Pricing mechanisms for *Sukūk* in Malaysia: "Comparative study between *Sukūk* and bonds"
Mécanismes de tarification de Sukūk en Malaisie: «Étude comparative entre Sukūk et les obligations»

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Abstract:
This study aims to clarify the concepts related to Sukuk and bonds, as well as highlighting the mechanisms of Sukuk pricing in the Malaysian financial market, which guarantees returns from their placement and comparing them with the bond pricing mechanisms. The study concludes that Sukuk pricing mechanisms depend on the market value of the underlying asset, & Bond pricing is based on credit rating.; Requiring the amendment of Sukuk pricing techniques; as a result of the demand for their circulation; to improve the performance of the Islamic financial market.
Keywords: Sukuk, Bonds, Sukuk Pricing, Bond Pricing, Malaysian Financial Market.

الملخص:
تهدُف هذه الدراسة إلى توضيح المفاهيم المتعلقة بالصكوك الإسلامية والسندات، وكذا إبراز آليات تسعير الصكوك الإسلامية في السوق المالي الماليزي؛ التي تضمن عوائد من توظيفها، ومقارنتها بآليات تسعير السندات، وحيث خلصت الدراسة إلى أن آليات التسعير الإسلامية تعتمد على القيمة السوقية للأصل الأساسي، ويستند تسعير السندات إلى التصنيف الائتماني؛ مما يتطلب تعديل تقنيات تسعير الصكوك الإسلامية؛ نتيجة الطلب على تداولها؛ لتحسين أداء السوق المالي الإسلامي.
الكلمات المفتاحية: الصكوك، السندات، تسعير الصكوك، تسعير السندات، السوق المالي الماليزي.

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Introduction:

Islamic finance is the largest sector in the Islamic economy. For a long time, this mechanism has not been properly understood and has not had sufficient development opportunities compared to conventional finance. However, Islamic finance has began to take steady steps in the past decade, Year-on-year, and the Islamic finance sector is still emerging, citing assets of US $ 2 293 billion and a large capital in flow. There is a 10% increase over 2015 and assets are expected to grow at an annual growth rate Compounded by 9.4% To reach US $ 4 362 billion by 2020;

Sukuk is the second largest asset and liability management sector with 15% of the total assets of the Islamic financial services industry;

Malaysia is also dominated by the global Sukuk market, although its sub-index of Sukuk has declined to 142 compared with 170 in 2015 and the continued decline in domestic issuance as a result of Bank Negara Malaysia's decision to discontinue short-term Sukuk issuance in 2015.

The study of this research raises the following problem:

How Sukuk are priced against *bonds*?

This research will be studied through the following axes:

I. Sukuk;

II. A technical comparison between Sukuk pricing and *bond* pricing.

I. Sukuk.

1. Sukuk Concept;

The Standard & Poor's Global Ratings scenario assumes that the Sukuk market activity will remain weak for the remainder of 2016. Total Sukuk traded amounted to USD 344 770 million in 2016 compared to USD 341.923 million in 2015, an increase of 0.83%. Partly because of the negative correlation between the volume of Sukuk issuance, global oil prices.

a. Definition of Sukuk*:*

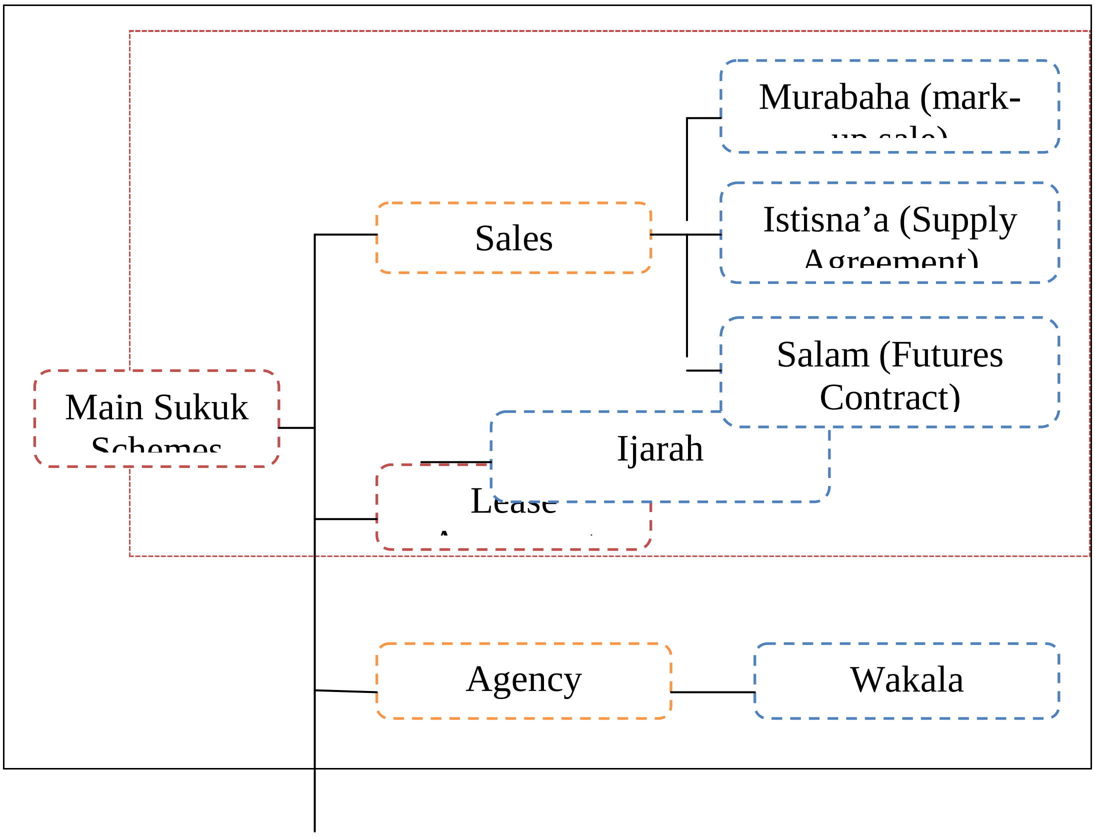
Sukuk represents a security that evidences a right to its owner in common ownership of an asset or assets. Therefore, securitization is the process of transferring assets into instruments and putting them up for sale;

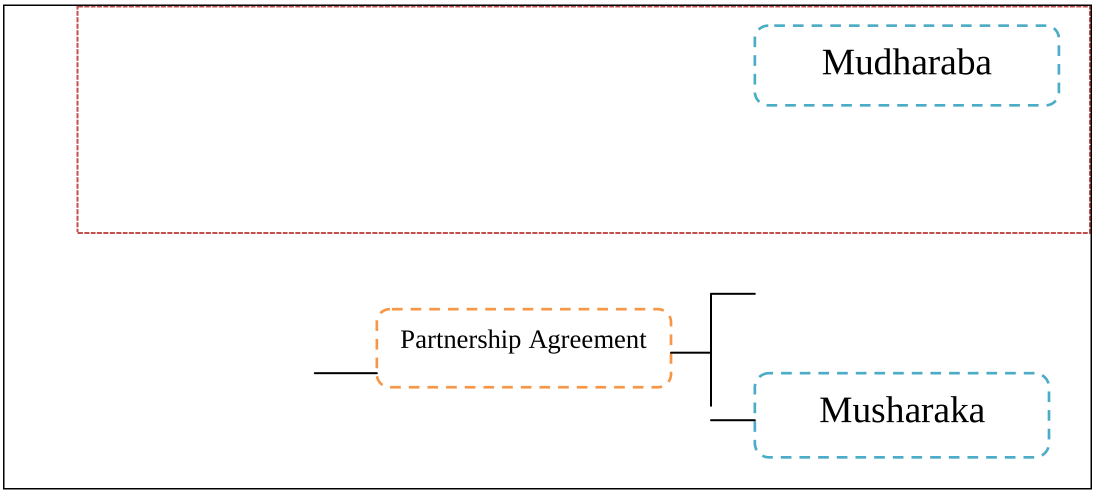
The AAOIFI recognized the Sukuk as: "Certificates of equal value representing undivided shares in the ownership of tangible assets, services in the ownership of certain projects or private investment activity. [1]

Thus, the terms of securitization and Sukuk are synonymous, as stated in the Shari'a Standard No. 17 of the Accounting and Auditing Organization for Islamic Financial Institutions (securitization), called securitization, which is the division of assets from interests, benefits or together into units of equal value, "The final communiqué of the 22 nd Al Baraka Symposium in 2002 recommended the choice of naming the Sukuk as an alternative to securitization, which is intended to apply debt conversion to bonds.

b. Types of Sukuk: There are several types of Sukuk as well as different forms of Islamic financing; As shown in the following figure:

Figure (01): Main Types of Sukuk.[2]





Through the definition of AAOIFI, the sukuk contracts can be regulated by 14 models, and the scope of assets under Shariah which can be secured is relatively limited in that the sukuk structuring is governed by Islamic Shari'a. The most important types of instruments according to the following four conventions:

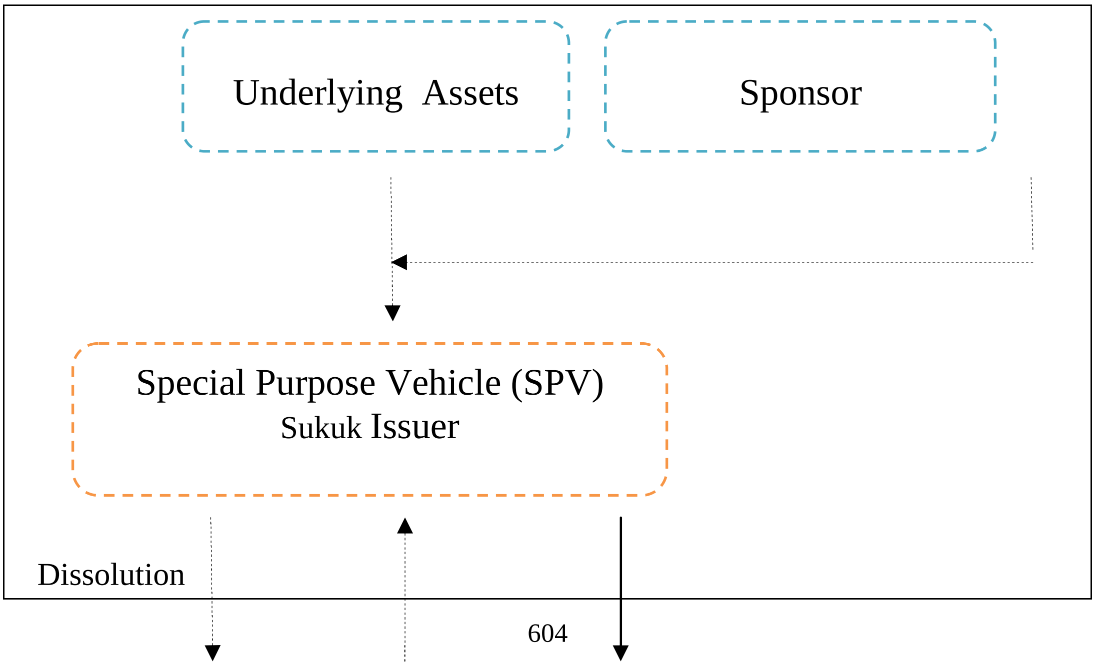
- Sales Agreement: Consisting of:
  - Sukuk al-Murabaha which Are equal value certificates issued to finance the purchase of a Murabaha commodity; the Murabaha commodity becomes the property of the Sukuk holders. The issuer of these instruments is the seller of the Murabaha merchandise, the subscribers are the buyers of the Murabaha merchandise, the proceeds of the subscription are the cost of the purchase of the goods, the Sukuk holders have the Murabaha commodity and are entitled to the sale price;
  - Istisna'a Sukuk: Projects are financed through the Istisna'a contract, where funds are provided to pay for supplies and work by an Islamic bank;
  - Sukuk al-Salam: Are certificates of equal value to be issued, to collect the capital of peace, and the peace commodity becomes the property of the Sukuk holders, and the source of those Sukuk is the seller of the peace product, and the subscribers are the buyers of the commodity, and the proceeds of the subscription is the price of the purchase of the commodity;[3]
- Lease Agreement : Consisting:
  - Sukuk al-Ijarah: relating to the transfer of ownership or benefit / title of tangible assets such as real estate, aircraft or ships to a special purpose company

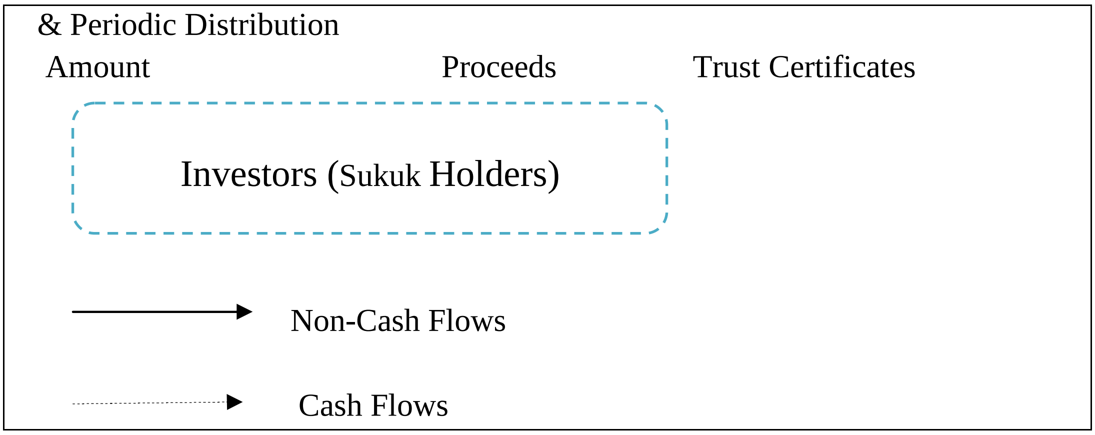
and subsequently issued to the certificates of the investors' Sukuk that represent undivided ownership interests in such assets;[4]

- Agency Agreement : Consisting Wakala Sukuk which are most commonly known as equal value certificates issued by the owner of a rented or appointed property to be leased or issued by a financial intermediary acting on behalf of the owner for the purpose of selling and redeeming them from the proceeds of the subscription. And the issuer of those Sukuk is a hired or appointed seller who is promised to rent them. The subscribers are the purchasers. The proceeds of the subscription are the purchase price. The Sukuk holders have the common assets in their ship and fined on the basis of partnership.;[5]
- Partnership Agreement : Consisting
  - Musharaka Sukuk: The structure of Musharaka Sukuk is linked to the extent that the originator does not have a tangible asset or does not have sufficient funds to purchase the asset to allow a structured lease on the arrangement of sale and leaseback,
  - Sukuk al-Mudharaba: Are participation certificates representing projects or activities that are managed on a Mudharaba basis by appointing speculators from partners or others to manage them.[6]

c. Technical Sukuk work: Illustrated in the figure below:

Figure (02): Technical Sukuk work.[7]





Illustrated by Figure:

Sukuk represents certificates of trust usually issued by a special purpose Vehicle, whose proceeds are usually lent to an institution, financial institution, insurance company, sovereign government, local or regional government (sponsor), for the purpose of raising funds in accordance with the principles of Islamic law, Sukuk is issued on the basis of one or more investment or Islamic financing contracts;

The transfer of an asset or group of principal assets or interests in these assets usually involves a special purpose entity issuing trust certificates. Accordingly, the return on these underlying assets is used as a basis for payment of the periodic divided distribution to the Sukuk holders. In order to separate the quality of the Sukuk credit from the performance of the underlying assets, Sukuk sponsors have undertaken contractual payment obligations to the issuer of the instruments to provide it with the necessary funds to meet its financial obligations to investors. The most common approach is that the Sukuk payment is based only on the underlying assets and thus simulates transaction characteristics Organization or project financing;

According to some Sukuk structure, the contractual payment obligations of the sponsor cover only the periodic and cumulative distribution accumulated under an early dissolution event, but not the periodic distribution. Under this type of structure, Sukuk will pay periodic distributions through the fact that the underlying assets generate sufficient revenue or the sponsor decides to pay equivalent payments to the issuing SPV.

2. Bonds Concept.

Bonds are one of a wide range of options available when building an investment portfolio. Investment in bonds depends on the potential advantages and risks these bonds carry.

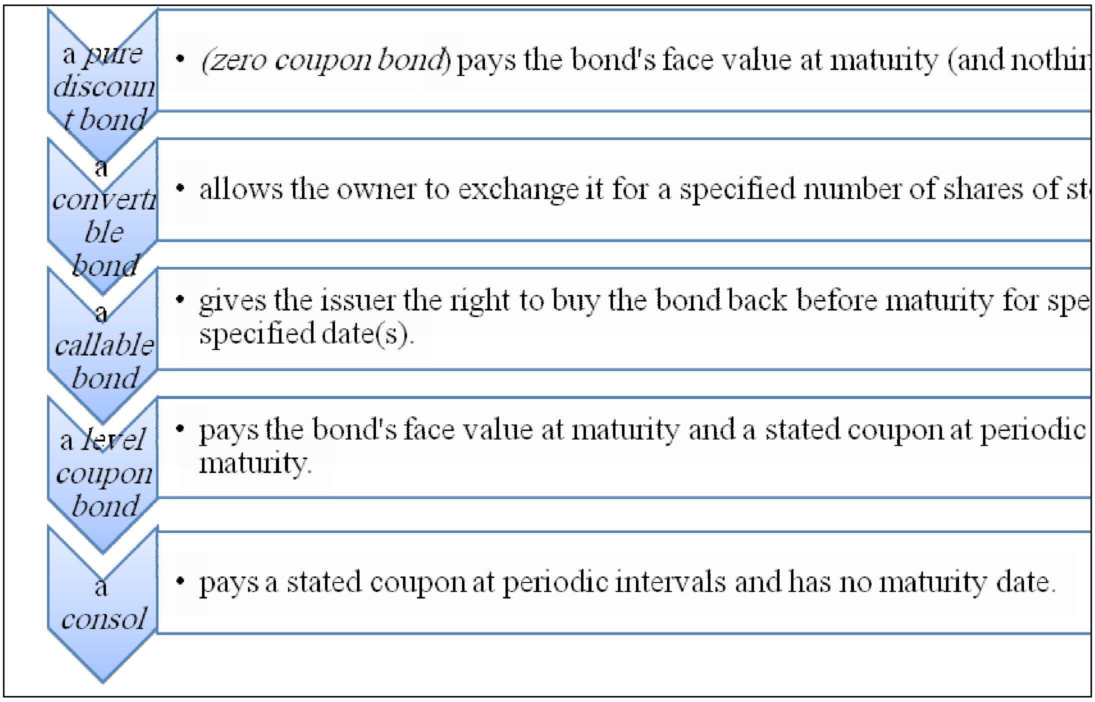
a. Definition of Bonds:

A bond is a type of investment that represents a loan between the borrower and the lender. It is similar to a personal loan from a bank except in this case the lender (known as the investor or creditor) and the borrower is generally a government or company (known as the issuer). The bond issuer must pay regular interest payments to the investor at a specified price. Once the maturity date of the bonds, the interest payments are suspended and the issuer must pay the nominal value of the original amount of the investor, as interest payments are generally made at certain time intervals and can be fairly predictable, often called fixed income certificates,[8] and the benefits of investing in Bonds are:[9]

- Income predictability: High-quality bonds can provide a predictable series of cash flows with minimum risk on private capital (principal) if the objective is to maintain a certain level of stable income from the portfolio;
- Safety: Bond quality and its level of security is reflected in the issuer's credit rating;
- Diversification: The addition of fixed income securities such as bonds to a equity portfolio helps to achieve greater diversification. This is a way to reduce portfolio risk - the risk inherent in shared investment assets - with the potential for increased returns over time, because even if one category declines in value, there is still an opportunity to increase one or more of the other categories;
- Choice: A wide range of issuers of bonds with a variety of coupon rates and maturity dates are available for selection; it allows the creation of bonds with cash flows that suit your income needs while complementing other portfolio holdings.

b. Types of Bonds: Bonds are a form of debt representing contractual obligations, which is merely a certificate that the borrower promises to pay the interest and asset on a fixed date, issued by both governments and companies, and There are several types of Bonds as well as different forms of traditional financing; As shown in the following figure:

Figure (03): Main Types of *Bonds.*[10]



II. A technical comparison between Sukuk pricing and *bonds* pricing.

1. Pricing Sukuk:

The current trend in the Sukuk market is the pricing of bonds at variable profit rates linking the profit rate to the Islamic rate available between banks. Financial institutions and banks face a particular problem in managing money, as borrowing and lending periods do not coincide, leading to substantial erosion of capital. This problem forces Islamic financial institutions to swap cash flows. The International Trade Bank first introduced an Islamic swap in June 2005 in Malaysia and the Islamic swap market grew alongside the Sukuk market.

The traditional valuation theory provides that the asset price represents the sum of the future discounted benefits arising from that asset. The same general concept applies to the pricing of Sukuk. The theoretical price of a coupon bond $P^c(t,T)$ can be represented as: [11]

$$P^c(t,T) = \sum_{u\in(t;T]} C(u).P(t,u)$$

Where $C(u)$ denotes the cash flows (coupon and principal) received by the coupon bond holder at time u, $P(t,u)$ denotes to the discount factor of \$1 received at time t. The coupon bond can be considered a portfolio of zero coupon bonds. Each coupon is deducted at a zero discount rate after applying the risk premiums corresponding to the risks involved. The same methodology applies to the pricing of the instruments. The LIBOR or other interest rate based measures are a discount rate zero, from technical perspective, LIBOR is a dollar-based rate at which euro bank would lend Euro currency to other Euro banks. LIBOR is a short-term criter; the maximum maturity is one year. Accordingly the Libor standard works for floating-rate instruments but not for long-term fixed instruments. From the perspective of Shari'a. Some prominent Shari'a scholars in the field of Islamic finance have noted that it is not prohibited to measure interest rates, but it is not desirable. A benchmark based on interest is allowed until an alternative Islamic standard is established. [12]

2. Second: *Bonds* Pricing Techniques.

The traditional theory of bond pricing is based on the theory of bond valuation. This theory suggests that the theoretical value of a bond holder in conventional bonds is the current value of the current of payments - interest vouchers and redemption value in nominal terms - discounted by market interest rate: [13]

$$P = \frac{M}{(1+r)^N} + \sum_{t=1}^{N} \frac{C}{(1+r)^t}$$

Where:

P: is the market price of a bond;

C: is the amount of pre-fixed periodic coupon payments;

M: is the amount of maturity payment (i.e., the face value of a bond certificate);

r: is the discount rate (i.e., market required yield at the time of pricing);

N: is the issue tenure (i.e., number of payments).

At the time of issue a level coupon bond is usually sold for a price which is close to its per value, and after issue a bond is traded on the market at a price which reflects the current level of interest rates and the degree of risk associated with the bond, typically the interested is in calculating either the market price that a bond should sell for, given that the investor wants to obtain a particular market yield; or the effective yield, given the price at which the bond is trading, the value of a financial security is the PV of expected future cash flows) to value bonds we need to estimate future cash flows (size and timing) and discount at an appropriate rate.[14]

- notation: Coupon payment: C
  Face value: F
  Discount Rate: r
  Time to Maturity: T
- Value of a Consol:

PV of consol = $\frac{C}{r}$

- Value of a Pure Discount Bond:

PV of pure discount bond= $\frac{F}{(1 + r)^T}$

3. The difference between Sukuk pricing and bond pricing:

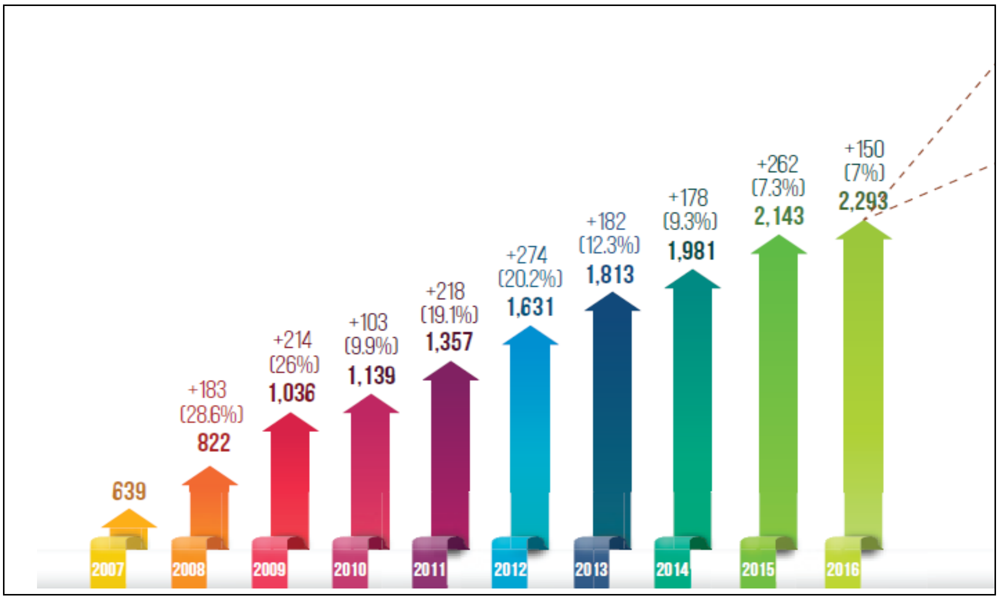
- The current practice of Islamic financial institutions is based on the pricing of Sukuk, whether debt-based or equity-based, using an interest rate benchmark such as the London Interbank Offered Rate (LIBOR) or other interest rate. This includes Sukuk securities where the resulting cash flows (profit / rental income) are priced for those agents. This practice has been criticized by Shari'ah scholars as one of the main principle under Shari'a (Sharia) is the prohibition of interest (usury).
- The absence of reference rate used as a starting point towards determining the short term profit structure (yield) required to price Islamic financial products in general and Sukuk in particular;
- • The AAOIFI statement in 2008 is based on the fact that the originator has not granted a purchase undertaking to the special purpose body / trustee. It also prevents the application price from being fixed in accordance with the formula; the rationale for this decision is that instruments of participation are in fact equity-based instruments; therefore, partners in partnership must share the risk of profit and loss. Therefore, the determination of the value of the assets of the partnership by reference to the nominal value of the instruments or by reference to the shortfall is similar to profit and collateral.

- The profit rate curve for equity-based Sukuk is developed using equity models such as the capital asset pricing model or the arbitrage pricing model. On the other hand, the profit rate curve for debt-based Sukuk is developed using interest rate models such as single factor and multi- And models free of arbitrage.[15]

4. Development of Sukuk in Malaysia against Bonds:

a. The evolution of the global financial industry: Illustrated in the figure below:

Figure (04): The evolution of the global Islamic financial industry between (2007-2016) and future growth prospects (unit: US$ 1 billion).[16]



Illustrated by Figure:

- The global Islamic financial services industry has reached a point where all stock holders should stop to rethink future growth and expansion strategies and the projected 2016.71% growth rate; the slowdown in industry requires revision of future industry size estimates The estimated industry size is based on the assumption that the potential size of the industry is growing by at least 10% per annual. This assumption is based on a number of factors:
  - High population growth rate of Muslims;
  - Increased awareness of banking services and Islamic finance;
  - The rise in per capita income and wealth held by Muslims globally.

- The volume of growth in the Islamic financial industry increased during the first consecutive years. At the end of 2016, the global volume of Islamic financial services reached US $ 2 293 billion, due to:
  - A gradual increase of US $ 150 billion in 2016 compared to 2015, with estimates of US $ 3.006 billion and US $ 4 362 billion for 2020 on the assumption that the industry is growing at a current growth rate of 7% in the four years the future, to 15.27% by 2020.

b. Sukuk in Malaysia: Illustrated in the figure below:

Figure (05): Development of Sukuk in Malaysia for the period (2010-2015).[17]

Erreur ! Objet incorporé incorrect.

Illustrated by Figure:

The sukuk market grew significantly in 2001 by US $ 500 million and reached US $ 60 billion in 2007. The number of Sukuk issuances globally declined by more than 50% compared to 2007 due to the following reasons:

- The effects of the global financial crisis,
- Lack of standardization in the financial market.
- Repayment by the originator.

The volume of Sukuk increased during the period 2010-2015, respectively, With the volume of trading in the financial market declining during the same period;

The volume of traded instruments globally reached about USD 344 770 million in 2016 compared to USD 341 923 million in 2015, a growth rate of 0.83%. The Sukuk issuers in Malaysia took control of the market in 2016, reaching USD 47.3 billion representing a share of 63.2%. These came mainly from the financial services sector, accounting for 80.7% of the total issuances of international companies,[18] the following figure shows the ratio of global contributions in the issuance of Sukuk for 2016:

Figure (06): Ratio of global contribution to Sukuk issuance on 2016. [19]

Erreur ! Objet incorporé incorrect.

Illustrated by Figure:

- Total Sukuk issuance in the GCC was US $ 19.6 billion in 2016, an increase of US $ 18 Billion compared to 2015, mainly due to :

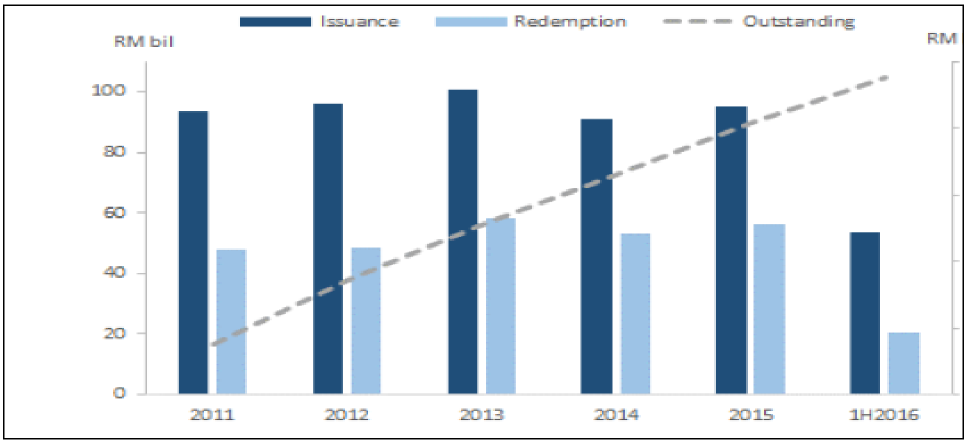
▪ The rise in government issues, and refers to the fact that Sukuk remains an important source of funding; to balance the national budget deficit, low oil prices and declining export earnings;

• Malaysia has always been an important center in the global Islamic finance industry and often dominates the volume of Sukuk issuance by 47% on 2016.

c. Development of *Bonds* in Malaysia:

• Development of Government *Bonds* in Malaysia: Illustrated in the figure below:

Figure (07): Development of Government *Bonds* in Malaysia for the period (2011-2016). [20]



Illustrated by Fugure:

During the first half of 2016, the Malaysian government raised a total of RM 51.0 billion from 16 offerings (RM 28 billion through gout and RM 23 billion through GII), slightly higher than RM 49.5 billion collected in the corresponding period of 2015. In general, the demand for government bonds was relatively stronger during the first half, with the interest shifted to the Global Information Index where investors sought relative value, and the new RM 4 billion, a 10.5-year-old, managed to record a high bid ratio to cover Costs by 3.20 x. The average interest rate on deposits in all government bond auctions in the first half of 2016 was 2.31 x, compared to 1.92 x in the second half of 2015.

d. Comparison between Pricing *Ṣukūk* and Bonds: Illustrated in the Table below:

Table (01): Difference between *Ṣukūk* and Bonds. [21]

Difference	Sukuk	Bonds

Owner-ship:	Sukuk indicate ownership of an asset.	Bonds indicate a debt obligation.
Contract between holders and issuers:	Based on lease or a defined business.	Purely earning money on money
Nature and use of the underlying:	The assets, businesses or basic projects must be permitted in their nature and use.	Bonds can be issued to finance almost any purpose, not necessarily assets.
Sale opération:	Selling Sukuk is a sale of ownership in the assets they support.	Sale of a debt.
Security prices:	Sukuk prices depend on the market value of the underlying asset.	Bond pricing is based on credit rating.
Risk and Return:	The Sukuk holders receive a return on profits earned through the asset.	Bond holders bear low risk; thus, they earn the interest income charged from the loan contract.
Shari'ah compliance:	Investment in Shari'ah-compliant activities.	Investment in any business without restriction.

Conclusion:

The bond and equity markets have evolved over 70 years in Malaysia, through British rule of the country with Singapore as one of its cities. The traditional bond market is worth RM 521 billion (US$173 billion); the stock market is capitalized at US$ 200 billion or 75 % of Malaysia's gross domestic product.

Islamic finance assets grew by 7 %, or US$ 2.2 trillion in 2016, compared to US$ 2.1 trillion in 2015, 57 countries contributed to total assets, and Islamic banking accounted for 75% of total Islamic finance assets, followed by Sukuk By 15%, other Islamic financial institutions by 5%, Islamic investment funds by 4%, and Takaful by 1%;

Sukuk is certificates backed by tangible assets rather than debt, and sukuk ownership refers to a valuable asset. Although bonds may also point to this, the true definition of the bond simply refers to the debt obligation, and the relationship between the issuer of the bonds and the consumer is fundamentally different from the relationship between the issuer of the sukuk and the sukuk buyer. In the case of bond, the consumer acts as the borrower and the issuer of the bond as the recipient of the loan. In this case, the loan has a fixed interest. In the sukuk, the buyer will purchase assets of value rather than participating in an implicit loan agreement.

The price of a bond represents the present value of the cash flows on the bond - the vouchers and nominal value - discounted again at an appropriate interest rate, and the yield to maturity of the bonds is the discount rate that is equivalent to the price of the bonds with the present value of expected future cash flows.

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