Finance and Business Economics Review | Volume 03/Number 02/ June/ 2019/ p1-19

Infrastructure Financing Through Islamic Sukuk: Case Studies in Malaysia
Le Financement d'Infrastructures par les Sukuk Islamiques : Études de Cas en Mala1isie

Dr. Ahmed MEDANI *

Laboratory of Globalization and its Impact on the Economies of North Africa
Hassiba Benbouali University of Chlef, Algeria, a.medani@univ-chlef.dz

Received: 27/04/2019 *Accepted: 20/05/2019* *Published:01/06/2019*

Abstract:

This paper examines the prominent role of sukuk in financing infrastructure investments in Malaysia by addressing the reality of the global infrastructure market, the reality and performance of the sukuk market and its contribution to financing infrastructure investments in general and in Malaysia in particular, through a presentation of three leading models are: DanaInfra Retail Sukuk, Khazanah Ihsan Sukuk and Green SRI Sukuk Tadau.

Keywords: Infrastructure Financing; Sukuk; Case of Malaysia.

(JEL) Classification : G23 ; H54.

Résumé :

Cet article examine le rôle important des sukuk dans le financement des investissements dans les infrastructures en Malaisie en abordant la réalité du marché mondial des infrastructures, la réalité et les résultats du marché des sukuk et sa contribution au financement des investissements dans les infrastructures en général et en Malaisie en particulier, en présentant trois modèles principaux sont: DanaInfra Retail Sukuk, Khazanah Ihsan Sukuk et Green SRI Sukuk Tadau.

Mots clés: Financement des infrastructures; Sukuk; Cas de la Malaisie.

(JEL) Classification : G23; H54.

* Corresponding author: ***Ahmed MEDANI***, E-mail *a.medani@univ-chlef.dz*.

1. INTRODUCTION :

The infrastructure development is one of the most important elements in achieving national development goals. With the availability of infrastructure and other public facilities, basic human needs, both economically and socially, can be met properly.

During the Tenth Malaysia Plan 2011-2015, the government made large investments in various infrastructure sectors such as the transport, energy and digital sectors. Recognizing that an efficient infrastructure reduces the cost of doing business and can improve productivity and competitiveness, the Eleventh Malaysia Plan 2016-2020 envisages further investments in the sector to support economic expansion. The focus areas of the Eleventh Malaysia Plan 2016-2020 include the following: building an integrated need-based transport system; improving the coverage, quality, and affordability of digital infrastructure; unleashing the growth of logistics and enhancing trade facilitation; encouraging sustainable energy use to support growth; and continuing the transition to a new water services industry framework.

The role of Islamic finance in providing finance for the infrastructure sector can be viewed in terms of financial institutions and markets and modes of financing in the form of equity or debt. Three ways in which the Islamic financial sector can provide the funds for infrastructure development can be identified. First is the taking of direct equity stakes in infrastructure-related projects or entities. Second, the investing of sukuk issued by infrastructure related projects or entities. Finally, the provision of direct financing to infrastructure related projects or entities.

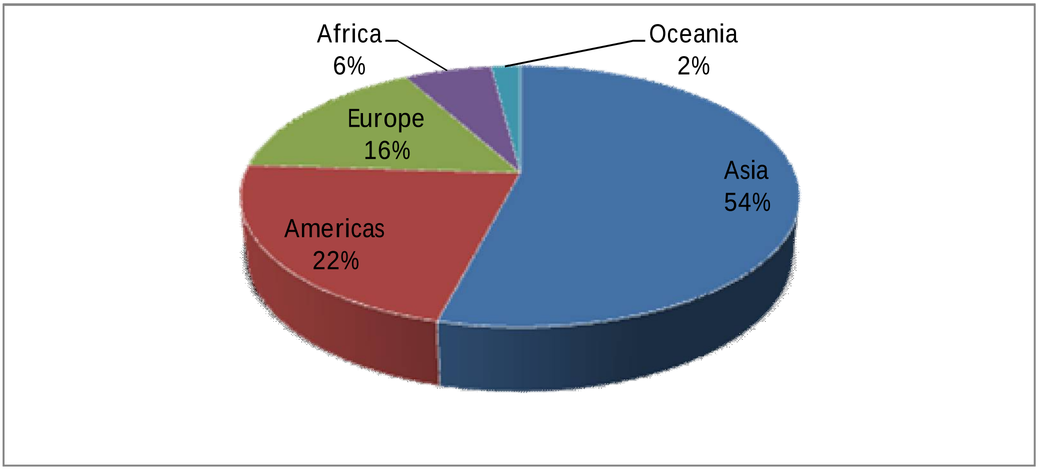
Therefore, this paper discusses the role of sukuk in financing infrastructure projects in Malaysia, referring to some pioneering experiences such as DanaInfra Retail Sukuk, Khazanah Ihsan Sukuk and Green SRI Sukuk Tadau.

2. Overview of the reality and prospects of the infrastructure industry

The World Bank estimated total global value of infrastructure investments at USD17 trillion in 2013 ***(Nik Mohamed Din, 2015, 02)***, while he estimate global infrastructure investment needs to be $94 trillion between 2016 and 2040. This is 19 percent higher than would be delivered under current trends, and is an average of $3.7 trillion per year. To meet this investment need, the world will need to increase the proportion of GDP it dedicates to infrastructure to 3.5%, compared to the 3% expected under current trends ***(PwC and Oxford Economics, 2017, 03)***.

Asia required the highest investment with market size of 54%, followed by Americas (22%) (See figure N°01). During the same period (2016-2040), electricity and roads are the two most important sectors-together they account for more than two-thirds of global investment needs. The investment gap between the two scenarios is greatest in the roads sector, where investment needs are 31% higher than would be delivered under current trends. The gap is also relatively large for ports and airports, where investment needs are 32% and 26% greater than our current trends forecast, respectively ***(PwC and Oxford Economics, 2017, 05)***.

Fig.(1): Size of Global Infrastructure Market by Region (2016-2040)



Source : Prepared by the researcher based on: PwC and Oxford Economics, Global Infrastructure Outlook, July 2017, p : 3-4.

The global infrastructure market has been performing well in 2017, and the market statistics, according to the 2018 Preqin Global Infrastructure Report - Sample Pages, were as shown in the following table:

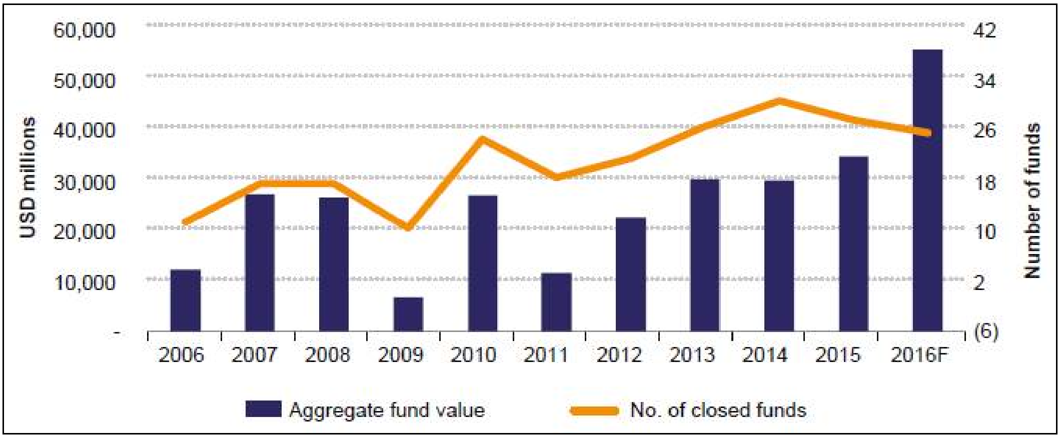
Table (1) :Key Stats about global Infrastructure industry in 2017

Infrastructure Highlights
• $916bn: Estimated aggregate deal value of the 2378 infrastructure deals completed globally in 2017. • $418bn: Value of unlisted infrastructure assets under management as at June 2017. • 69: Number of unlisted infrastructure funds that reached a final close in 2017, securing an aggregate $65bn. • $18.8bn: Size of the largest deal completed in 2017.
Investor Satisfaction
• 93% : Proportion of investors that feel infrastructure investments have met or exceeded their expectations. • 53% : Proportion of surveyed investors that have a positive perception of infrastructure, four-times the proportion that have a negative perception (9%).
Capital Concentration
• 42% : Proportion of total capital raised in 2017 secured by the five largest funds closed. • $992mn : Average size of an unlisted infrastructure fund closed in 2017.
Competition for Assets
• $150bn : Amount of dry powder held by infrastructure firms as at June 2017. • 59% : Of surveyed fund managers believe that asset pricing will be their biggest challenge in 2018.
Deal Flow
• $378mn : Average size of infrastructure deals completed in 2017, the highest amount since 2008. • 51% : Of infrastructure deals completed in 2017 were in the renewable energy industry, a nine-percentage-point rise since 2008.

Source : The 2018 Preqin Global Infrastructure Report, New York, p : 16.

In the decade since the Global Financial Crisis, more than US$200bn (see figure *N°02*) has been raised by investment funds to deploy long term capital into infrastructure investments. It is estimated that at least the same amount again has been allocated to infrastructure by organisations seeking to invest directly rather than through investment funds. Typically, these organisations will be major pension, insurance and sovereign wealth funds; all of whom have needs for long-term investments.

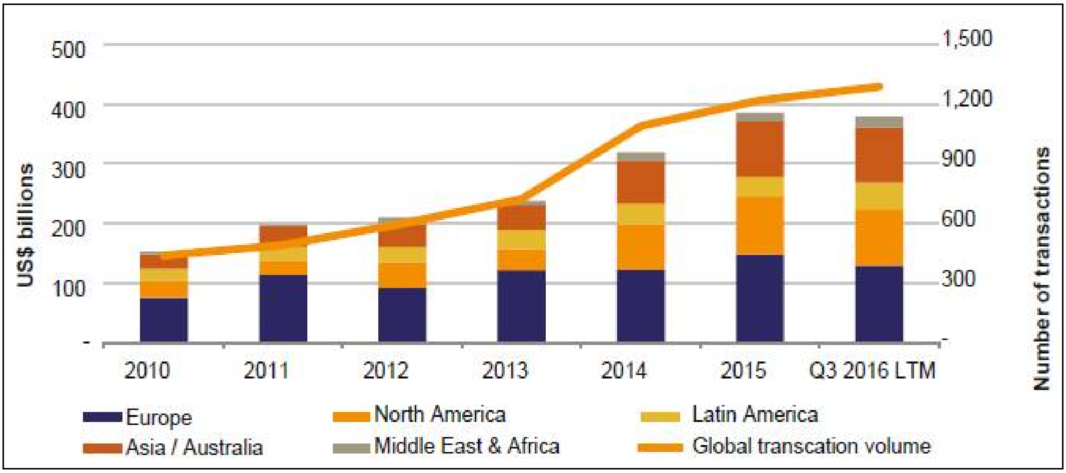
Fig.(2) : Global unlisted infrastructure fundraising (2006-2016)



Source : PwC and GIIA (2017). **«Global infrastructure investment : The role of private capital in the delivery of essential assets and services »**. P : 10.

The creation of these specialist vehicles and teams has, unsurprisingly, led to a sharp rise in the volume and value of infrastructure transactions over the last decade (see figure *N°03*), and a significant rise in asset valuations13, as acquirers have accepted lower returns on their investments.

Fig.(3) : Global infrastructure transaction activity (2006-2016)



Source : PwC and GIIA. Op.cit. P : 10.

A McKinsey study in June 2016 estimated that USD3.3 trillion needs to be invested each year to 2030 in order to support current growth rates. A 2011 OECD study also concluded that "increased private sector investment in strategic transport infrastructure will be essential ***(PwC and GIIA. 2017, 09)***".

3. Sukuk market and its performance :

3.1. Size of the Islamic financial industry globally :

The global Islamic financial services industry has also reverted to its positive growth trajectory as the industry's assets have surpassed the 2 trillion USD. The industry's total worth across its three main sectors (banking, capital markets and *takāful*) is estimated at USD 2.05 trillion in 2017 (see Table 02), marking an 8.3% growth in assets in US Dollar terms and reversing the preceding two years of assets' growth stagnation (1.89 trillion USD in 2017 versus 1.88 trillion USD in 2016). In comparison to values reported in the previous Islamic Financial Services Industry (IFSI) Stability Report 2018, by sector, the global sukuk outstanding (based on par value at issuance has increased by 25.6% to USD399.9 billion, while Islamic funds' assets has improved by 6.3% to USD66.7 billion. In contrast, the *takāful* sector is estimated to has expanded by 4% to USD26.1 billion, while the dominant Islamic banking sector has grown moderately at 4.3% to USD1.6 trillion ***(IFSB, 2018, 09-10)***.

Table (2) : Breakdown of Islamic Finance Segments by Region (USD billion, 2017)

Region	**Banking Assets**	***Sukūk* Outstanding**	**Islamic Funds' Assets**	***Takāful* Contributions**	***Total***	***Share (%)***
Asia	232.0	239.5	24.8	3.3	**499.9**	24.4
GCC	683.0	139.2	26.8	12.6	**861.6**	42.0
MENA (ex. GCC)	569.0	17.8	0.1	9.5	**596.4**	29.1
Africa (ex. North)	27.1	2.0	1.6	0.7	**31.4**	1.5
Others	46.4	1.5	13.3	0.0	**61.3**	3.0
Total	1557.5	399.9	66.7	26.1	**2050.2**	100.0
2016-2017 (%)	**4.3**	**25.6**	**19**	**4**	**8.3**	**-**

Source : Islamic Financial Services Board, Islamic Financial Services Industry (2018). **«Stability Report».** Bank Negara Malaysia, Kuala Lumpur, Malaysia, p : 09.

3.2. Sukuk industry :

Looking at *ṣukūk* issuance activity across both the sovereign and corporate sukuk markets, issuances took place in 17 jurisdictions in 2017. Malaysia retained its position as the overall largest issuer of sukuk in terms of volume, accounting for 37.9%; while Saudi Arabia moved up to second place owing to its substantial sovereign issuances during 2017, accounting for an overall global market share of 33.1%. On the other hand, Indonesia's share in volume of total issuances saw it drop to third-largest issuer in 2017, accounting for 6.1%. Qatar and UAE were the fourth- and fifth-largest issuers, accounting for 5.5% and 4.1%, respectively. Notably again, all six GCC member states issued sukuk during 2017, accounting for a total of USD 40.79 billion, or 44.4% of total volume of sukuk issuances ***(IFSB, 2018, 28-29)***.

However, the global sukuk market witnessed a rebound in 2016 after three consecutive years of decline, with Malaysia continuing to be the main driver according to the Malaysia International Islamic Financial Centre (MIFC) ***(Capital Markets of Malaysia, 2017, website)***.

3.3. Why the need to sukuk issuance :

The massive global infrastructure requirements create financing opportunities for Islamic finance and at the forefront we find the sukuk. The following table summarizes the importance of the need for sukuk in financing infrastructure and others :

Table (3) : Financing opportunities for sukuk

	Why Sukuk ?
Nature of Sukuk Transactions	• Promote good business practice - avoid interest, uncertainties, overleveraging and speculation, backed by real economic activities. • Gaining prominence as an alternative source of funding for large scale & long-term infrastructure projects. • Greater governance and transparency that promotes ethical and fairness.
Investor Base	• Tapping wider investor base - Islamic and conventional investors.
Financing Cost	• Competitive pricing vis-à-vis bond – strong demand creates better pricing.

Tax Incentive	• Special tax incentive in Malaysia to promote sukuk

The source : Plus Malaysia Berha. (2016, May 17). «**Sukuk for infrastructure – Malaysia Experience** ». Malaysia, p : 06.

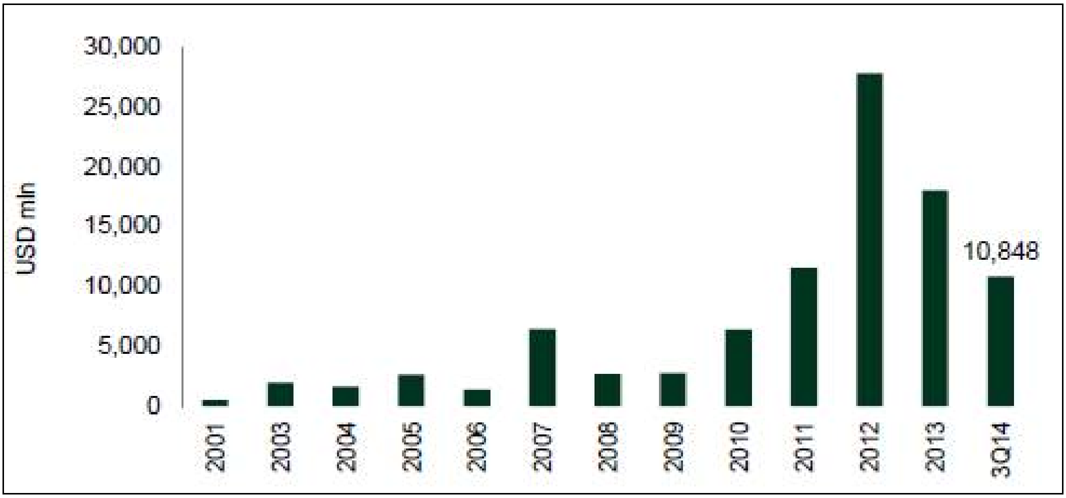
4. Role of sukuk in infrastructure finance:

4.1. The reality of the infrastructure Sukuk market :

Sukuk has played a pivotal role in infrastructure financing for both public and private projects. Overall, the sukuk market is expected to reach greater heights. Therefore, the infrastructure sukuk market witnessed developments in terms of volume, shares of exporting countries and future opportunities available. The summary of this is in the following:

- USD73.1 billion infrastructure sukuk have been issued by more than 10 different countries between 2002 and 3Q2015 ***(Nik Mohamed Din, 2015, 04)***.

Fig.(4) : Infrastructure Sukuk issuances (USD mln per year)

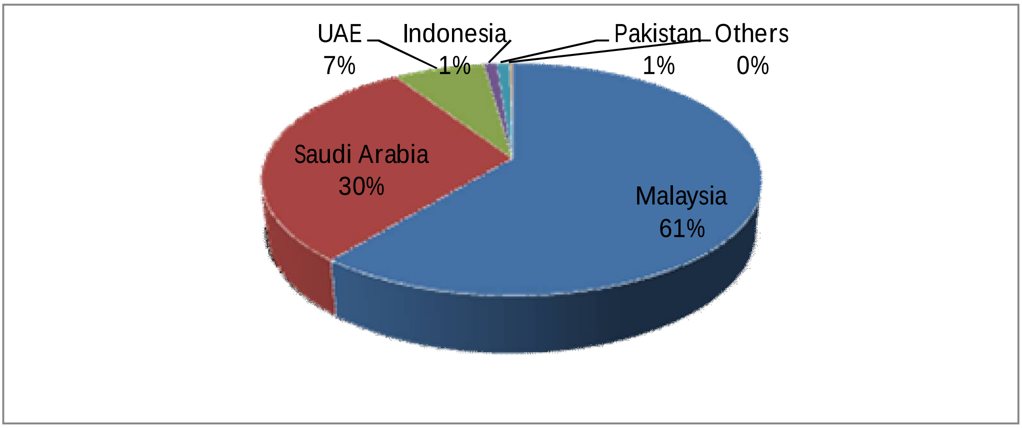


Source: SOHAIL JAFFER (2015, November 18). «**Infrastructure sukuk, FWU Global Takaful Solutions** ». P: 06.

- Infrastructure sukuk have increased from USD20.8 billion in (2009-2011) to USD73.1 billion in (2012-3Q2015) ***(Nik Mohamed Din, 2015, 04)***.

- Infrastructure sukuk market dominated by issuances from Malaysia (61%), followed by Saudi Arabia (30%) and the UAE (7%) (As shown in the figure below).

Fig.(5) : Infra Sukuk issued by domicile of issuer (2012-3Q2015)



Source : Nik Mohamed Din Nik Musa, op.cit, p : 04.

- Malaysia's Economic Transformation Programme (ETP) will accelerate spending plans to meet its economic and socio-economic targets by 2020.
- GCC infrastructure and real estate projects are forecasted to reach almost USD2 trillion by 2020.
- Infrastructure sukuk have increased from USD20.8 billion in (2009-2011) to USD73.1 billion in (2012-3Q2015).

4.2. Types of sukuk used in infrasructure projects financing :

Sukuk (Islamic bonds) are well suited to infrastructure financing, as illustrated by their extensive use in project finance in Malaysia. The sharing of risk between project sponsors and investors and the creation of tangible assets that generate revenue align well with the principles of sharia (Islamic law) financing. Sukuk can also be combined with conventional financing options in project structures.

Three main Islamic instruments have been used for infrastructure projects. Musharakah sukuk share the profits and losses of the infrastructure project between the investors and issuers, while sukuk based on ijarah (rental) and murabahah (profit) are more similar to conventional bonds as the rental and profit rates are fixed. The ijarah structure can be used for the brownfield refinancing of an existing project as its structure is similar to that of a conventional lease ***(Asian Development Bank, 2015, 06)***.

Sukuk can also be used for greenfield financing. The istisna structure allows an asset to be sold before it has been built, with the purchase price paid in installments during the construction phase. This can be combined with an ijarah, allowing investors to receive lease prepayments, and thus a return, during the construction phase.

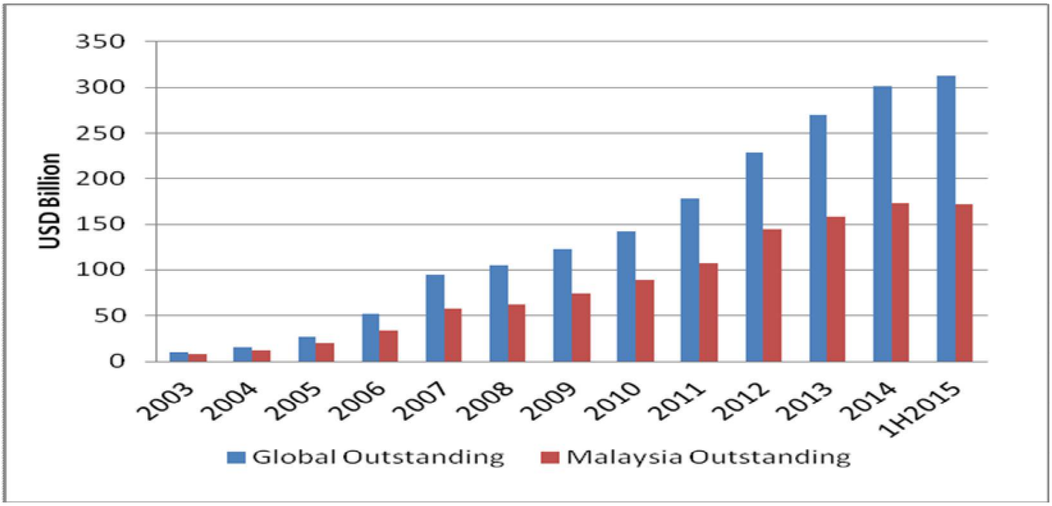
Recent project sukuk in Malaysia include the 2014 Tenaga Project 3A thermal plant (with sukuk composing three-quarters of the total project financing package), Tanjung Bin Energy, and TNB Northern Energy. Sukuk have also been used for toll road and rapid transit construction.

5. Role of sukuk in Infrastructure Finance in Malaysia:

5.1. Sukuk market performance in Malaysia :

Malaysian Sukuk market is among the most structured in the field ***(El Mosaid & Boutti, 2014, 226)***. In the sukuk market, Malaysia retained its position as the leading destination for issuances, with a sizeable share of 53% or USD34.8 billion of global new sukuk issuances in 2015 ***(Bank Negara Malaysia, 2015, 68)***. In fact, Malaysia is the global leader in the sukuk market, accounting for 66% of global sukuk issuance and 57% of global sukuk outstanding in 2014 ***(Asian Development Bank, 2016, 01)***. Malaysia's share of global sukuk outstanding declined slightly to 54.9% in 1H2015 (1H2014: 57.4%), reflecting both lower issuances by Malaysia, as well as higher issuances from other jurisdictions including Indonesia and Hong Kong (see figure 06).

Fig.(6) :Global Sukuk outstanding (2003-1H2015)



Source : Nik Mohamed Din Nik Musa, op.cit, p : 12.

Malaysia maintained its pole position in the global sukuk arena as at end-2016, with 41.1% of total sukuk issuance (compared with 48% as at end-2015).

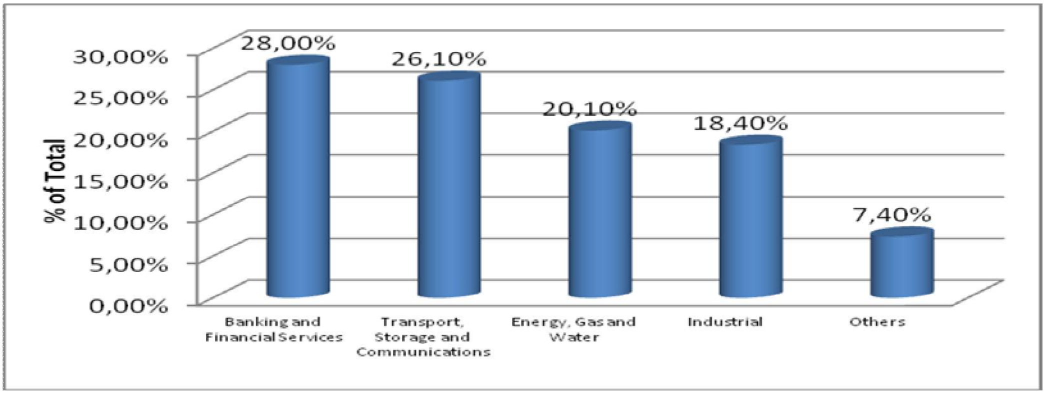
In a statement, despite a slight decline and the weaker ringgit, sukuk originated from Malaysia still summed up to USD29.9 billion as at end-2016 (USD30.4 billion as at end-2015). Greater sukuk issuance in non-core markets also augmented the global sukuk base to USD72.9 billion at year-end (USD63.4 billion as at end-2015) – with issues from Turkey (USD5 billion), Pakistan (USD4.8 billion) and Bangladesh (USD1.1 billion) featuring prominently. A total of USD18.2 billion of global sukuk was issued in the fourth quarter of 2016 (4Q16), bringing the full-year issuance to USD72.9 billion as at end-December 2016. Meanwhile, in the latest issue of RAM's Sukuk Snapshot, RAM Ratings highlighted that a total of RM29.9 billion of domestic sukuk was issued in 4Q16, leading to an issuance value of RM129.4 billion for the full year. The financial services and infrastructure & utilities sectors remained the chief driving forces of the better showing, which surpassed RAM's full-year projection of RM100 billion to RM120 billion for the local-currency market. The value of outstanding sukuk had also increased to RM661.9 billion as at end-2016 (RM608.5 billion as at end-2015), accounting for 56.3% of the overall Malaysian market's outstanding debt securities ***(BorneoPost online, 2017, website)***.

For 2016, the major sukuk issuers after Malaysia were GCC countries with a 26.2% market share, Indonesia (9.9%) and Turkey (5.5%) ***(Capital Markets of Malaysia, 2019, website)***.

5.2. Important role of sukuk in financing the infrastructure:

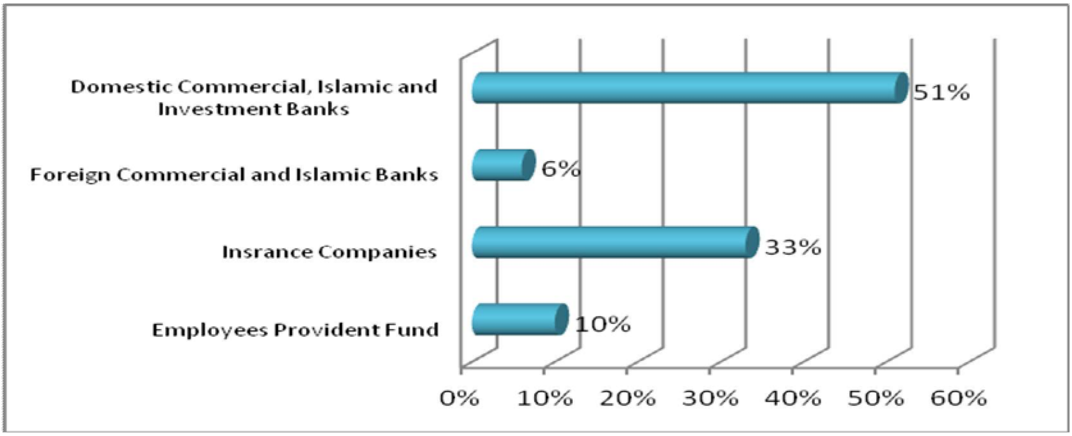
Given the size of the capital markets in general and sukuk sector in particular, they play an important role in financing the infrastructure sector in Malaysia. The key players in the infrastructure sector are GLCs that receive their equity capital from the government and other GLICs and then raise funds from capital markets, a large part of which are sukuk. Ahmad (2017) reports ***(Ahmad, 2017, website)*** that 61% of the world's infrastructure sukuk was issued out of Malaysia during the period 2012 to 3Q2015. Figure 7 shows that more than 46% of the sukuk issued in Malaysia was by infrastructure-related entities (transport, storage, communications, energy, gas and water).

Fig.(7) : Corporate Sukuk Issuer Profile in Malaysia (end of June 2015) (%)



Source : International Islamic Financial Market (IIFM), Sukuk Report 2016: A Comprehensive Study of the Global Sukuk Market, , Bahrain, p : 125.

Fig.(8) : Investor Profile of Corporate Sukuk in Malaysia (%)



Source : COMCEC, Infrastructure Financing through Islamic Finance in the Islamic Countries, Ankara, TURKEY, March 2019, p : 103.

Figure 8 shows the investor profile of corporate sukuk in Malaysia. The majority (51%) of sukuk investors belong to the category of “commercial, Islamic and investment banks” while the insurance sector is the second largest holder of corporate sukuk (33%). The Employees Provident Fund holds around 10% of the sukuk and the remaining 6% is held by foreign commercial and Islamic banks.

5.3. Case Studies :

In this final subsection, three case studies on sukuk issuances in Malaysia for infrastructure projects from different sectors is presented. While the first two of these were issued by GLCs to fund transport and education, the last one is a private sector initiative to finance green energy.

5.3.1. DanaInfra Retail Sukuk :

The establishment of DanaInfra Nasional Berhad (“DanaInfra”) was pursuant to the Economic Council’s decision on 14 June 2010 after an in-depth consideration for the need to have an Infrastructure Financing Entity (“IFE”) to advise and undertake funding for the proposed Mass Rapid Transit project (MRT Project). The main objectives of the IFE are to ***(DanaInfra, 2017, website)***:

- Rating star blank Separate fund raising activity from infrastructure construction;
- Rating star blank Develop the most cost competitive, efficient and sustainable financing models;
- Rating star blank Maintain Government’s fiscal position through the most competitive financing and timely disbursement of funds.

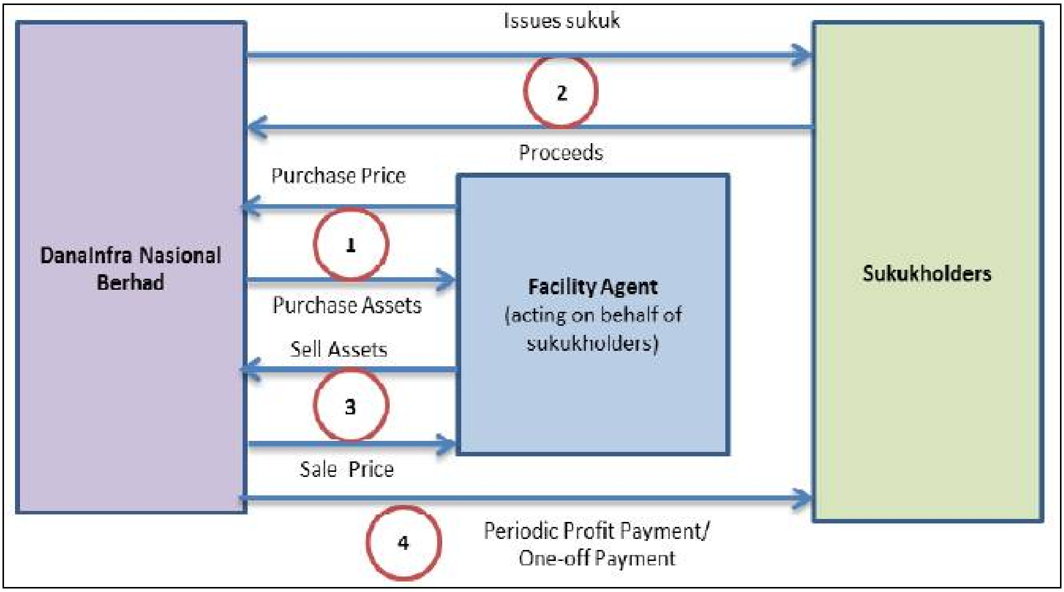
Consequently, DanaInfra was established on 3 March 2011 with the main purpose of undertaking the funding of infrastructure projects assigned by the GoM. DanaInfra has an authorised share capital of RM100 million consisting of 100 million shares of RM1.00 each of which RM10 million consisting of 10 million ordinary shares of RM1.00 each is issued and fully paid-up. All the issued and paid-up capital of DanaInfra, save for one (1) ordinary share owned by the Federal Lands Commissioner are owned by the Minister of Finance, Incorporated ***(DanaInfra, 2014, 12)***.

The first infrastructure project initiated by DanaInfra was the USD 6.2 billion Klang Valley Mass Rapid Transit (MRT) Project. DanaInfra raised a total of RM2.5 billion (USD 789.14 million) by selling different series of sukuk to partly cover the total cost of the project. The series of retail sukuk included RM300 million (issued February 2013 with a 10 year maturity), RM 100 million (issued October 2013 with a 15 year maturity), and RM 100 million (issued July 2014 with 7 year maturity) paying a profit rate of 4.0%, 4.58% and 4.23% respectively. The sukuk was structured using a commodity murabahah contract and coupon payments were made semi-annually. Priced at MYR 100, the minimum subscription amount of the retail sukuk was MYR 1000. Investors could buy the sukuk by using different modes such as internet banking or through automated teller machines (ATMs) of participating banks and financial institutions (Star 2014 and DNB 2014) ***(COMCEC, 2019, 106)***.

This company issued three sukuk issuances to finance Mass Rapid Transit projects, the first issuance was on 03/03/2011, while the last issuance was on

21/07/2014. The salient terms and conditions of last DanaInfra Retail Sukuk issuance are summarised as follows:

Fig.(9) :Structure of DanaInfra Retail Sukuk



Source : COMCEC, Infrastructure Financing through Islamic Finance in the Islamic Countries, Ankara, TURKEY, March 2019, p : 106.

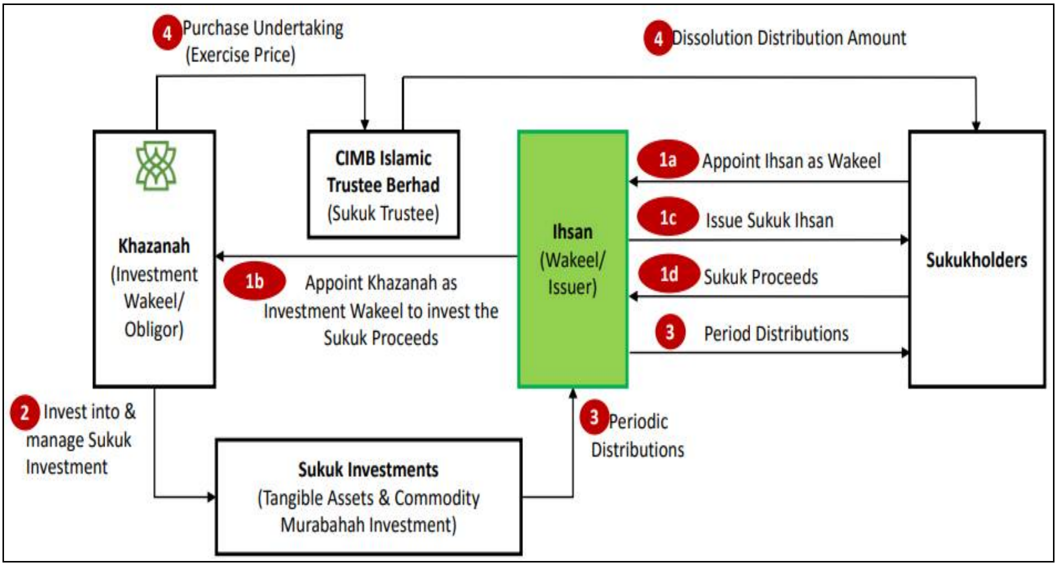
5.3.2. Khazanah Sustainable and Responsible Investment Sukuk :

In supporting and facilitating the education transformation agenda further, Khazanah Malaysia through a Special Purpose Vehicle (SPV) called Ihsan Sukuk Berhad (Ihsan) issued a sukuk programme of Ringgit Malaysia One Billion in 2015. This is the first ever sukuk issued under the Malaysian Securities Malaysia's Sustainable and Responsible Investment (SRI) Sukuk program. The proceeds from this 1st tranche 7 years sukuk issuance are used to fund 20 schools under the 2015 Trust School Program. While the 2nd tranche is also to cover 20 schools under the 2016 Trust School Program ***(Noor, 2018, 23)***.

The Khazanah Ihsan Sukuk was priced in line with the Khazanah's non-SRI seven year offerings which were yielding 4.3-4.4% at the time of issue. Due to the tight pricing as well as the unique structure which offers a reduction in yield, the Sukuk w as only slightly oversubscribed with about RM 133 million worth of orders. The CFO of Khazanah Nasional in a statement acknowledged that it is challenging to get fixed income managers to accept a step-down yield, however that it is a “feel-good Sukuk for investors who want to give back to society.” So it is in fact heartening to see that the issue was fully subscribed through one day of book-building ***(IIFM, 2016, 56)***.

In 2017, Khazanah issued the second tranche of the RM100 million sukuk that also had a retail component that gave opportunities to individuals to participate in the scheme. As in the case of the first issue, the sukuk had features of the step-down of returns upon achieving KPIs (The Key Performance Indicators) and the option to donate the principal to the Trust School Programme.

Fig.(10) : Structure of Khazanah Sukuk Ihsan



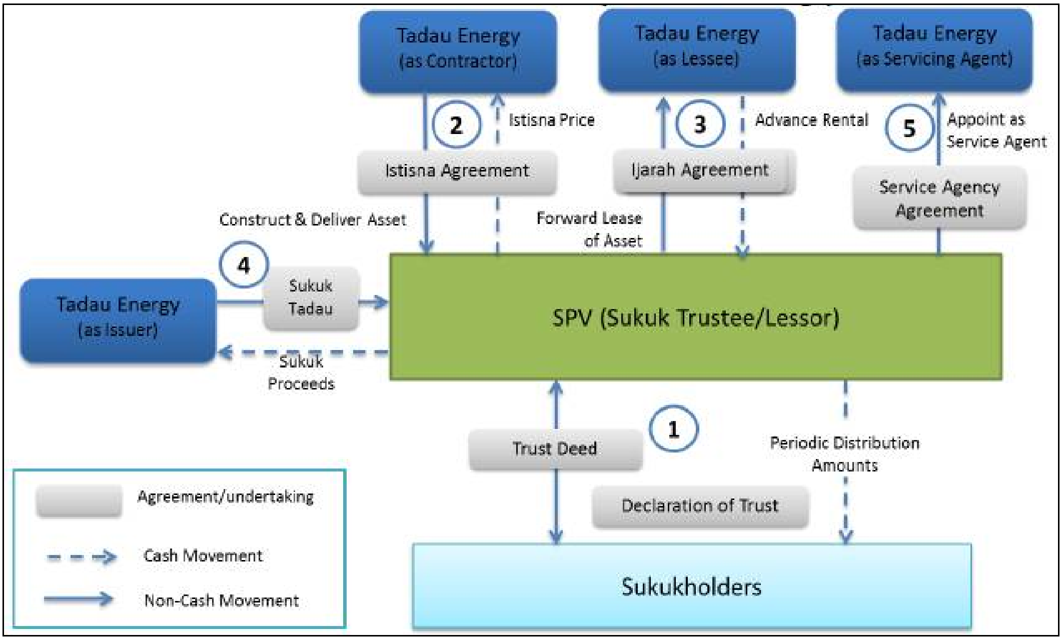
Source : Rafe Haneef, Retail Sukuk and SRI Sukuk: The Malaysian Experience, 1st Annual Islamic Finance Conference, Jakarta 17 May 2016, p: 22.

5.3.3. Green SRI Sukuk Tadau :

Although the Sustainable and Responsible Investment (SRI) Sukuk Framework was issued in 2014, the first green sukuk under this framework was issued in July 2017. Valued at RM 250 million (USD 59.2 million), the Green SRI Sukuk Tadau were issued by Tadau Energy Sdn Berhad as Islamic, medium-term notes to finance two solar power plants that would produce 50 MW of electricity in Kudat, Sabah. The investment in green energy is a private sector initiative of Tadau Energy which is a Malaysian private limited company established with the goal of constructing and operating solar projects by two other companies Kagayaki Energy and Edra Solar. While the former is a Malaysian renewable energy and sustainable technology investment firm, the latter is a wholly owned subsidiary of Edra Power Holdings which is an independent power producer with a diversified portfolio of renewable and fossil fuel power plants and is a subsidiary of CGN, a Chinese energy company involved in constructing and operating nuclear and renewable plants ***(CICERO, 2017, website)***.

Green SRI Sukuk Tadau was issued in 15-tranches of two to 16 years maturities with coupon payoffs ranging from 4.8% for the RM14 million two-year component to 6.2% for the RM10 million 16-year piece. The sukuk structure was based on the principles of istisna, ijarah and ijarah mawsufah fi zimmah ***(COMCEC, 2019, 107)***. The risks were mitigated by securing legal assignments of the issuer's right, title and benefits in all the licenses and permits related to the project and two 21-year power purchase agreements with Sabah Electricity Sdn Bhd, an entity owned by state government of Sabah ***(Boey, 2017, website)***. Rated at AA3 by RAM, Affin Hwang Investment Bank was the principal advisor, lead manager and arranger, underwriter and facility agent of the issue.

Fig.(11) : Structure of Green SRI Sukuk Tadau (Construction Stage)



Source : COMCEC, Infrastructure Financing through Islamic Finance in the Islamic Countries, Ankara, TURKEY, March 2019, p : 107.

6. CONCLUSION:

Infrastructure plays a key role in promoting and sustaining rapid economic growth. In order for this role to be realized, unlocking the great potential of sukuk will be necessary to function as a bridge between infrastructure projects and funding needs.

Malaysia's use of sukuk products in infrastructure financing has helped to build critical infrastructure like railways and roads, where the sukuk is becoming more relevant in infrastructure financing today because of its flexibility and underlying assets, adding that various sukuk forms and structures exist, thereby giving prospective users a range of options.

The bulk of the infrastructure financing is channelled through the capital markets in general and sukuk issuances in particular. While most of the infrastructure-related sukuk are issued by Malaysian Government Linked Companies, private sector entities have also tapped in the sukuk market to finance infrastructure projects. Malaysia has also been at the forefront of experimenting with innovative sukuk issues that cater to social and sustainable development-related infrastructure segments. Examples of these include the impact sukuk and green sukuk. Given the large size and robustness of the sukuk market, various financial institutions invest in sukuk issued by infrastructure-based projects and entities.

But several significant challenges would need to be overcome first, most importantly finding a legal structure that would be acceptable to governments, investors and the sukuk's Sharia boards. Infrastructure projects could eventually be a key source of sukuk issuance due to their asset based or asset-backed nature. But so far infrastructure sukuk have generally been relatively small and locally funded. Traditionally, infrastructure development has been financed and carried out by government or government linked bodies, or in some regions with private sector involvement through infrastructure project financing.

Finally, we believe several important trends will provide the necessary impetus for the development of infrastructure sukuk. These include growing government support for Islamic finance, increasing acceptance of sukuk and large investment and financing requirement in the GCC (Gulf Cooperation Council), Turkey, Asia and other emerging markets projects. A transparent framework that investors, issuers and scholars are all comfortable with and which makes clear the rights of all the stakeholders should help attract the significantly wider investor base that would be needed for major infrastructure projects. As well as the G20's initiative, other bodies are also taking steps that could help. These include the Islamic Development Bank's and the Asian Development Bank's reported efforts to provide technical assistance and credit guarantees to member countries that want to fund infrastructure projects and the International Monetary Fund's creation of a working group to build expertise in sukuk.

7. Bibliography List and Citations:

1. Asian Development Bank (2015), ***Local currency bonds and infrastructure finance in ASEAN+3***, Mandaluyong City, Philippines, Asian Development Bank.

2. Asian Development Bank (2016), ***ASEAN+3 bond market guide 2016 Malaysia***, Mandaluyong City, Philippines: Asian Development Bank.

3. Bank Negara Malaysia (2015), ***The Financial Stability and Payment Systems Report 2015***, Malaysia.

4. COMCEC (2019), ***Infrastructure Financing through Islamic Finance in the Islamic Countries***, Ankara, TURKEY.

5. DanaInfra Nasional Berhad (2014), ***Retail Sukuk*** (Knowledge pack).

6. Fadma El Mosaid & Rachid Boutti (2014), ***Sukuk and Bond Performance in Malaysia***, International Journal of Economics and Finance, Canadian Center of Science and Education, Canada.

7. International Islamic Financial Market (IIFM) (2016), ***Sukuk report (A comprehensive study of the Global Sukuk Market)***, 5th Edition, Manama, Kingdom of Bahrain.

8. Islamic Financial Services Board (2018), ***Islamic Financial Services Industry, Stability Report***, Bank Negara Malaysia, Kuala Lumpur, Malaysia.

9. Nik Mohamed Din Nik Musa (2015), ***Role of Islamic finance in infrastructure financing : Financing Sources for Public-Private Partnerships (PPP) Sub-Regional Expert Group Meeting (EGM) for South-East Asian Countries***, Bank Negara Malaysia, Kuala Lumpur, Malaysia.

10. Noor Suhaida Kasri (2018), ***Khazanah SRI Sukuk Case Study***, 2nd Islamic Finance Intellectual Discourse Sustainable Development Goals: Way Forward in Islamic Finance 22 February 2018, Putrajaya, Malaysia.

11. Plus Malaysia Berha. (2016), ***Sukuk for infrastructure – Malaysia Experience,*** Malaysia.

12. Preqin Global Infrastructure ***Report -2016) - Sample Pages***, New York.

13. PwC and GIIA (2017), ***Global infrastructure investment : The role of private capital in the delivery of essential assets and services***.

14. PwC and Oxford Economics (2017), ***Global Infrastructure Outlook***.

15. Rafe Haneef (2016), ***Retail Sukuk and SRI Sukuk: The Malaysian Experience***, 1st Annual Islamic Finance Conference, Jakarta.

16. Sohail Jaffer (2015), ***Infrastructure sukuk***, FWU Global Takaful Solutions.
17. Ambrose (2016), Size of Sukuk Market, IIFM, Islamic finance, website: https://www.islamicfinance.com/2016/04/size-sukuk-market-2015-iifm/(Visited : 15/08/2018)
18. Capital markets of Malaysia (2017), MALAYSIA LEADS GLOBAL SUKUK MARKET REBOUND, website : http://www.capitalmarketsmalaysia.com/malaysia-leads-global-sukuk-market-rebound/ (Visited: 18/08/2018).
19. BorneoPost online (2017), ***Malaysia remains global leader in sukuk market in 2016 - RAM Ratings***, website: http://www.theborneopost.com/2017/01/30/malaysia-remains-global-leader-in-sukuk-market-in-2016-ram-ratings/ (Visited : 19/08/2018.
20. DanaInfra Nasional Berhad (2017), ***About us***, website : http://www.danainfra.com.my/index.php?option=com_content&view=article&id=233&Itemid=304 (Visited : 22/08/2018.
21. Ahmad, Aijaz (2017), ***Tapping Islamic finance for infrastructure development, Infrastructure & Public-Private Partnership Blog***, see the link: http://blogs.worldbank.org/ppps/tapping-islamic-finance-infrastructure-development (27/3/2019)
22. CICERO (2017), ***Second Opinion on Tadau Energy's Green Sukuk Framework***, 24 July 2017, see the link: http://tadau.com.my/second-opinion-on-tadau-energy-green-sukuk-framework-final24072017.pdf (29/3/2019).
23. Boey, Kit Yin (2017), ***Islamic issue***, Malaysia Capital Markets Deal, IFRAsia, see the link : http://www.ifrasia.com/islamic-issue-malaysia-capital-markets-deal/21320965.fullarticle (01/04/2019).