as medium term financial instrument gives the adjust sheet of the Islamic money related institution which are required to be related with more liquidity which legitimized the generally utilize of sukuk within the GCC nations. There is different sort of sukuk which are based on their action at the side the structures of the Islamic contracts. The Islamic fixed securities that are generally issues within the worldwide advertise are required to be upgraded with the investment review which highlights the generally term of one year. These are the securities which are issued by the government which incorporates the change of nearby cash which are to be presented with certain angles. Besides, the measure of the secondary market focuses out the financial securities which focuses out the a few prohibitions that transacts the unethical goods and the administrations. There are certain standards on which the financing through sukuk are based on that highlights the set of a few prohibitions which highlights the debts of financing. Speaking to the sukuk highlights the total together with the unified offers which focuses out the bond holders that incorporates interface and standards. As the examiner do not have the debt commitment which possess the part of assets which got to be included with the bond holders and get a certain portion of the benefit which are direct related with the resources.

There are certain similarities and differences between traditional bond and that of Sukuk. Both conventional bonds and Sukuk are issued to the investors who are supposed to receive a payment till the maturity date. Both are issued to increase the supply of capital with lesser risk compared to equities. Before issuing both Sukuk and conventional bonds a disclosure document must be issued. The first contrasting feature of Sukuk and conventional bond is that Sukuk should be Shariah compliant while in case of conventional bonds there is no such compliance. Sukuk and conventional bonds also differ in terms of pricing mechanism. Conventional bond prices are determined based on the credit rating of the issuer while the value of Sukuk depends on backing assets. Unlike Sukuk, value of bonds does not increase as the asset value increases since conventional bonds relies on fixed interest. Investors of conventional bonds are promised to get their initial investment. The investors of Sukuk in contrast has to take the risk with underlying assets and are not promised with their initial investment.

The companies chosen for the purpose of data analysis are Emirates NBD Bank, Abu Dhabi National Energy Company and First Abu Dhabi Bank. The risk factors that have considered are price of conventional bond, exchange rate between USD and AED and Libor rate. Daily data on the selected variables have been collected for a sample period June 2016 to May 2020. From the analysis, it is evident that there is a relationship.

The first and foremost important benefit of Sukuk is that these kinds of bonds are safer as compared to conventional bonds. When compared globally, the country that has issued maximum amount of Sukuk is Malaysia followed by UAE and Indonesia. Sukuk is one instrument that is considered as an alternative to conventional bonds which are required to be more structured to generate overall return to the investors. Given the attractive nature of Sukuk investors have shown growing interest for investing in Sukuk. In case of Sukuk, the income share from profit is fixed

giving investors benefit of enjoying a steady cash flow. There is no such locking period for this type of bond giving investors flexibility of investment.

In the current financial condition, use of Sukuk bonds helps with understanding the economic scenario as it requires studying the method and create some possibilities by manipulating others. Sukuk plays an integral role in the preparation of financing which helps to improve the Islamic market from the side of banking system. The compliance of Sukuk contributes to boosting the standard issuance of Sukuk is favorable for increasing economic status of the society.

One main advantage of Sukuk is that it helps to diversify the fund. The Sukuk bonds are regarded as main resource of revenue for major projects undertaken by government and corporate bodies. Sukuk holders are supplied with sufficient liquidity so that they can freely trade in the secondary market. To boost up the profiles of investors creation and enhancement of the profiles are developed in international market by international credit agencies.

Another type of benefit associated with Sukuk is the price benchmarking. The overall tradability of Sukuk allows the investors to set a price which serves as an indicator in the secondary market. The horizon the Sukuk maturity makes the investors more confident about regarding overall security. Financing through Sukuk allows the investors the benefits of easy transaction and clear settlement within the maturity date. Sukuk is one instrument of the financial market the points out to the exchange organization that are associated with development and preparation of the instrument. This common instrument having a fixed income is highlighted in the economic report including the risk of investment. The joint investment funds are required to be associated with the effective responses allowing investors to invest in bonds providing benefit to the economy.

To investigate the risk factors associated with Sukuk, relationship has been established between Sukuk price and that of conventional price, USD-AED exchange rate and Libor rate. For all the company's average prices of Sukuk is larger than that of conventional bonds. For Emirate NBD Bank, variation of Sukuk is greater than the variation of conventional bonds suggesting for this company conventional bond prices are more stable compared to Sukuk price. However, in case of Abu Dhabi National Energy Company and First Abu Dhabi Bank, variation of Sukuk prices is relatively smaller than the conventional bond prices implying for these two companies conventional bond prices fluctuates more than Sukuk price.

A separate regression analysis was conducted for finding risk associated with Sukuk for each of the company. In case of Emirates NBD Bank, conventional bond price has a positive significant influence on Sukuk price implying movement of Sukuk price is closely related with the movement of conventional bond price. Therefore, fluctuations in the conventional bond prices is one major risk for Sukuk investors. Another risk factor for Sukuk price is Libor rate. Libor rate has a statistically significant negative impact of Sukuk price. That means Sukuk price moves in opposite direction of Libor rate. That means a higher interest rate lowers Sukuk price which enhance demand for bonds. So far the risk regarding exchange rate is concerned, the coefficient is not statistically significant. Sukuk issued by Emirate NBD bank therefore is varies with changes in exchange rate.

In case of Abu Dhabi National Energy Company, the only risk factor has been found to be conventional bond price. The regression coefficient associated with conventional bond prices is positive and statistically significant. The investors in Sukuk therefore need to follow the trend movement of prices in conventional bond to gauge the price movement of Sukuk. Neither exchange rate nor Libor rate have found to be statistically significant. Therefore, Sukuk issued by

Abu Dhabi National Energy Company does not vary with changes in Libor rate and USD/AED exchange rate.

For First Abu Dhabi Bank, the only statistically significant risk factor is Libor rate. The coefficient of Libor rate is negative and statistically significant. This implies price of Sukuk varies inversely with Libor rate which in turn affects demand of Sukuk. Libor rate thus works as a risk factor for financing through Sukuk. Neither conventional bond price nor exchange rate are statistically significant. The impact of conventional bond price and exchange rate on issuance of Sukuk by the First Abu Dhabi Bank therefore is uncertain.

### **5.3 Implications**

The analysis of benefits and risks as associated with Sukuk reveals that there are certain advantages of Sukuk over the conventional bonds. The main advantages of financing through Sukuk are they are often safer than the conventional bonds, Sukuk allows the investors to diversify fund resources, issuance of Sukuk helps to boost economic status and Sukuk comes with the benefit of price benchmarking. Considering these benefits companies in GCC countries should focus on issuing more Sukuk instead of conventional bonds. This will be helpful for successful completion of government and corporate projects which in turn will enhance financial environment of the nation. However, before investing in Sukuk investors need to analyze carefully the risks factors associated with Sukuk. The two risk factors for Sukuk as obtained from the analysis are conventional bond price and Libor rate. Investors should consider the fact that Sukuk prices move in same direction as conventional bonds. Therefore, investors should analyze trend in conventional bonds for assessing movement of Sukuk prices. Not only conventional bond price but also the Libor rate affects Sukuk prices. Sukuk prices move in opposite direction of Libor rate. Hence, to analyze Sukuk price and associated demand companies should consider trend of Libor rate.

#### **5.4 Limitation and future research**

The paper though provides brief analysis of benefits and risks of Sukuk, there are some limitation of the current research study. The first limitation of the paper is related to the use of limited sample size. The paper uses data only for three companies. A more robust analysis can be made by including more companies in GCC countries that are issuing Sukuk. For analyzing the risk factors associated with Sukuk the paper considers risks originated from conventional bond price, exchange rate and Libor rate. Besides these three factors there are other associated risks which include market risk, credit risk, asset redemption risks, Shariah compliance risk, liquidity risk, business risk and infrastructural rigidities. No attentions have been given to analyze these risk factors while consider risk of Sukuk. The third limitation is related to methodological limitation. The paper collected time series data for three different companies. A separate time series analysis has been conducted for each of the three companies. Instead of making three separate analyses, the method of panel data analysis can be used to obtain a more comprehensive result. Limitation of the current research indicates further scope of research in this area and help to draw any further inference related to benefits and risks of financing through Sukuk.

#### **References**

- Abd Rahim, S. and Ahmad, N., 2016. Event Study on Sukuk Announcement Using Caar and Extended Capm to Islamic Indexes in Malaysia. *Journal of Global Business and Social Entrepreneurship (GBSE)*, 4(5), pp.91-103.
- Adel, D., 2017. *Sukuk Bonds as an alternative source of funding: risks and implications*.

Ahmad, A.U.F., Muneeza, A., Farooq, M.O. and Hasan, R., 2019. Post-Default Sukuk Restructuring: An Appraisal of Shari'ah Issues. *Management of Islamic Finance Principle, Practice, and Performance, International Finance Review, Emerald Publishing, 19*, p.113.

Ahmad, N. and Rahim, S.A., (2015). Sukuk Ijarah versus Sukuk Musyarakah: Reactions on Stock Prices following Issuance during and Post-2008 Crisis.

Ahmed, E.R., Islam, M.A. and Alabdullah, T.T.Y., 2018. The moderating role of Shariah supervisory board on sukuk pricing benchmark. *International Journal of Excellence in Islamic Banking and Finance, 6(2)*.

Ahmed, E.R., Islam, M.A. and Ariffin, K.H.K., 2015. An empirical analysis on legitimacy of sukuk: An insight of malaysian sukuk. *Asian Social Science, 11(13)*, p.84.

Ahroum, R. and Achchab, B., 2017. Pricing of Sukuk Musharakah with joint venture as underlying, beyond the use of PLS ratio. *Journal of Islamic Accounting and Business Research*.

Ahroum, R., Touri, O., Sabiq, F.Z. and Achchab, B., 2018. Investment strategies with rebalancing: How could they serve Sukuk secondary market?. *Borsa Istanbul Review, 18(2)*, pp.91-100.

Alam, N., Duygun, M. and Ariss, R.T., 2016. Green Sukuk: An Innovation in Islamic Capital Markets. In *Energy and Finance* (pp. 167-185). Springer, Cham.

Aloui, C., Hammoudeh, S. and ben Hamida, H., 2015. Global factors driving structural changes in the co-movement between sharia stocks and sukuk in the Gulf Cooperation Council countries. *The North American Journal of Economics and Finance, 31*, pp.311-329.

Aloui, C., Hammoudeh, S. and 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, pp.69-79.

Aloui, C., Hammoudeh, S. and Hamida, H.B., 2015. Price discovery and regime shift behavior in the relationship between sharia stocks and sukuk: A two-state Markov switching analysis. *Pacific-Basin Finance Journal*, 34, pp.121-135.

Al-Sawwa, A.M. and Ghi, M., 2015. "Bonds of Benefit and Service, and Risk and Various Steps for a Solution. *Journal of College of Sharia & Islamic Studies*, 33(2).

Alswaidan, M.W., Daynes, A. and Pasgas, P., 2017. Understanding and evaluation of risk in Sukuk structures. *Journal of Islamic Accounting and Business Research*.

Amaliah, I. and Aspiranti, T., 2017. State Sukuk Potential in Reducing Indonesia Budget Deficit 2009–2015. *Journal of Economics, Business & Accountancy Ventura*, 20(1), pp.21-30.

Amrani, M.B. and Hamza, F., 2017. Sukuk: Literature Review. *Journal of Social and Administrative Sciences*, 4(1), pp.124-131.

Arundina, T., Kartiwi, M. and Omar, M.A., 2016. Artificial Intelligence for Islamic Sukuk Rating Predictions. In *Artificial Intelligence in Financial Markets* (pp. 211-241). Palgrave Macmillan, London.

Arundina, T., Omar, M.A. and Kartiwi, M., 2015. The predictive accuracy of Sukuk ratings; Multinomial Logistic and Neural Network inferences. *Pacific-Basin Finance Journal*, 34, pp.273-292.



Ashidiqi, C. and Arundina, T., 2017. Indonesia Students's Intention to Invest in Sukuk: Theory of Planned Behaviour Approach. *International Journal of Economic Research*, 14(15), pp.395-407.

Awalludin, N.R.B. and Al-Aidaros, A.H., 2015. Towards effectiveness of sukuk murabahah at CIMB bank in Malaysia. *International Review of Management and Business Research*, 4(1), p.215.

Awaludin, T., Beik, I.S. and Ismal, R., 2016. THE LESS-INTERESTED OF ISLAMIC BANK FOR ISSUING SUKUK: Factors and Recommendations. *Walisongo: Jurnal Penelitian Sosial Keagamaan*, 24(1), pp.37-56.

Azman, S.M.S. and Ali, E.R.A.E., 2016. The potential of innovative financial tools: Social Impact Bond (SIB) and Sustainable and Responsible Investment (SRI) sukuk, towards the sustainable growth of the Islamic finance industry. *European Journal of Islamic Finance*, (4).

Bhuiyan, R.A., Rahman, M.P., Saiti, B. and Ghani, G.M., 2018. Financial integration between sukuk and bond indices of emerging markets: Insights from wavelet coherence and multivariate-GARCH analysis. *Borsa Istanbul Review*, 18(3), pp.218-230.

Billah, M.M.S., 2019. Sukuk Paradigm and Structure. In *Islamic Financial Products* (pp. 299-325). Palgrave Macmillan, Cham.

Billah, M.M.S., 2019. Sukuk Takaful Plan. In *Islamic Insurance Products* (pp. 221-226). Palgrave Macmillan, Cham.

Bo, D., Ali, E.R.A.E. and Saiti, B., 2016. Sukuk issuance in China: Trends and positive expectations. *International Review of Management and Marketing*, 6(4), pp.1020-1025.

- Borhan, N.A. and Ahmad, N., 2018. Identifying the determinants of Malaysian corporate Sukuk rating. *International Journal of Islamic and Middle Eastern Finance and Management*.
- Brugnoni, G.C., Di Lorenzo, P.G.C., Didonato, R., Giustiniani, E., Lentini, L., Mariani, M., Palandra, C., Petrucci, F., Salvi, A. and Tami, A., 2017. Islamic bonds and real estate securitizations: the Italian perspective for issuing a sukuk. In *Empirical Studies on Economics of Innovation, Public Economics and Management* (pp. 3-28). Springer, Cham.
- Choi, D.A., Tagore, P., Siddiq, F., Park, K. and Ewing, R., 2020. 7 Descriptive Statistics and Visualizing Data. *Basic Quantitative Research Methods for Urban Planners*.
- Dreassi, A., Miani, S., Paltrinieri, A. and Scip, A., 2016. Volatility Linkages and Co-movements Between International Stocks and the Sukuk Market. In *Bank Funding, Financial Instruments and Decision-Making in the Banking Industry* (pp. 31-61). Palgrave Macmillan, Cham.
- Duqi, A. and Al-Tamimi, H., 2019. Factors affecting investors' decision regarding investment in Islamic Sukuk. *Qualitative Research in Financial Markets*.
- El Mosaid, F. and Boutti, R., 2014. Sukuk and bond performance in Malaysia. *International Journal of Economics and Finance*, 6(2), pp.226-234.
- Elhaj, M.A., Muhamed, N.A. and Ramli, N.M., 2018. The effects of board attributes on Sukuk rating. *International Journal of Islamic and Middle Eastern Finance and Management*.
- Elhaj, M.A.A., Muhamed, N.A., Ramli, N.M. and Zakaria, N.B., 2016. Ownership monitoring mechanism over sukuk credit rating. *International Journal of Academic Research in Business and Social Sciences*, 6(12), pp.2222-6990.

- Elian, M., 2015. Why the US should accommodate sukuk: And how accommodating sukuk will protect and benefit the American financial system. *Minn. J. Int'l L.*, 24, p.1.
- Ghani, N.A.R.N.A., 2018. Beneficial ownership in sukuk ijarah: a shari'ah appraisal. *International Journal of Islamic and Middle Eastern Finance and Management*.
- Godlewski, C.J., Turk-Ariss, R. and Weill, L., 2016. Do the type of sukuk and choice of shari'a scholar matter?. *Journal of Economic Behavior & Organization*, 132, pp.63-76.
- Greenland, S., Senn, S.J., Rothman, K.J., Carlin, J.B., Poole, C., Goodman, S.N. and Altman, D.G., 2016. Statistical tests, P values, confidenc
- Haque, M.M., Chowdhury, M.A.F., Buriev, A.A., Bacha, O.I. and Masih, M., 2017. Who drives whom-sukuk or bond? A new evidence from granger causality and wavelet approach. *Review of Financial Economics*.
- Hasan, R., Ahmad, A.U.F. and Parveen, T., 2019. Sukuk risks—a structured review of theoretical research. *Journal of Islamic Accounting and Business Research*.
- Hassan, M.K., Paltrinieri, A., Dreassi, A., Miani, S. and Scip, A., 2018. The determinants of co-movement dynamics between sukuk and conventional bonds. *The Quarterly Review of Economics and Finance*, 68, pp.73-84.
- Holcomb, Z.C., 2016. *Fundamentals of descriptive statistics*. Routledge.
- Ibrahim, M.H., 2015. Issues in Islamic banking and finance: Islamic banks, Shari'ah-compliant investment and sukuk. *Pacific-Basin Finance Journal*, 34, pp.185-191.

- Ismath Bacha, O. and Mirakhor, A., 2018. Funding development infrastructure without leverage: A risk-sharing alternative using innovative sukuk structures. *The World Economy*, 41(3), pp.752-762.
- Johnson, R.A. and Bhattacharyya, G.K., 2019. *Statistics: principles and methods*. John Wiley & Sons.
- Kartiwi, M., Gunawan, T.S., Arundina, T. and Omar, M.A., 2018. Decision tree optimization for Sukuk rating prediction. *Journal of Fundamental and Applied Sciences*, 10(2S), pp.323-332.
- Kartiwi, M., Gunawan, T.S., Arundina, T. and Omar, M.A., 2018. Sukuk rating prediction using voting ensemble strategy. *International Journal of Electrical and Computer Engineering (IJECE)*, 8(1), pp.299-303.
- Lahsasna, A., Hassan, M.K. and Ahmad, R., 2018. Forward Ijarah Sukuk: Concept, Issuance, Structuring and General Governing Rules. In *Forward Lease Sukuk in Islamic Capital Markets* (pp. 111-147). Palgrave Macmillan, Cham.
- Lahsasna, A., Hassan, M.K. and Ahmad, R., 2018. Introduction to Sukuk. In *Forward Lease Sukuk in Islamic Capital Markets* (pp. 1-9). Palgrave Macmillan, Cham.
- Lahsasna, A., Hassan, M.K. and Ahmad, R., 2018. Types of Sukuk, their classification and structure in Islamic capital market. In *Forward lease Sukuk in Islamic capital markets* (pp. 49-85). Palgrave Macmillan, Cham.
- Maghyereh, A.I. and Awartani, B., 2016. Dynamic transmissions between Sukuk and bond markets. *Research in International Business and Finance*, 38, pp.246-261.

- Maghyereh, A.I. and Awartani, B., 2016. Dynamic transmissions between Sukuk and bond markets. *Research in International Business and Finance*, 38, pp.246-261.
- Mancini, K., 2015. Not by Benevolence Alone: The Use of Project Sukuk to Finance Public-Private Partnerships in Saudi Arabia. *Pub. Cont. LJ*, 45, p.313.
- Melzattia, S. and Doktoralina, C.M., 2018. Yield Sukuk: Maturity, Rating and Value of Emission. *Research Journal of Finance and Accounting*, ISSN, pp.2222-1697.
- Mohamed, G.G.A., 2016. Islamic Bonds: Economic Benefits and International Political Risk. In *The Name of Allah, The most Beneficent, The most Merciful*, p.78.
- Mohamed, H.H., Masih, M. and Bacha, O.I., 2015. Why do issuers issue Sukuk or conventional bond? Evidence from Malaysian listed firms using partial adjustment models. *Pacific-Basin Finance Journal*, 34, pp.233-252.
- Mooi, E., Sarstedt, M. and Mooi-Reci, I., 2018. Descriptive Statistics. In *Market Research* (pp. 95-152). Springer, Singapore.
- Muhmad, S.N. and Muhmad, S.N., 2018. Potential Development of Sukuk in Competitive Market. *International Journal of Business and Management*, 2(2), pp.26-29.
- Mukhlisin, M. and Mustafida, R., 2019. Can We Combine Sukuk and Waqf? A Case Study of Indonesia. In *Revitalization of Waqf for Socio-Economic Development, Volume I* (pp. 169-191). Palgrave Macmillan, Cham.
- Musari, K., 2016. Waqf-Sukuk, Enhancing the Islamic Finance For Economic Sustainability in Higher Education Institutions. *Papers World Islamic Countries University Leaders Summit (WICULS)*.

- Naifar, N. and Hammoudeh, S., 2016. Dependence structure between sukuk (Islamic bonds) and stock market conditions: An empirical analysis with Archimedean copulas. *Journal of International Financial Markets, Institutions and Money*, 44, pp.148-165.
- Naifar, N., 2018. Exploring the Dynamic Links between GCC Sukuk and Commodity Market Volatility. *International Journal of Financial Studies*, 6(3), p.72.
- Najeeb, S.F., Bacha, O. and Masih, M., 2017. Does a held-to-maturity strategy impede effective portfolio diversification for Islamic bond (sukuk) portfolios? A multi-scale continuous wavelet correlation analysis. *Emerging Markets Finance and Trade*, 53(10), pp.2377-2393.
- Nasir, A. and Farooq, U., 2017. Analysis of value at risk of Sukuk and conventional bonds in Pakistan. *Journal of Islamic Accounting and Business Research*.
- Paltrinieri, A., Dreassi, A., Miani, S. and Scip, A., 2015. In search of zero beta assets: Evidence from the sukuk market. *International Journal of Social, Behavioral, Educational, Economic and Management Engineering*, 9(1), pp.67-75.
- Paltrinieri, A., Hassan, M.K., Bahoo, S. and Khan, A., 2019. A bibliometric review of sukuk literature. *International Review of Economics & Finance*.
- Qizam, I. and Fong, M., 2019. Developing financial disclosure quality in sukuk and bond market: Evidence from Indonesia, Malaysia, and Australia. *Borsa Istanbul Review*, 19(3), pp.228-248.
- Rafay, A., Sadiq, R. and Ajmal, M., 2017. Uniform framework for Sukuk al-Ijarah—a proposed model for all madhahib. *Journal of Islamic Accounting and Business Research*.
- Rahim, S.A. and Ahmad, N., 2015. Asymmetric market reactions to Sukuk issuance. *International Journal of Novel Research in Humanity and Social Sciences*, 2(3), pp.48-56.

- Rahim, S.A. and Ahmad, N., 2015. Forecasting Volatility using Bootstrap MCEWMA Following Sukuk Ijarah Issuances. *International Business Management*, 9(4), pp.581-589.
- Rahman, M.P.B., Duasa, J., Kassim, S. and Zainudin, W.R.A., 2017. Sovereign Sukuk Pricing Analysis: Do Macroeconomic Variables Matter?. *International Journal of Economics, Management and Accounting*, 25(3), pp.513-528.
- Rahmany, S., 2018. Sukuk Reduces Risk of Corruption and Theft of Funds. *IQTISHADUNA: Jurnal Ilmiah Ekonomi Kita*, 7(2), pp.152-167.
- Rauf, A.L.A., 2016. Relationship between Risk and Return: Evidence from Dow Jones Sukuk Price Index. *Eastern Journal of Economics and Finance*, 2(1), pp.9-15.
- Razak, S.S., Saiti, B. and Dinç, Y., 2019. The contracts, structures and pricing mechanisms of sukuk: A critical assessment. *Borsa istanbul review*, 19, pp.S21-S33.
- Reboredo, J.C. and Naifar, N., 2017. Do Islamic bond (sukuk) prices reflect financial and policy uncertainty? A quantile regression approach. *Emerging Markets Finance and Trade*, 53(7), pp.1535-1546.
- Rodoni, A. and Setiawan, A., 2016. Risk and Return: Bonds and Sukuk in Indonesia. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah*, 8(2), pp.255-270.
- Ryandono, M.N.H., 2018. Sukuk model determinant as funding strategy of Islamic Bank in Indonesia. *Ijtihad: Jurnal Wacana Hukum Islam dan Kemanusiaan*, 18(2), p.153.
- Saad, A.A., 2019. Structural Development of Ijarah Sukuk: An Appraisal. *Journal of Islamic Finance*, 8, pp.107-116.

Saad, N.M., Haniff, M.N. and Ali, N., 2016. Firm's growth and sustainability: The role of institutional investors in mitigating the default risks of sukuk and conventional bonds. *Procedia Economics and Finance*, 35, pp.339-348.

Saad, N.M., Haniff, M.N. and Ali, N., 2019. The Encumbrance of Institutional Investor and Board of Directors in Reducing Risk of Default for Conventional Bonds and Sukuk in Malaysia. *Jurnal Pengurusan (UKM Journal of Management)*, 55.

Schober, P., Boer, C. and Schwarte, L.A., 2018. Correlation coefficients: appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), pp.1763-1768.

Sclip, A., Dreassi, A., Miani, S. and Paltrinieri, A., 2016. Dynamic correlations and volatility linkages between stocks and sukuk: Evidence from international markets. *Review of Financial Economics*, 31, pp.34-44.

Sillah, B.M., 2018. Project-backed sukuk: can it be a model for resource mobilization, risk sharing and capital market development in developing economies. *Journal of Islamic Banking & Finance*, 35(1), pp.68-83.

Sukmana, R., 2019. A critical assessment of retail sovereign sukuk in Indonesia. *Qualitative Research in Financial Markets*.

Talahma, K.I., 2015. Islamic Bonds (Sukuk): Opportunities and Challenges. *Asper Rev. Int'l Bus. & Trade L.*, 15, p.391.

Taoual, S., 2016. Sukuk: a potential for stability and development in the GCC.

Thajudeen, K.S., 2017. Sukuk for the Financing of Non-revenue Water Management: Malaysia as a Case Study. In *Developments in Islamic Finance* (pp. 21-42). Palgrave Macmillan, Cham.



Uddin, M.A., Sultan, Y., Hosen, M. and Ullah, N., 2015. A critical analysis of Islamic bond: A case study on Sunway Treasury Sukuk.

ULUSOY, A. and Mehmet, E.L.A., 2018. Secondary Market of Sukuk: An Overview. *Uluslararası İslam Ekonomisi ve Finansı Araştırmaları Dergisi*, 4(2), pp.17-32.

Warsame, M.H. and Ileri, E.M., 2016. Does the theory of planned behaviour (TPB) matter in Sukuk investment decisions?. *Journal of Behavioral and Experimental Finance*, 12, pp.93-100.

Yesuf, A.J., 2016. A Comparative Analysis of Sukuk and Conventional Bonds. In *Chaos, Complexity and Leadership 2014* (pp. 417-438). Springer, Cham.

Zain, N.R.M., Abideen, A. and Ali, E.R.A.E., (2017). Innovations in Sukuk in the Global Finance Market: Reviewing Key Considerations.

Zulhibri, M., 2015. A synthesis of theoretical and empirical research on sukuk. *Borsa Istanbul Review*, 15(4), pp.237-248.

Zweig, G. and Sherma, J. eds., 2016. *Principles, Statistics, and Applications: Analytical Methods for Pesticides and Plant Growth Regulators* (Vol. 15). Academic Press.