

CONTRIBUTION OF ISLAMIC FINANCE TO THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

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Executive Summary

In line with the theme of the High-level Political Forum (HLPF) 2018, this paper studies the role of Islamic finance in promoting the Sustainable Development Goals (SDGs) by increasing investment in sustainable infrastructure. Most infrastructure projects are of great scale and scope, involving many stakeholders and investment arrangements that entail complex legal documentations and intricate financial planning. Infrastructure investment requirements are usually enormous and have long timespans, making them less liquid. The legal contracts have to ensure proper allocation of risks and returns to create the right incentives for attracting capital.

Bielenberg and others (2016) estimates that, to close the financing gap for the SDGs, investments of \$US 93 trillion would be needed in sustainable infrastructure projects during 2015–2030, with the bulk going to the energy sector (\$40 trillion or 43 per cent), followed by transport (\$27 trillion or 29 per cent), water and waste (\$19 trillion or 20.4 per cent) and telecom (\$7 trillion or 7.5 per cent). The funding gap for the period is estimated to be between \$39 trillion (with aggressive investment growth scenario) to \$51 trillion (with conservative investment growth assumption).

While the public sector has traditionally provided infrastructure investments, its role in filling the gaps is becoming limited due to the large sums needed on the one hand and budget constraints and deficits that Governments face on the other. The huge demand for investments in infrastructure thus necessitates seeking funding from different sources. The broad categories of infrastructure financing sources are public-domestic, public-international, private-domestic and private-international. Given the large investments needed for infrastructure projects, investments also take the form of private-public partnerships (PPP) and blended finance.

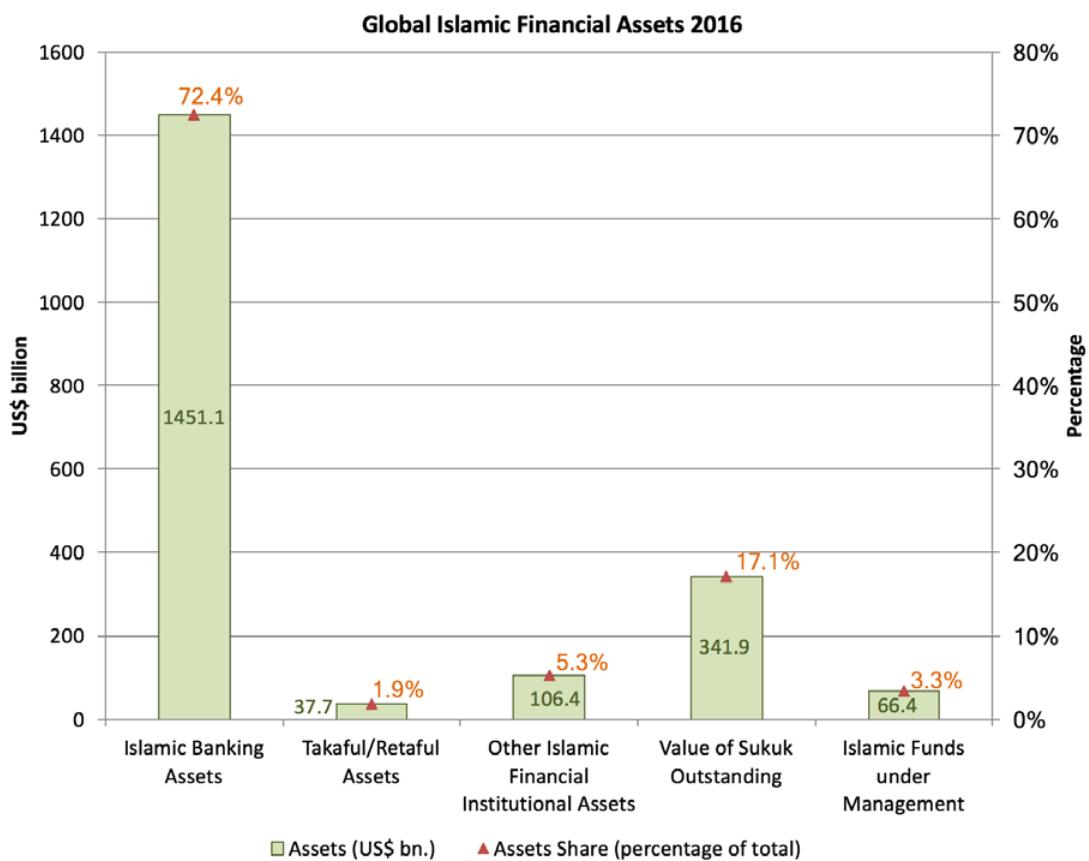
Many countries with sizable Muslim populations have high levels of poverty and score low in terms of progress towards achieving the SDGs, implying that they would require huge amounts of investment in the infrastructure sector. While the financial sector can play a vital role in the promotion of the SDGs, Muslim countries can face some limitations in mobilizing resources due to cultural and religious factors. Since interest-bearing transactions are prohibited under Islamic teachings, many Muslims do not engage with the conventional financial sector because of their religious convictions. Providing Islamic financial services in Muslim countries thus becomes an issue of financial inclusion at the micro level and economic development at the macro level. More generally, Islamic finance can also be used as an alternative source of funds to cater to the high demands for infrastructure financing.

Guided by values and principles of Shariah, Islamic finance provides an alternative source of resources that are compatible with Islamic law and ethics. The overall goals of Shariah entail realizing human well-being by enhancing welfare or benefit (*maslahah*) and preventing harm (*mafsadah*). Other than avoiding exploitative practices and prohibited activities, such as alcohol, pork products and gambling, key features of the Islamic financial

system include risk sharing and materiality in terms of links with the real economy. At the operational level, Islamic finance uses contracts that are devoid of *riba* (which includes interest in loan transactions) and *gharar* (legal ambiguity or excessive risk). Instead, the industry uses contracts that can be broadly classified as sale (*murabahah*, *salam*, and *istisna*), leasing (*ijarah*), partnership (*mudarabah* and *musharakah*) and agency (*wakala*).

Since its inception in the 1970s, the Islamic financial sector has grown rapidly to become systemically significant in many jurisdictions. With an estimated value of \$2 trillion in 2016, the banking sector dominates the Islamic finance industry, amounting to 72.4 per cent of total assets, followed by *sukuk* (or Islamic bonds) at 17.1 per cent (figure I). The non-bank financial institutions and *takaful* (Islamic insurance) sectors are relatively small. Other than asymmetrical growth across sectors, the development of Islamic finance has been uneven in different countries. While in some countries the industry has become a significant part of the financial sector, in many other countries it is nascent and emerging.

Figure I



Source: ICD and TR (2016).

Given the social and ethical ethos and emphasis on risk sharing and asset-backed financing, Islamic finance can play an important role in contributing to the achievement of the SDGs. However, since infrastructure investment requirements are large and Islamic banks are relatively small, infrastructure is usually financed in smaller tranches. Although most Islamic project investments in the past would finance one part of a larger conventional financing structure, recently, with the growth of the sector, some infrastructure projects have been financed wholly through Islamic syndications. Examples include the Doraleh Container Terminal in Djibouti and Madinah International Airport in Saudi Arabia.

Sukuk can also be used to mobilize funds from capital markets to finance infrastructure. Several projects have been financed wholly or partially by raising funds using various *sukuk* structures. Some examples include Neelum Jhelum *sukuk*, which raised PKR 100 billion to finance a hydroelectric dam in Pakistan, and the East Klang Valley Expressway *sukuk* which mobilized RM 1 billion to fund the building of a toll road in Malaysia.

Danainfra Retail sukuk in Malaysia raised funds to finance Kuala Lumpur's Mass Rapid Transit (MRT) project by issuing a series of retail sukuk.

There have been some recent developments in promoting sustainable infrastructure by the Islamic financial sector. While Master Wind Energy got financing of \$100 million from an Islamic banking syndication to finance wind turbines that would generate 50 megawatts (MW) of electricity in Pakistan, a Khazanah sustainable responsible investment (SRI) sukuk issued two series of impact bonds to enhance education standards in Malaysia.

The evidence shows that Islamic finance is used for infrastructure projects in countries where the industry is more developed. Other than implementing policies to provide an enabling environment in which Islamic finance can grow, increasing further infrastructure investments by the financial sector would require a sound macro-economic and legal/regulatory framework at the national level and good governance and risk management at the organizational levels. This paper provides the following recommendations to enhance the role and contribution of the Islamic finance industry in promoting infrastructure development.

- **National SDG strategy and infrastructure-related policies**

To ensure achievement of the 2030 Agenda for Sustainable Development, there is a need for a transparent, national-level SDG strategy that entails the creation of an infrastructure plan and the accompanying financial policy. The infrastructure plan would list the projects that need to be developed in different sectors, including energy, transport, water and communications.

- **Financial policy**

After assessing the sustainability features of the projects, the financial plan would outline how these would be financed from different international-domestic and public-private sources. The financial policy should also lay out a framework of aligning environment, social and governance (ESG) and sustainability issues with the financial sector practices. Within the private sources, the role and participation of Islamic finance in infrastructure development can be identified. Another outcome of including the Islamic financial sector in financial policy would also be diversification within the financial sector to enhance its resilience against negative shocks.

- **Legal and regulatory framework**

A stable and predictable legal and regulatory regime that provides and enforces regulation related to all aspects of infrastructure investment is necessary for creating the right incentives and instilling the confidence among investors to support long-term projects. Since most countries where Islamic finance operates have either common law or civil law regimes, it is necessary to provide a supporting legal and regulatory framework that can cater to the needs of Islamic infrastructure financing. Specifically, there is a need to introduce enabling Islamic financial laws that would address the unique issues in Islamic financial contracts and reduce legal uncertainty in disputes. Legal frameworks for capital markets should accommodate issuance of different types of sukuk. Other than ensuring transparency and disclosure, the laws should recognize the rights of sukuk holders, including reorganization and liquidation rights.

The tax regime should recognize the tax implications of different Islamic financial contracts and change relevant tax laws to level the playing field between Islamic and conventional finance. Tax laws should also address the favourable treatment of debt-based financing over equity to bring balance to debt and equity modes of financing. Furthermore, a concession law that is flexible enough to deal with Shariah-related issues is also needed. Finally, there is a need to introduce enabling laws and regulations that encourage use of green and social investments in the infrastructure sector. For example, the introduction of the SRI sukuk framework in Malaysia in 2014 facilitated the issuance of green sukuk and impact sukuk in the country.

- **Public-private partnerships (PPP)**

Since the size of investment in infrastructure needed to achieve the SDGs is so large, one option of financing infrastructure projects would be to use a PPP framework whereby the private sector develops and operates the project for a limited time under a concession agreement. Certain Shariah issues—such as rights and obligations of the parties and ownership of assets—have to be resolved to enhance the in-

vement of Islamic finance in PPP projects. This can be done by raising awareness of these contracts and instituting a supportive legal and regulatory framework for PPPs. Since infrastructure projects are complex and Islamic finance is relatively new, standardizing the documentation and developing Shariah-compliant products that address specific issues—such as transfer of ownership and the responsibilities of different parties—would facilitate the involvement of the Islamic financial sector in newer projects.

- **Capital markets**

Capital markets play an important role in mobilizing funds from both institutional and retail investors. While *sukuk* have been used to raise funds for some projects, the overall share of Islamic capital markets is still small and the sector is underdeveloped in many countries. Developing the Islamic capital markets in general and the *sukuk* sector in particular would require strengthening the Islamic capital market infrastructure. Such strengthening would include creation of an appropriate legal and regulatory framework, as noted above, and other supporting institutions such as liquidity providers and brokers and dealers who facilitate transactions in secondary markets.

Developing the *sukuk* market to raise funds for infrastructure projects will also help support the growth of a liquid secondary market that would increase the asset choices for institutional investors. Governments can promote Islamic capital markets not only by providing the necessary legal and regulatory frameworks and market infrastructure, but also by taking the initial lead to issue sovereign *sukuk* for different infrastructure projects. A sound national level Shariah governance regime that reduces diversity of *fatwas* (Shariah rulings) can reduce the legal risks and build confidence among stakeholders. In this regard, standardized *sukuk* structures that are well understood by different stakeholders—including the investors—are needed for an efficient *sukuk* market.

- **Financial institutions**

Islamic banks dominate the Islamic financial industry and the non-bank financial institutions sector is very small compared to its conventional counterparts. Since the bulk of the funds for infrastructure finance come from non-bank financial institutions, such as insurance companies and pension funds, the scale of Islamic infrastructure financing can be increased if the industry becomes more diverse. Although it is expected that the share of Islamic non-bank financial institutions will increase with the growth of the Islamic financial industry, this can be facilitated by instituting a supportive legal and regulatory framework. Promoting the institution of *waqf* also has the potential to contribute to the development of social infrastructure in many countries. The growth of Islamic non-bank financial institutions is also contingent on a robust Islamic capital market that creates Shariah-compliant investment opportunities. In this regard, infrastructure projects not only provide new investment opportunities, but also create synergies that allow Islamic non-bank financial institutions and capital markets to grow together.

- **Products**

Infrastructure can be considered as a separate product class that conforms to the values and principles of Islamic finance. However, to enable stakeholders to invest in this asset class would require developing Shariah-compliant products and instruments for both retail and institutional investors. Developing products that are acceptable to investors would require increasing the number of professionals who have the knowledge and skills of both Islamic law and complex infrastructure products.

Islamic banks can increase their share of financing infrastructure projects by transforming investment accounts that reflect risk-sharing features. For example, the Islamic Financial Services Act 2013 of Malaysia separated investment accounts from deposits and therefore investors take on risks. Since the banks are not burdened with additional capital charges, they will be more inclined to invest in infrastructure projects. Introducing some features in *sukuk* that can increase their liquidity and tradability would also increase their use in funds in infrastructure projects. Since debt-based products cannot be traded, there is a need to increase the share of *sukuk* that is asset- and equity-based to enhance liquidity. While there have been some developments in ESG-related investments in Islamic finance, it is necessary to come up with new, innovative products that can finance sustainable infrastructure projects. Recent examples from Pakistan and Malaysia show that a supporting legal and regulatory framework is needed for these

products to grow further.

- **Multilateral institutions (MLIs)**

Given that the 2030 Agenda for Sustainable Development is a global initiative, there are different ways in which MLIs can help promote the SDGs. Along with being key sources of investment for sustainable infrastructure development, multilateral development banks (MDBs) can also contribute to the sector by setting up infrastructure funds. Other than funding infrastructure projects, MDBs, along with MLIs, can play a key role in building capacity, sharing experiences and providing operational models of project financing. To overcome the constraint of having too few professionals with knowledge and skills to implement the infrastructure projects, MDBs such as Islamic Development Bank (IsDB) and the World Bank Group can provide technical assistance to train and build human capital in Islamic infrastructure financing.

An important aspect of increasing investments in sustainable infrastructure projects is to come up with a standardized definition of sustainability and normative approaches to dealing with ESG-related issues. This is a particularly useful practice in the context of Islamic syndications and PPP structures where unique and specific issues arise. IsDB and other organizations, such as the Islamic Financial Services Board (IFSB) and International Islamic Financial Market (IIFM), can enhance Islamic finance industry contribution to infrastructure investments by providing standardized templates of Shariah-compliant structures for sustainable project financing that can be used by different countries. Furthermore, countries with a large and growing Islamic finance industry need to promote and champion the incorporation of discussions on the role of Islamic finance in contributing to achievement of the SDGs in different international forums, including the annual Economic and Social Council (ECOSOC) Financing for Development (FFD) Forum.

- **Conceptual outlook and mindset**

There are four areas in which a change in mindset is needed to increase the participation of the financial sector in sustainable infrastructure development:

- i. *Decision-making.* Sustainability can be integrated into the decision-making process by moving from an exclusive focus on economic considerations to inclusion of social and environmental dimensions in due diligence of projects. MLIs, among others, can provide a framework for use at the operational level.
- ii. *Long-term investing.* A change from the current preference for short-term financing to a longer-term investment perspective would allow for a greater volume of infrastructure investment. This would, however, require a supportive legal and regulatory environment that mitigates risks and creates the incentives for long-term investments.
- iii. *Perception of Islamic finance.* Islamic finance is not only for Muslims, but can be used by all as an alternative ethical source of funding to finance the SDGs.
- iv. *Broadening Islamic finance approaches.* For Islamic finance, there is a need to move from legalistic compliance with Shariah to fulfilling broader social and ethical objectives and using more participatory forms of financing. Considering the overall goals of Shariah (*maqasid*) in operations of Islamic finance will enhance its contribution to the SDGs in general and to sustainable and social infrastructure in particular.

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I. Introduction

"This Agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. We recognize that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development." (United Nations, 2015a, Preamble)

With the expiration of the Millennium Development Goals (MDGs) in 2015, the United Nations adopted the 2030 Agenda for Sustainable Development in September 2015 as "a plan of action for people, planet and prosperity" (United Nations, 2015a, Preamble). The declaration identified 17 Sustainable Development Goals (SDGs), their means of implementation, and provided a framework for review of and follow-up on the progress. Building on the success and experience of the MDGs, the SDGs are more ambitious and universal, integrating sustainability with development. While the SDGs would require economic growth and development, the notion of sustainable development shapes their quality and ties them to other international conventions and frameworks. For example, the environmental aspects of the SDGs reflect, *inter alia*, the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity; the economic and social dimensions link to the United Nations Guiding Principles on Business and Human Rights, the Core International Labour Organization (ILO) Conventions, and the International Bill of Human Rights (Principles for Responsible Investment, 2016, p. 7). Thus, SDGs harmonize the three dimensions of sustainable development: economic, social and environmental.

The means of implementation of the 2030 Agenda for Sustainable Development are contained in the Addis Ababa Action Agenda (Addis Agenda) adopted at the Third International Conference on Financing for Development, held in Addis Ababa from 13–16 July 2015. Other than identifying the policies and strategies that can be undertaken, the Addis Agenda emphasized the roles of national and international stakeholders in contributing to the achievement of the SDGs. Given the high expectations and extensive scale of coverage of the 2030 Agenda for Sustainable Development, realization of the SDGs would require involvement from multilateral bodies and development banks, official development assistance, foreign direct investment at the international level, and governments (national, state and local), the private sector and civil society at the national level.

Achieving the SDGs will require huge amounts of resources and investments from different sources. In this regard, the financial sector has a key role to play to in mobilizing resources to advance the SDGs. United Nations and KPMG International (2015, p. 8) identifies two broad themes under which the financial sector can contribute to the SDGs. First, the sector can increase financial access and inclusion for individuals (SDGs 1, 2, 3, 4, 10), small and medium-sized enterprises (SDGs 5, 8) and Governments (SDG 13). Second, the industry can help generate resources for investment in renewable energy (SDGs 6, 13) and infrastructure projects (SDGs 6, 9). Given the themes of the SDGs in the High-level Political Forum 2018 (SDGs 6, 7, 9, 11, 13), the focus of this paper is to explore ways in which the financial sector can promote investments in sustainable infrastructure.

The global financial crisis of 2008, however, has shown that the financial sector is exposed to risks that can have detrimental effects on economies and hamper the achievement of the SDGs. With the monetary cost of the crisis estimated to be as high as \$15 trillion (Yoon, 2012), there is a need to reduce the fragility of the financial sector.¹ Addressing vulnerabilities of the sector, the Addis Agenda suggests taking steps to enhance its resilience and strengthen financial and economic stability (United Nations, 2015b, paras. 4 and 104).

Recognizing the important role sustainable infrastructure plays in achieving the SDGs, the Addis Agenda calls for "investing in sustainable and resilient infrastructure, including transport, energy, water and sanitation for all" and considers them to be "a pre-requisite for achieving many of our goals" (*ibid.*, para. 14). Infrastructure is "a basic requirement for a proper functioning economy" as it facilitates "production and exchange of goods and services" (UNEP, 2016, p. 6). Infrastructure investment promotes economic growth and poverty reduction in two important ways. First, it provides essential products and services like power, water, sanitation, etc., to the citizens. While infrastructure—such as clean water and sanitation—are key to health and services, provision of transportation, schools, energy and telecommunications increase job availability and overall productivity. Second, infrastructure expands capital stock that reduces the costs of production in other sectors. Transport, electricity and water are key inputs in production, which helps promote production and increases productivity

¹ Researchers from the Federal Reserve Bank of Dallas estimate the losses from the global financial crisis in the United States of America to be in the range of \$6 trillion to \$14 trillion. See Atkinson and others, 2013.

of other factors of production. A direct implication of lack of infrastructure is that it leads to higher costs of services, such as power, water, freight, mobile telephones, etc., making countries less competitive and hindering economic growth.

Most infrastructure projects have positive externalities from which an economy benefits, but these are difficult to measure. Some projects, however, can also have negative externalities that lead to direct and indirect detrimental impacts on society and environment. For example, coal- and fuel-powered power plants can cause air, soil and water pollution that can adversely affect the environment and people's health. Furthermore, infrastructure such as hydroelectric dams and oil platforms can potentially harm the ecosystems. From a sustainability perspective, infrastructure investment needs both an increase in quantity and an improvement in quality in order to avoid negative externalities. Sustainable infrastructure would constitute projects that integrate the environment, social and governance (ESG) aspects into all phases of project implementation and are "socially, economically, and environmentally sustainable" (Bielenberg and others, 2016, p. 8).

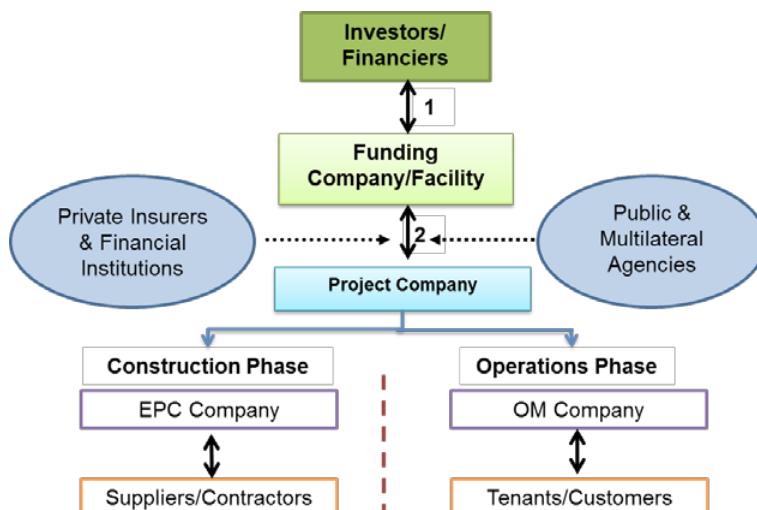
I.1 Infrastructure finance: features, sources and issues

Figure I.1.1 shows the basic infrastructure investment framework and identifies the relationship between key stakeholders. The private sponsors of the project establish a special purpose vehicle (SPV) as a Project Company, which acts as a separate bankrupt remote legal entity. The investors finance the project through a Funding Company, which acts as an agent for the investors. The investors provide funds to the Funding Company that finances the Project Company. Arrow 1 indicates the contractual relationship between the investors/financiers and the Funding Company; arrow 2 shows the relationship of the Funding Company and the Project Company.

Other than planning for the project, infrastructure implementation is differentiated into construction and operational phases. In the former phase, the Project Company undertakes the construction of the project by using the services of a construction arranger or an engineering, procurement and construction (EPC) company. The EPC Company in turn deals with suppliers of inputs and contractors to construct the project. In some cases, the Project Company may take the role of the EPC Company and undertake the construction responsibilities. After the project is completed, the Project Company may use the services of an operations and management (OM) company. The OM Company operates and manages the project by selling the services to the ultimate customers.

Figure I.1.1

Stakeholders and relationships in infrastructure finance



Source: Adapted from Miller and Morris (2008).

In order to encourage the private sector to invest in infrastructure projects, the Government can provide different kinds of incentives. One option is to provide price support and/or guarantees to minimize risks and

ensure a stable revenue stream. Incentives can include guarantees of supply of inputs, the purchase of output at certain fixed prices, and/or providing subsidies. Bilateral and multilateral development agencies also provide partial credit guarantees and partial risk guarantees to financial institutions investing in infrastructure projects. Furthermore, multilateral insurance agencies like Multilateral Investment Guarantee Agency of the World Bank Group provide political risk insurance for both debt and equity (Matsukawa and Habbeck, 2007). Some public national bodies provide additional guarantees and insurance to cover equity and debt investments and trade.

Other than guarantees and price support, project companies manage other commercial risks associated with infrastructure projects and use different mechanisms and instruments to mitigate these risks. This may involve seeking the services of private financial institutions and insurers that provide coverage for various commercial and political risks. Provision of guarantees and insurance can improve the credit rating, which not only can encourage private investment, but also lead to lowering borrowing costs and enabling securitization of assets.

Infrastructure finance: sources and types

Ehlers (2014, p. 5) identifies the financial arrangements that can arise in different phases of implementation. The planning stage would require equity investors who would then arrange more funds in the form of debt. Due to the long period of investment, the early debt investors would require higher returns. The construction phase is most risky, and risks increase with the complexity of the projects. This stage is funded by equity and debt raised in the planning stage. Any cost overruns would have to be covered by raising either more equity or debt. In the operational phase, there are risks related to cash flow, but the default risk diminishes. Refinancing of debt can be done in the planning stage by raising funds either through bank loans, government funds or issuing bonds.

The sources of infrastructure finance are broadly classified in two dimensions: public/ private and domestic/international. Table I.1.1 shows the various elements in the broad categories of infrastructure financing sources: public-domestic, public-international, private-domestic and private-international.

Table I.1.1

Sources of SDG financing

	Public	Private
Domestic	<ul style="list-style-type: none"> • Government Revenue (tax/duties) • Natural resource concessions • User fees • Public borrowing 	<ul style="list-style-type: none"> • Domestic Private investments • Non-governmental organizations • Philanthropy/social responsibility
International	<ul style="list-style-type: none"> • Official development assistance (ODA) • Climate Finance • Multilateral development banks (MDBs) • Sovereign wealth funds 	<ul style="list-style-type: none"> • Foreign direct investment (FDI) • Multilateral infrastructure funds • Remittances • Foreign pension funds • International bank loans

Public-private partnership (PPP)

Blended Finance

Figure I.1.2 shows the key components of the domestic financial sector and instruments used to raise funds for investments in infrastructure. The key sectors providing funds are households, the business sector, the non-profit sector and the government sector. The sources of funds from these sectors are savings and surpluses, which include retail savings and long-term investment products such as household pensions, business sector savings and taxes, and other revenues of government.

The financial sector constitutes two broad segments: financial intermediaries and financial markets. The former have different financial institutions such as banks, insurance companies, pension funds, sovereign wealth funds, and other financial institutions (investment companies, private-equity funds, development banks and infrastructure developers and institutions, *inter alia*). Different financial markets exist for stocks, bonds and

other financial instruments such as derivatives.

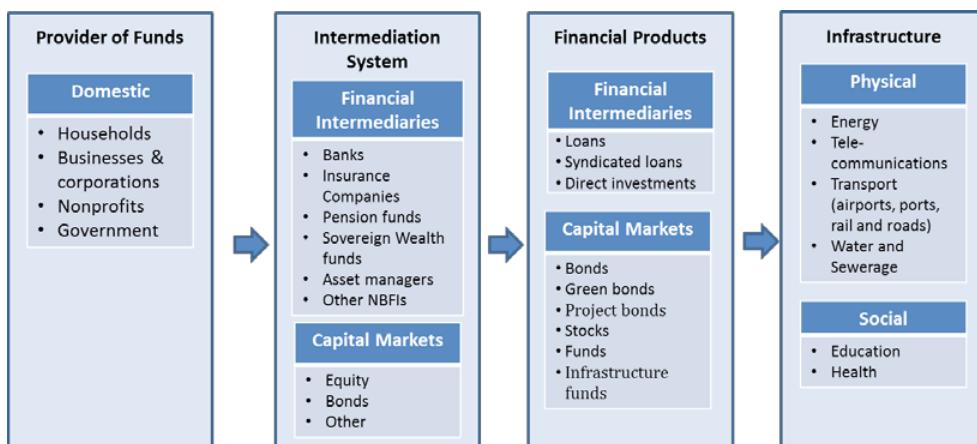
Different financial segments offer a variety of products that can be broadly classified as debt and equity. For infrastructure financing from financial institutions, debt-based products take the form of loans; in capital markets, various types of bonds are used. Equity-based financing in the case of financial institutions consists of direct investments; in capital markets, investments are made in stocks and funds.

The private sector can participate in infrastructure projects through PPPs, whereby investment projects that are traditionally financed by the public sector are transferred to the private sector. Under PPPs, the ownership of a public asset is temporarily transferred to the private sector through a concession arrangement. The concession agreement determines the roles of the public and private sectors under PPPs and identifies the ownership and the control rights of the projects of the parties during the concession period (Lienert, 2009). While there are a variety of PPP models suited to the local political, economic and legal environments, some common elements are necessary for an efficient and effective PPP framework. Jomo and others (2016) identify the necessary elements of an enabling PPP framework as (i) project selection and implementation (using credible cost-benefit analysis); (ii) contracts that ensure appropriate pricing and transfer of risks (for optimum risk allocation); (iii) fiscal accounting and reporting standards (to provide transparency on fiscal implications); and (iv) legal, regulatory and monitoring frameworks (to safeguard welfare of citizens and sustainable development).

There are different ways in which private participation can take place in infrastructure projects. While figure I.1.2 identifies different stakeholders, institutions and markets that play a role in providing financing for infrastructure projects, figure I.1.3 shows the relative size of different institutional investors globally. The largest three institutional players are banks, which hold 33.5 per cent of the total global assets of \$200 trillion, followed by investment companies with 24.2 per cent and insurance and pension funds with 22.1 per cent.

Figure I.1.2

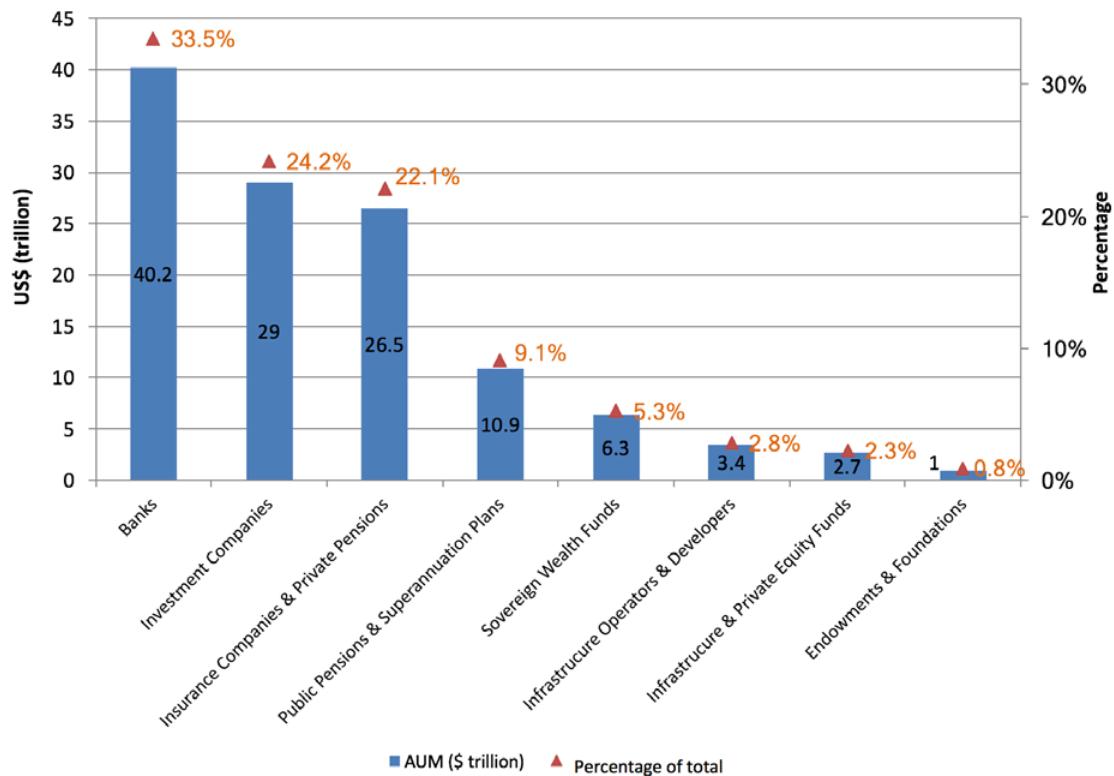
Stakeholders and instruments in private sector financing of infrastructure



Source: Adapted from Group of Thirty (2013).

Figure I.1.3

Assets under management of institutional investors



Source: Bielenberg and others (2016, p. 16).

Infrastructure finance: features and constraints

Infrastructure can be considered a separate investment class with risks and returns lower than equities and higher than debt. Infrastructure assets, however, have some unique features that affect investment decisions. Infrastructure projects are very large, involving many stakeholders and investment arrangements, and entailing complex legal documentations and intricate financial planning. The legal contracts have to ensure proper allocation of risks and returns to create the right incentives for attracting capital. The long timespan of infrastructure projects also makes them less liquid. Investment in sustainable infrastructure projects would also appeal to ethical, green and impact investors. Some infrastructure projects, such as highway or water supply, can be natural monopolies and Governments would control them directly or indirectly to ensure that monopoly power is not abused. Some of the barriers that inhibit private sector financing of infrastructure projects are identified below:²

- *Uncertain legal and regulatory environment.* The long-term nature of infrastructure investment creates the need for legal and regulatory certainty to reduce the risks. In many countries, a coherent and predictable legal framework for infrastructure investments is lacking. Furthermore, with the implementation of Basel III standards in the post-crisis period, regulatory regimes will potentially create disincentives to investment in long-term projects, as they require higher capital charges.
- *Lack of policies and institutional capabilities.* The enormity of the investment required and the long-term nature of infrastructure financing necessitate appropriate policies and capabilities for implementation. An absence of policies makes it difficult to create an enabling environment, build pipelines of sustainable and viable infrastructure projects, and it increases the transactions and development

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This section is based on Ehlers (2014), Bielenberg and others (2016), and GCEC (2016).

costs, creating disincentives for private sector investments.

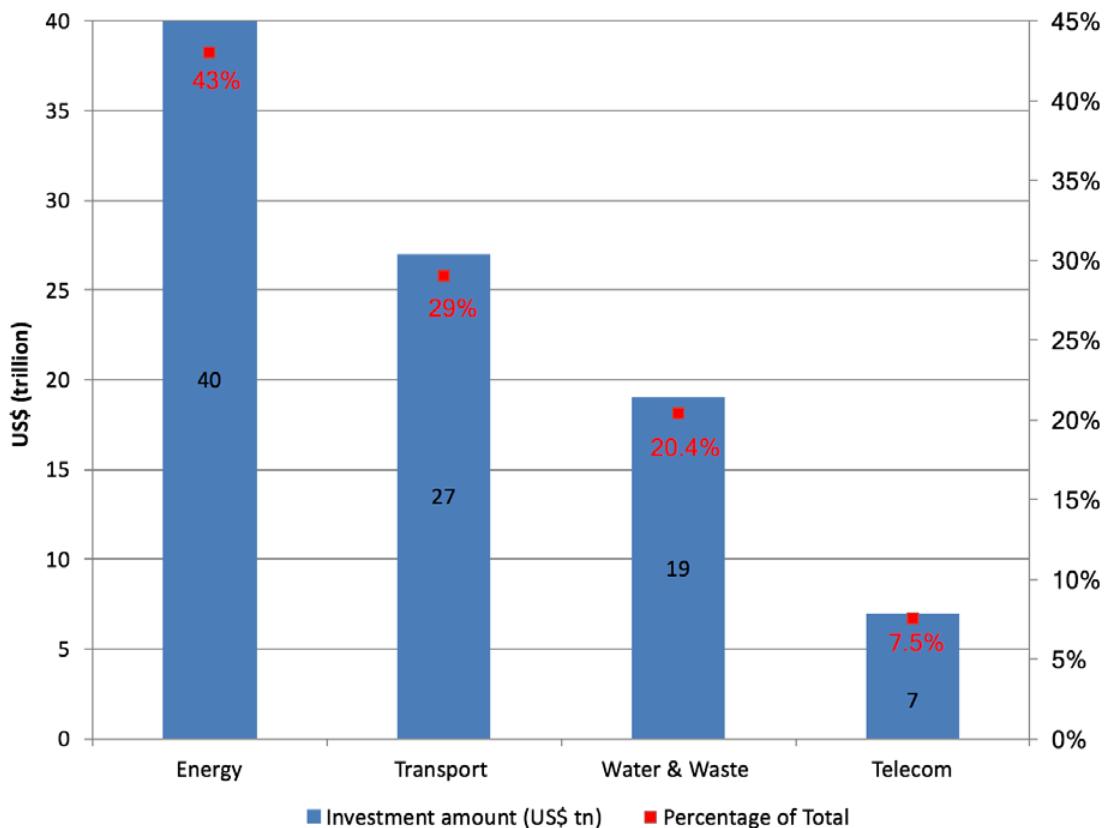
- *Insufficient pipeline of bankable projects.* There is a lack of bankable pipelines of infrastructure projects in many countries, making it difficult to estimate the demand and needs. The problem extends beyond developing countries; only half of G20 countries publish infrastructure pipelines (Bielenberg and others, 2016, p. 3).
- *High development and transaction costs.* Many sustainable infrastructure projects are capital intensive and can drive up the upfront costs. For example, transport investments require high upfront capital costs, long timelines and produce relatively low financial returns (IDFC, 2014, p. 5). Furthermore, administrative costs can be high in the energy sector due to difficulties and delays in procedures and approving concessions (IDFC, 2014, p. 5).
- *Inadequate risk-adjusted returns.* Because they require large and long-term investments, infrastructure projects are prone to government interference and corruption, which can increase the political risks. Furthermore, due to the limited number of projects and the uniqueness of each one, there is a lack of historical data and information on risk-adjusted returns, causing difficulty in decision-making. While investors would expect higher risk-adjusted returns, in many infrastructure projects the returns may be low. For example, tariff levels are usually low in water and energy sectors. Further, enough revenues cannot be generated in many developing countries due to leakage and stealing of water and electricity that limits the ability to maintain and expand the services. For instance, up to 70 per cent of the water provided in sub-Saharan Africa is unmetered, lost through leaks or stolen (Bielenberg and others (2016, p. 3).
- *Human capital.* The size and complexity of infrastructure projects leads to the involvement of many parties and people with different skills and expertise. Structuring financial contracts for infrastructure projects is complicated and requires not only financial expertise but also an understanding of the project features and their implications for risk and return. A key constraint is the lack of professionals with knowledge and experience of structuring and financing large infrastructure projects.

I.2 Gaps and scope in infrastructure investment

Estimates for infrastructure investment required to fulfil the 2030 Agenda for Sustainable Development vary. The Global Commission on the Economy and Climate estimates that \$90 trillion (or \$6 trillion a year) would be needed for investments in urban, land-use and energy systems globally during 2015–2030 (GCEC, 2014, p.8; GCEC, 2016, p. 8). Bielenberg and others (2016, p. 10) estimates \$93 trillion would be needed to finance sustainable infrastructure to meet the SDGs by 2030. Figure 1.2.1 shows the breakdown of the investment in different sectors. The bulk of the investments would be needed in energy (\$40 trillion or 43 per cent), followed by transport (\$27 trillion or 29 per cent), water and waste (\$19 trillion or 20.4 per cent) and telecom (\$7 trillion or 7.5 per cent)(ibid., 2016, 12).

Figure I.2.1

Investment needs for infrastructure to achieve the SDGs, 2015-2030



Source: Bielenberg and others (2016).

An estimated gap in demand and supply of infrastructure funding for the period 2015-2030 is from \$39 trillion or \$2.6 trillion annually (aggressive investment growth scenario) to \$51 trillion or \$3.4 annually (conservative investment growth scenario) (Bielenberg and others, 2016, p. 24). Furthermore, institutional investors currently invest on the average 5.2 per cent of their assets in infrastructure, amounting to \$300 billion to \$400 billion (ibid., p. 27). With this rate of investment and a projected increase of assets under management (AUM) of 6 per cent annually, there will be an additional \$8.6 trillion (or \$575 billion annually) invested in infrastructure between 2015 and 2030. If the allocations for infrastructure were increased to 8 per cent of AUM, this would translate to additional \$325 billion per year.

The extent to which the financial sector would be able to contribute to closing this huge gap in infrastructure financing will depend on various factors. At the macro level, the legal and regulatory environment along with government policies provide the framework under which the financial sector operates. At the project level, the long timespans, cash flow profiles, high risks and illiquidity of infrastructure projects discourages private investment (Ehlers, 2014, p. 4).

At the operational level, adding sustainability dimensions to the financing decision-making process would entail integrating economic considerations with social and environmental risks and externalities. Economic, social and environmental returns will determine the extent to which the private and public sectors would get involved with infrastructure projects. While projects with a relatively high risk-adjusted economic return are expected to attract capital from the financial sector, the public sector would need to invest in projects that produce high social and environmental impact.

The Organization for Economic Cooperation and Development (OECD) (2014) identifies three types of infrastruc-

ture projects in terms of financial features and involvement of the private sector. First, fully self-sustainable infrastructure generates sufficient revenue from markets to recover costs and provide investors a positive return. Examples of this category would be projects in the telecommunications and energy and power sectors. The second group entails projects that are not financially sustainable. Social infrastructure such as health and education falls into this category. Finally, partially self-sustainable infrastructure generates revenue from tariffs and fees from end users, but the prices are set at levels that cannot make the projects fully sustainable. To attract private investors in these projects would require providing incentives such as grants during the construction period, and other kinds of support such as tax relief or subsidies during the operational phase. Examples of infrastructure in this category include water and sewerage and light railways.

I.3 Islamic finance and infrastructure investment

Many Muslim countries have pervasive poverty, with estimates of 700 million people living on less than \$2 a day (World Bank, 2014, p. 38). While the financial sector can play a vital role in the promotion of the SDGs in developing countries, Muslim countries may face some limitations in mobilizing resources for development because of cultural and religious factors. Since interest-bearing transactions are prohibited under Islamic teachings, many Muslims would not engage with the conventional financial sector (box I.3.1). Providing Islamic financial services in Muslim countries, thus, becomes an issue of financial inclusion at the micro level and economic development at the macro level.

Islamic finance is a relatively new industry with the first Islamic bank starting operations in 1975. The pioneers of Islamic economics envisioned that a financial system based on Islamic principles and ethos would serve all sections of the population, thereby bringing about equity, stability and growth in the economy. Being a part of a moral economy and, given the basic objectives of Shariah of enhancing welfare (*maslaha*) and preventing harm (*mafsada*), the practices within the Islamic finance industry are expected to reflect these ethical and social characteristics. Other than avoiding exploitative practices and prohibited activities, such as alcohol, pork products, gambling, etc., the key features of the Islamic financial system include risk sharing and materiality in terms of links with the real economy (El Hawary and others, 2004, p. 5).

Box I.3.1

Voluntary financial exclusion for religious reasons in Muslim countries

Karim, Tarazi and Reille (2008) find that 72 per cent of people living in Muslim countries do not use formal financial services, and a large percentage of the population (ranging from 20 per cent to more than 40 per cent) would not avail themselves of conventional microfinance to avoid interest. Similarly, in a survey of 66,484 adults from 64 countries conducted in 2011, Demirgüt-Kunt, Klapper and Randall (2013, p. 4) report that Muslims are less likely than non-Muslims to have an account and save at a formal financial institution, and more likely to identify religion as a reason for not having an account. In a smaller survey of 5,071 respondents in five Arab countries (Algeria, Morocco, Tunisia and Yemen), 45 per cent of the respondents reported preferring a loan from an Islamic bank than a conventional bank, even if they had to pay 5 per cent more annually for the Islamic bank loan. In another survey of nine countries in the Middle East and North Africa region, the International Finance Corporation (2014, p. 39) finds that, on average, 32.2 per cent of the small and medium enterprises in these countries prefer to have Shariah-compliant products.

Given the social and ethical ethos and emphasis on risk-sharing and asset-backed financing, Islamic finance can play an important role and has great potential in contributing to the achievement of the SDGs. As many infrastructure projects benefit the community at large, financing these projects by the Islamic financial sector would comply with its ideological standing (Miller and Morris, 2008).

The aim of this paper is to explore and analyse the role of Islamic finance in providing infrastructure finance to advance the 2030 Agenda for Sustainable Development and the SDGs. After providing an overview of the basic principles of Islamic commercial law and contracts used in Islamic finance, followed by information on the

current status of the Islamic finance industry in section II, section III discusses the ways in which different segments of Islamic finance can contribute to infrastructure investments. The last section presents some policy recommendations for enhancing the contribution of Islamic finance to the SDGs in general and infrastructure investments in particular.

II. Islamic finance: principles and practice

The essential goals of Shariah (*maqasid al Shariah*) constitute safeguarding the faith, life or self, intellect, prosperity, wealth and personal honour or human dignity (Chapra, 2008; Kamali, 2007). Based on Islamic principles and values, an Islamic economy would strive to protect and enhance one or several of the *maqasid*. The implications of *maqasid* for an economy and the financial sector can be viewed at different levels. *Maqasid* at the broadest level would involve realizing the human well-being by enhancing welfare or benefit (*maslahah*) on the one hand and preventing harm (*mafsadah*) on the other (Laldin and Furqani, 2012).

Abozaid (2010, p. 67) views macro-level implications of *maqasid* as a practice that would protect and preserve public interests in all aspects and segments of life. Fulfilling the *maqasid* at this level would imply that an economy ensures growth and stability with equitable distribution of income, where all households earn respectable income to satisfy basic needs (Chapra, 1992). The micro-level *maqasid* relates to specific issues arising in operations and transactions of the Islamic financial sector. Using various Islamic legal maxims, Dusuki and Abdullah (2007) and Dusuki and Bouheraoua (2011) conclude that prevention and minimizing harm should be a key objective of an Islamic firm. These would include not engaging in harmful activities, such as selling products that harm consumers and dumping toxic waste harmful to the environment or residential areas.

II.1 Islamic financial contracts

Islamic financial products are governed by Islamic commercial law, which prohibits *riba* (literally meaning "excess") and *gharar* (legal ambiguity or excessive risk) in transactions. While *riba* is usually translated into interest, it has wider connotations such as prohibition of sale of debt. Similarly, contemporary derivatives (forwards, futures, swaps, etc.) are not permissible as they have elements of both *riba* and *gharar*. Since interest is prohibited, Islamic finance uses various other permissible contracts to structure financial products. The contracts used in practice can be broadly classified as sale, leasing, partnership and agency. The basic features of the key contracts used in Islamic finance are as follows:³

- (a) *Murabahah* is a cost-plus sale where the seller adds a profit component (markup) to the cost of the item being sold.
- (b) *Bai-muajjal* is a contract wherein the purchase is on credit and the payment for a good/asset is delayed. A variant would be a sale where the payments are made in instalments. These contracts create debt and can have both short- and long-term tenors.
- (c) *Salam* sale is a pre-paid or product-deferred sale of a generic good. In a *salam* contract, the buyer of a product pays in advance for a good that is delivered at a later agreed upon date. The contract is applied mainly in financing agricultural goods.
- (d) An *istisna* contract is similar to a *salam* contract with the difference being that, in *istisna*, a good/asset is produced according to the specifications given by the buyer. This contract mainly applies to manufactured goods and real estate. Furthermore, in *istisna*, the payments can be made in instalments over time with the progression of the production.
- (e) *Ijarah* is a lease contract in which the lessee pays rent for use of usufruct. In *iijarah*, the ownership and right to use an asset (usufruct) are separated. It falls under a sale-based contract as it involves the sale of usufructs. A lease contract that results in the transfer of an asset to the lessee at the end of the contract is called *iijarah wa iqtina* or *iijarah muntahia bittamleek*. *Iijarah wa iqtina* combines sale and leasing contracts and uses the hire-purchase principles. After completion of payments during the contract period, the lessee assumes the ownership of the asset.
- (f) *Musharakah* is a partnership between parties in which financial capital and labour/management act as

3 For a discussion on Islamic modes of financing see Ayub (2007), Kahf and Khan (1992) and Usmani (1999).

shared inputs in a project and profit is distributed among partners at an agreed upon ratio. The loss, however, is distributed according to the share of the capital.

- (g) *Mudarabah* is a silent partnership in which financial capital is provided by one or more partners (*rab ul mal*) and the work is carried out by the other partner(s) (*mudarib*). While the financiers and managers of the project share the profit at an agreed upon ratio, the loss is borne by the former according to their share in the capital. Being a silent partner, the financiers (*rab ul mal*) do not have any say in the management of the firm.
- (h) *Tawarruq* is used when a client needs cash. The financial institution buys a certain commodity and then sells it to the client at a markup, with the price payable in the future. The client assigns the financial institution as an agent to sell the commodity back to a broker on the spot and transfer the proceeds of the sale to the client.

II.2 Sukuk: features and types

The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) defines *sukuk* as “certificates of equal value representing, after closing subscription, receipt of the values of certificates and putting it to use as planned, common title to shares and rights in tangible assets, usufructs and services, or equity of a given project or equity of a special investment activity.” (AAOIFI, 2003, p. 298) Thus, *sukuk* are securities representing ownership in equity, real assets, usufruct, money or debt, or any combination of these. AAOIFI identifies various types of *sukuk* that can be classified based on assets, debt, equity, and services.

Asset-based *sukuk* include *ijarah sukuk*, which are certificates issued against an existing tangible asset, leased asset, and/or promise of leasing an asset in the future. *Sukuk* of *manfah* (usufructs) are also considered asset-based securities issued by owners of usufruct of existing or future assets. By purchasing the *sukuk*, holders become owners of the assets or usufructs. Debt-based *sukuk* arise from transactions that create debt. *Murabahah sukuk* are used to collect funds that are used to purchase goods or assets that are sold at a markup. Holders of *istisna sukuk* provide funds that are used in the construction of real estate, and become the owners of the real estate upon completion. Equity-based *sukuk* arise when funds raised are used in profit/output-sharing contracts. The holders of *mudarabah sukuk* participate in a project by appointing a manager on a profit/loss-sharing basis. *Musharakah sukuk* holders invest and manage the project and share the profit according to a pre-agreed ratio. Under the agency-based *sukuk* such as *wakala*, the holders of the certificates provide funds that are managed by an investment agency in some income-generating activity. The manager or agent gets paid a certain fee for the services provided. The features and properties of various types of *sukuk* are shown in table II.2.1.

Table II.2.1

Sukuk types and features

Sukuk types	Underlying contract	Nature of return	Risk attribution	Returns (fixed/variable)	Tradability
Asset-backed	Leasing	Rent	Assets	Fixed/variable	Yes
Debt	Sale	Profit	Obligor	Fixed	No
Equity	Partnerships	Profit	Project	Variable ^a	Yes
Investment agency	Agency contract	Profit	Project	Variable ^a	Yes

^aThe return can be fixed if the underlying assets of the project (e.g., real estate) yields a fixed return.

Sukuk investors own the rights and bear the risks that these instruments represent. Depending on the contractual basis used, *sukuk* can have fixed or variable returns and may be tradable. *Sukuk* that represent debt or money are not negotiable and can be exchanged at par value only. Along with equity shares, instruments can be securitized and traded at negotiable prices if these represent real physical assets or usufruct.⁴

4 The Islamic Fiqh Academy has a ruling along similar lines (see Ruling No. 30 (5/4), IFA and IRTI, 2000, p. 63).

II.3 Social finance and charitable sector

Islamic teachings have introduced institutions of *zakat* and *waqf* for poverty alleviation and promoting social welfare.⁵ *Zakat*, obligatory for all Muslims, is one of the pillars of Islam that has direct economic bearing on the distribution of income and emancipation of the poor. Considered among one of the essential forms of worship, it requires Muslims whose wealth is more than a specific threshold (*nisab*) to distribute a percentage of their wealth and annual income.⁶ Early Islamic history demonstrates that *zakat* was used as an effective distributive scheme in taking care of the poorer sections of the population in Muslim societies.

Waqf (plural *awqaf*) is a voluntary charitable act that has wide economic implications and can play an important role in increasing sources of welfare. While the main endowment in creating *waqf* was usually immovable assets, such as land and real estate, moveable assets, such as cash, grain to use as seeds, etc., were also used for its creation. Other than providing support in religious matters, *waqf* can be established for provision of socio-economic relief to the needy and the poor, including education, health care and other social purposes. Various *awqaf* were also established for public utilities and research as well as to serve animals and the environment. Examples of the latter types of *waqf* include those created to preserve forests, feed birds and maintain the health of animals such as horses and cats (Kahf, 2000 and 2004).

The *waqf* sector grew significantly in Muslim societies and became the most important institution for poverty alleviation (Cizakca, 2002). The large investments in the social sector empowered the poor and succeeded in transforming the society. The historical significance of the *waqf* in Muslim societies is evident: Schoenblum (1999) reports that in the nineteenth century, three quarters of the arable land of the Ottoman empire was dedicated to *waqf*—including one half of the arable land in Algiers and one third in Tunis. The status of *waqf*, however, has deteriorated in many Muslim countries during contemporary times. Not only have the existing *waqf* become inefficient and unproductive, fewer new *waqf* are being established (Ahmed, 2004). While there are no updated statistics on *waqf* assets in different countries, one estimate shows the total in Indonesia to be \$60 billion.

II.4 Evolution of Islamic finance and international infrastructure institutions

The first contemporary Islamic financial institution operated as a savings and investment cooperative in Mit Ghamar, Egypt, in 1963. The first Islamic bank was launched in Dubai, United Arab Emirates (UAE), in 1975. In the same year, the Islamic Development Bank was established in Jeddah, Saudi Arabia, as a multilateral development bank. In the late 1970s, two Islamic insurance (*takaful*) companies started operations, one in the UAE and the other in Sudan.

The first capital market product was initiated in 1986 in the United States of America with the launching of an Islamic mutual fund (Amanah Mutual Fund). The 1980s also witnessed the establishment of other Islamic non-bank financial institutions including *modaraba* companies in Pakistan, investment banks in Bahrain, microfinance institutions in Bangladesh, credit unions in Trinidad and Tobago and cooperatives in Canada and Thailand.

Islamic banks ventured into large-scale project financing for the first time in Pakistan in 1993 and then in Kuwait in 1996. The growth of other non-bank financial institutions and capital market products continued in the 1990s. Islamic alternatives for conventional pawn shops were established in Malaysia in 1992. In capital markets, the first Islamic index was initiated and a corporate sukuk was issued in Malaysia. The trends continued in the 2000s when more non-bank financial institutions such as the Awqaf Properties Investment Fund, infrastructure funds and leasing companies were established and the capital markets saw the initiations of sovereign *sukuk*, hedge funds and real estate investment trusts (REITs).

Other than increasing the numbers of Islamic banks, non-bank financial institutions and capital markets in different jurisdictions, the 2010s witnessed further developments. A few fintech institutions, such as Shariyah-compliant crowdfunding and asset management platforms, have been launched recently. In capital markets, a few new types of social and green *sukuk* were issued. A brief overview of the developments of Islamic finance over the years is shown in table II.4.1.

5 For detailed discussions see Ahmed (2004), El Asker and Haq (1995) and Cizaka (1996, 1998).

6 The percentage of *zakat* varies from 2.5 per cent paid on assets—such as cash, gold, silver, goods for trade, etc.—to 5 per cent on agricultural products if the crops are irrigated or 10 per cent if they use water from natural sources such as rain, rivers or springs.

Table II.4.1**Evolution of Islamic financial institutions and markets**

Period	Financial institutions	Financial markets
1970s	<ul style="list-style-type: none"> • Banks • Takaful 	
1980s	<ul style="list-style-type: none"> • Retakaful • Mudarabah companies • Microfinance institutions • Cooperatives/Credit unions • Investment banks 	<ul style="list-style-type: none"> • Mutual funds
1990s	<ul style="list-style-type: none"> • Private equity and venture capital firms • Project finance • Pawn shops 	<ul style="list-style-type: none"> • Islamic indices • Corporate sukuk
2000s	<ul style="list-style-type: none"> • Awqaf Properties Investment Fund • Infrastructure fund • Leasing companies 	<ul style="list-style-type: none"> • Sovereign sukuk • Hedge funds • Islamic real estate investment trust
2010s	<ul style="list-style-type: none"> • Crowd funding platforms 	<ul style="list-style-type: none"> • Social sukuk • Green sukuk

Source: Adapted from COMCEC (2016) and modified.

The evolution of different international institutions related to the Islamic finance industry is shown in table II.4.2. The Islamic Development Bank (IsDB) was established in 1975 to foster development in member countries and Muslim communities on non-Muslim countries. Other than having different affiliates such as Islamic Corporation for the Development of the Private Sector (ICD) and Islamic Research and Training Institute, IsDB has been instrumental in establishing other Islamic finance-related supporting institutions such as the Islamic Financial Services Board (IFSB), the International Islamic Financial Market (IIFM), the International Islamic Liquidity Management Corporation (IILM) and the International Islamic Centre for Reconciliation and Commercial Arbitration (IICRCA).

In 1981, Islamic Fiqh Academy (IFA) based in Jeddah, Saudi Arabia was established as an organ of the Organisation of Islamic Cooperation with the key role of issuing legal rulings on contemporary issues. IFA has issued many resolutions related to Islamic finance that have helped set the direction of the industry. Under the patronage of IsDB, AAOIFI was established in Bahrain in 1991 to develop accounting, auditing and Shariah standards for the Islamic finance industry.

The first decade of the 2000s witnessed the establishment of several standard-setting bodies and supporting institutions. Other than establishing the IFSB in Malaysia in 2002 as the regulatory standards-setting body for Islamic banks, *takaful* and capital markets, the IIFM was formed in Bahrain in the same year to develop standardized contracts for Islamic capital markets, corporate finance and trade finance. In 2004, the IICRCA was launched in Dubai, UAE, as an alternative dispute resolution platform for Islamic finance using Islamic law.

Three international institutions were established in Bahrain in the early 2000s with different purposes: the General Council of Islamic Banks and Financial Institutions was launched as a global trade association of Islamic financial institutions to adopt best practices; the Islamic International Rating Agency provides credit and Shariah ratings; and the role of the Liquidity Management Centre (LMC) is to develop Islamic interbank money markets and liquidity instruments. To reinforce the efforts of LMC, the IILM was founded in Kuala Lumpur, Malaysia, in 2010 to develop and issue short-term Islamic instruments for cross-border liquidity management that Islamic financial institutions can use globally.

Table II.4.2

Global institutions for Islamic finance

Period	Legal/Regulatory/Standard-setting institutions	Supporting institutions
1970s		➤ Islamic Development Bank (IDB) , (1975) Jeddah, Saudi Arabia (promote economic development and Islamic finance)
1980s	➤ Islamic Fiqh Academy (IFA) , (1981) Jeddah, Saudi Arabia (issue Islamic legal resolutions on different issues including Islamic finance)	
1990s	➤ Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) , (1991) Bahrain (develop accounting, auditing, and Shariah standards for Islamic finance)	
2000s	➤ Islamic Financial Services Board (IFSB) , (2002) Kuala Lumpur, Malaysia (standard-setting body for regulations and supervision of Islamic banking, <i>takaful</i> and Islamic capital markets) ➤ International Islamic Financial Markets (IIFM) , (2002) Bahrain (develop contracts for Islamic capital markets, corporate finance and trade finance) ➤ International Islamic Centre for Reconciliation and Commercial Arbitration (IICRCA) , (2004) Dubai, UAE (alternative dispute resolution platform for Islamic finance using Islamic law)	➤ General Council of Islamic Banks and Financial Institutions (CIBAFI) , (2001) Bahrain (trade association of Islamic financial institutions to enhance best practices) ➤ Islamic International Rating Agency (IIRA) , (2002) Bahrain (provide credit and Shariah ratings) ➤ Liquidity Management Centre (LMC) , (2002) Bahrain (develop Islamic inter-bank money markets and liquidity instruments)
2010s		➤ International Islamic Liquidity Management Corporation (IILM) , (2010) Kuala Lumpur, Malaysia (develop and issue short-term Islamic instrument for cross-border liquidity management)

Source: Adapted from COMCEC(2016).

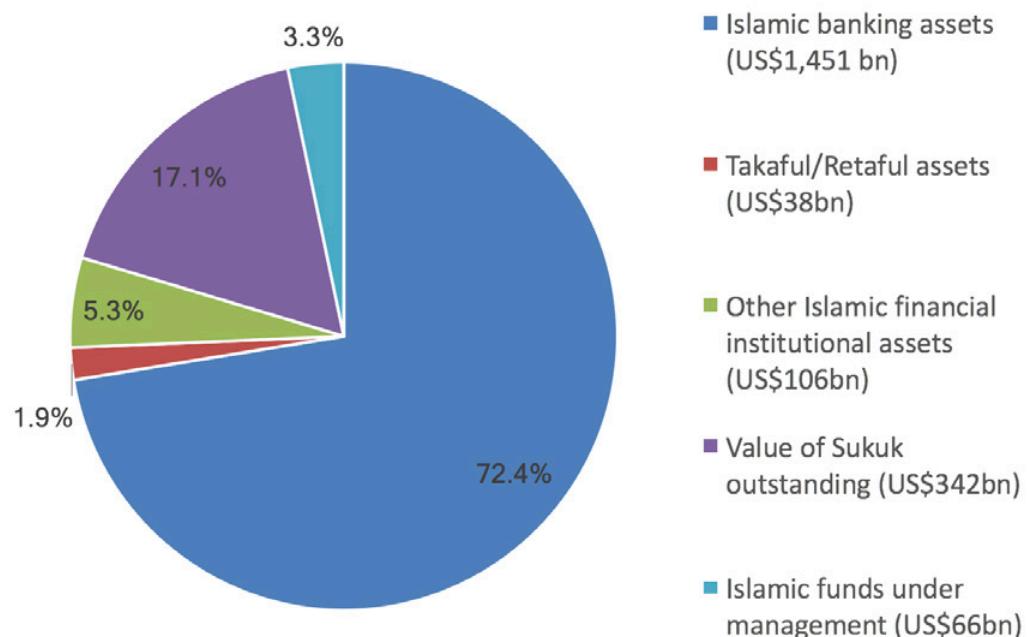
II.5 Volume and features of Islamic finance

IFSB (2017) estimates the total global Islamic finance assets in the first half of 2016 to be \$1.89 trillion, and ICD and TR (2016) puts the value at \$2.003 trillion for the year. Figure II.5.1 shows the distribution of Islamic finance assets across different sectors. The Islamic banking sector dominates the industry, with \$1.451 trillion assets constituting 72.4 per cent of the total followed by sukuk issuances of \$341.92 billion (or 17.1 per cent of total assets). While the *takaful* industry is relatively small with \$37.745 billion (or 1.9 per cent of assets), the non-bank financial institutions have assets worth \$106.35 billion, constituting 5.3 per cent of the total. Islamic funds under management comprise 3.3 per cent of the industry with assets under management of \$66.436 billion.

Figure II.5.2 shows the regional distribution of Islamic finance assets. The Gulf Cooperation Council (GCC) region leads with assets worth \$801.1 billion (or 42.3 per cent of the total), followed by the non-GCC Middle East and North Africa region with assets of \$565.7 (or 29.9 per cent of the total). Whereas Asia also has significant Islamic finance assets amounting to \$425.5 billion (or 22.5 per cent of the total), Africa has a relatively small share of 1.6 per cent of global assets, valued at \$30.6 billion.

Figure II.5.1

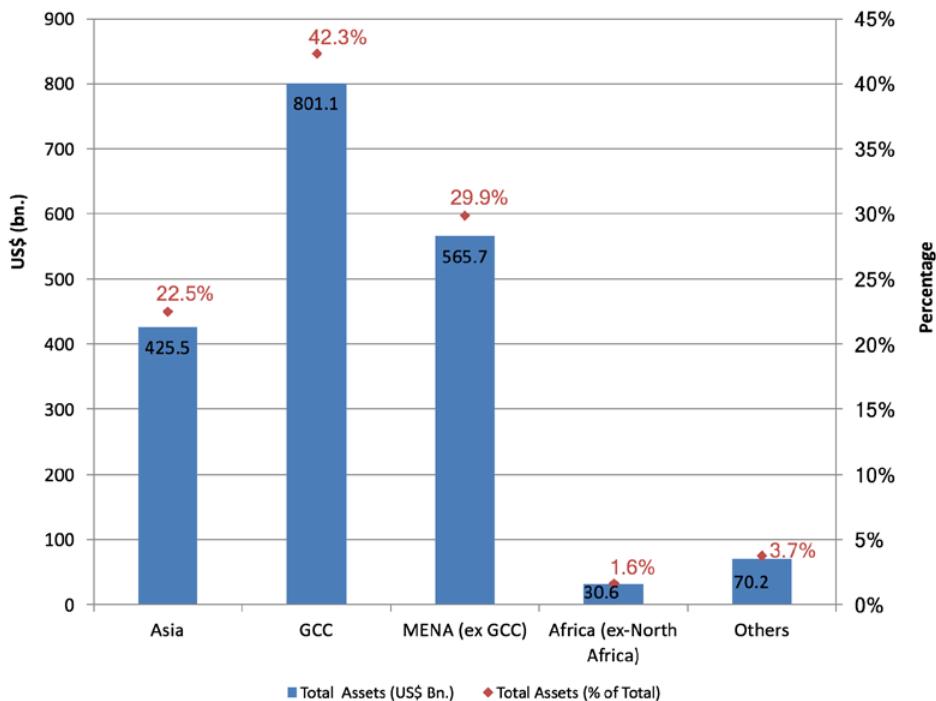
Global distribution of global Islamic financial assets



Source: ICD and TR (2016).

Figure II.5.2

Regional distribution of global Islamic financial assets



Source: IFSB (2017).

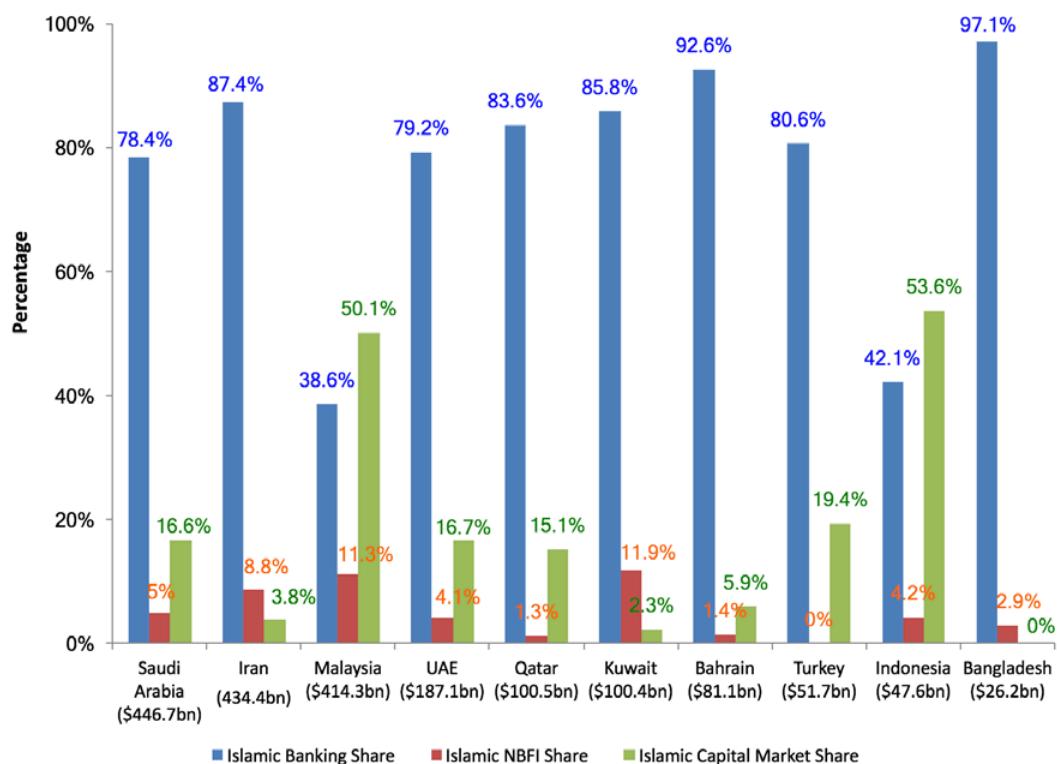
Figure II.5.3 shows the distribution of the Islamic finance industry across different sectors for the ten largest

Islamic finance countries. The figure highlights the relative sizes of the Islamic banking, non-bank financial institutions (which includes *takaful* and other financial institutions) and capital market segments in different countries. The banking sector appears to be dominant in most countries and the capital market is relatively small. For example, while the banking sector in Saudi Arabia—the largest Islamic finance country—comprises 78.4 per cent of the total Islamic finance assets of \$446.7 billion, the capital markets and the non-bank financial institutions represent 16.6 per cent and 5.0 per cent respectively.

The Islamic finance industry in Malaysia appears to be the most balanced, with the banking sector constituting 38.6 per cent of the assets, the capital markets about 50.0 per cent and the share of non-bank financial institutions standing at 11.3 per cent. Other than Malaysia, Indonesia is the only other country that has a larger share of the Islamic capital markets compared to the banking sector. A few countries have not developed certain segments of the industry. For example, in Turkey, the Islamic non-bank financial institutions sector is absent; in Bangladesh, the Islamic capital markets segment does not exist.

Figure II.5.3

Sectoral composition of Islamic finance in countries with the most Islamic finance (percentage of total assets)



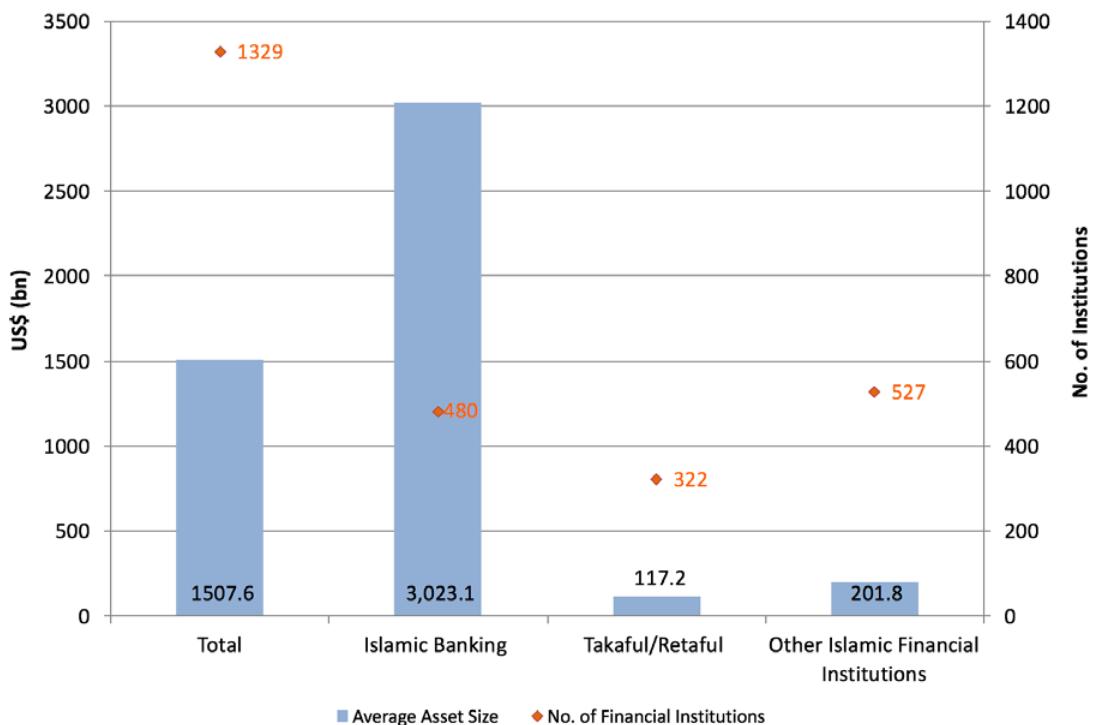
Source: Estimated from ICD and TR (2016).

Islamic financial institutions

Figure II.5.4 shows the number of Islamic financial institutions and their average asset sizes globally in 2016. There were a total of 1,329 Islamic financial institutions with an average of \$1.507 billion in assets. Interestingly, non-bank financial institutions (other than *takaful*) constituted the largest number of Islamic finance institutions, but had a relatively smaller average asset size of \$201.8 million. The Islamic banking sector constituted 480 banks globally and had an average asset size of \$3.023 billion. The number of *takaful* operators stood at 322 and had the lowest average asset size of \$117.2 million.

Figure II.5.4

Number of institutions and average asset size, 2016



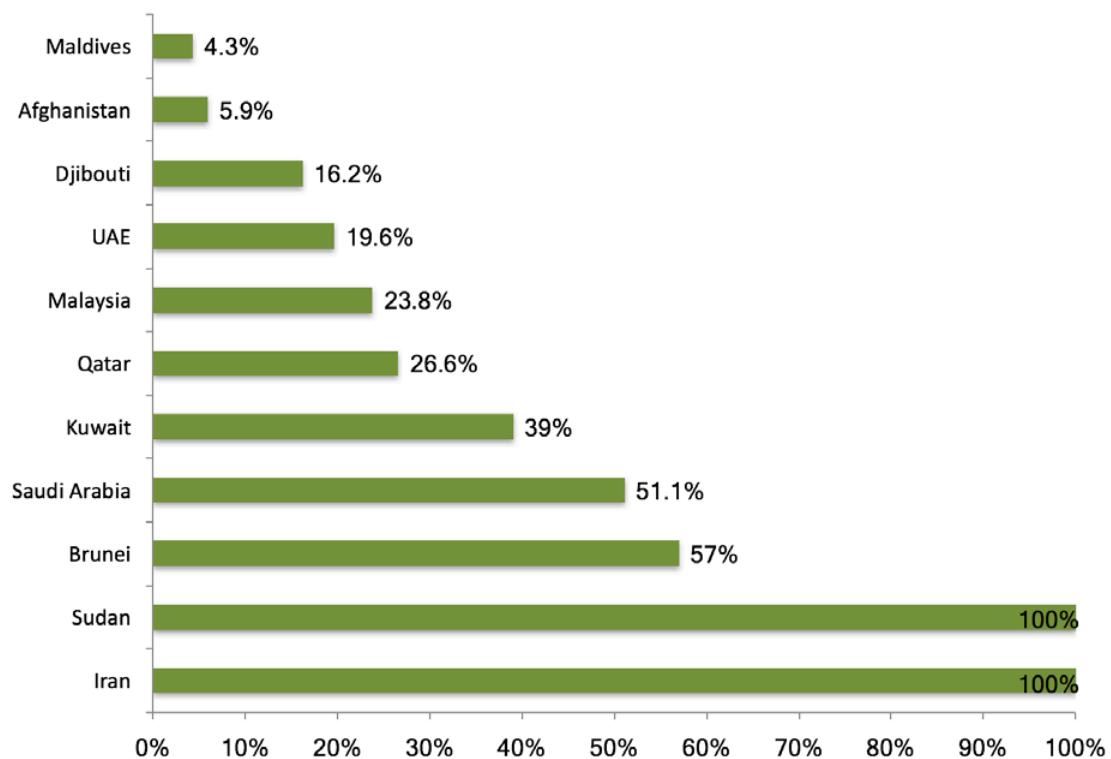
Source: Estimated from ICD and TR (2016)

Figure II.5.5 shows the share of the Islamic banking sector relative to the overall banking sector for a sample of countries. While the whole banking sector in two countries (Iran (Islamic Republic of) and Sudan) is Islamic, in other countries Islamic banking operates along with the conventional banking sector. In two countries (Brunei Darussalam and Saudi Arabia), Islamic banking assets exceed those of their conventional counterparts. The figure shows that in many other countries, the Islamic banking sector has become systemically important with its share of the total banking assets exceeding 15 per cent.⁷

⁷ IFSB (2017) categorizes Islamic banking to be systemically important when its share exceeds 15 per cent of total banking assets.

Figure II.5.5

Islamic banking share



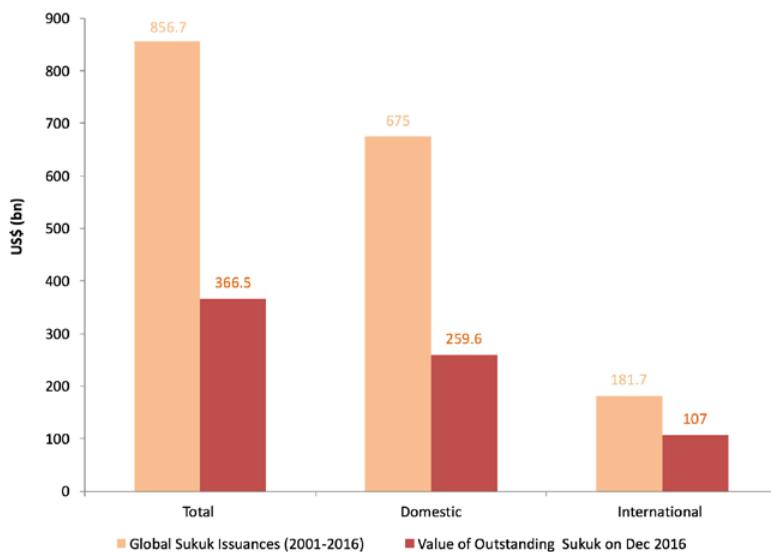
Source: IFSB (2017).

Capital markets

The second largest segment of Islamic finance is the *sukuk* sector. Figure II.5.6 shows the total *sukuk* issuances during the period 2001–2016 and the total outstanding *sukuk* in December 2016. The figure reveals that the bulk of the *sukuk* (78.7 per cent) issued during the period is domestic and more than a fifth was international. Figure II.5.7 shows the issuance of *sukuk* according to issuer type. Most of the *sukuk* issued during the period was sovereign followed by corporates. While quasi-sovereign entities issued relatively less *sukuk*, most of their issuances were international.

Figure II.5.6

Total issuances and outstanding sukuk



Source: Calculated from IIFM Sukuk Report 2017.

Figure II.5.8 provides a breakdown of the share of domestic and international sukuk according to the Islamic contracts used for the period 2010-2015. While the bulk of the domestic sukuk was *murabahah* (debt-based) (64 per cent) and *ijarah* (14 per cent), most of the international sukuk used the *wakala* (43 per cent) and *ijarah* (35 per cent) structures. It should be noted that risk-sharing contracts of *musharakah* and *mudarabah* have not been used extensively in sukuk during the period under consideration.

Figure II.5.7

Total sukuk issuances, 2001-2016

Source: Calculated from IIFM Sukuk Report 2017.

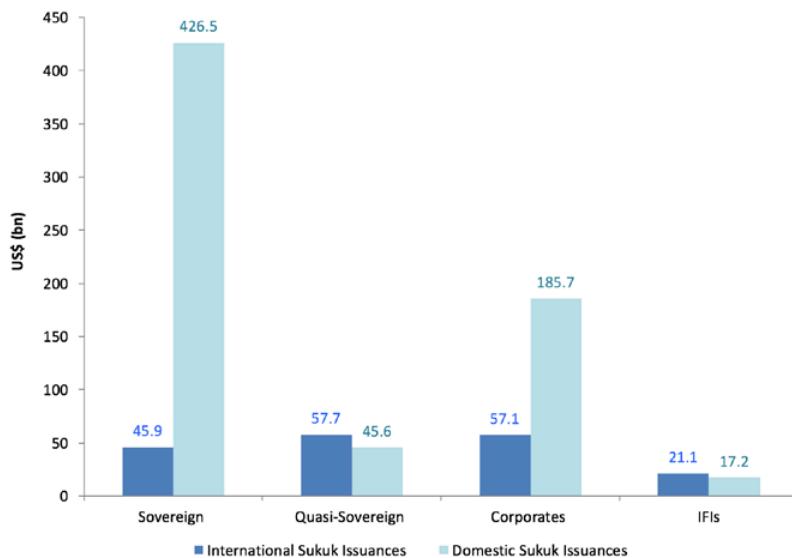
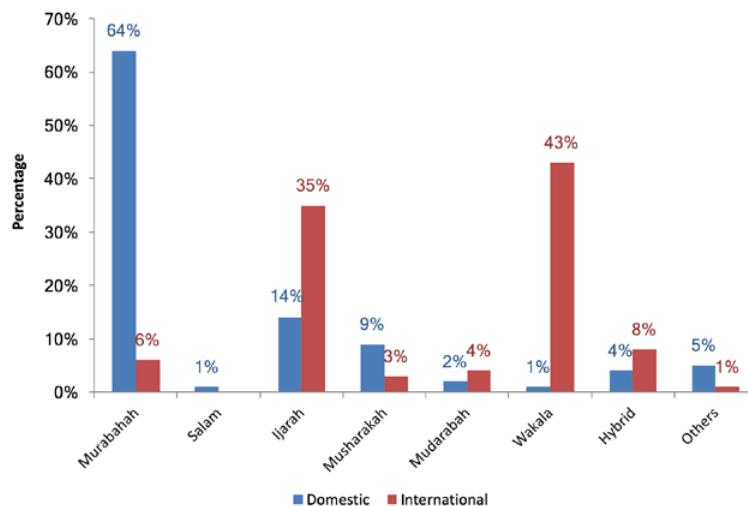


Figure II.5.8

Share of sukuk issuances by contract structure, 2010-2015



Source: Calculated from IIFM Sukuk Report 2017.

III. Islamic finance contribution to infrastructure development

Islamic finance can be considered as an alternative ethical source of finance that can be used by all, irrespective of their religious beliefs. There is, however, a misconception that Islamic finance is for Muslims only. This is far from the truth. For example, Al Rayyan Bank markets itself as an alternative ethical banking option to non-Muslims in the United Kingdom of Great Britain and Northern Ireland and many Malaysian Islamic banks have a significant number of non-Muslim clients. Similarly, many non-Muslim countries, such as Hong Kong SAR, Luxembourg, South Africa and the United Kingdom, have tapped into the sukuk market. Many issuances were oversubscribed, indicating high demand for alternative financing sources. For instance, the \$1 billion Hong Kong SAR sukuk attracted \$4.7 billion in orders from both Islamic and non-Islamic investors; the \$500 million South African sukuk drew \$2.2 billion orders; and the £200 million United Kingdom sukuk garnered orders of £2 billion (Timmons, 2014; Wigglesworth, 2014). Furthermore, a \$500 million socially responsible sukuk was issued in 2014 by the International Financial Facility for Immunization to raise money for a vaccine fund (Chew, 2014a).

Although Islamic finance is not restricted to Muslims or countries with sizable Muslim populations, it is more likely to be used in countries with larger Muslim populations. To explore the potential contribution of Islamic finance to the Sustainable Development Goals (SDGs), the countries considered in this section belong to the Organisation of Islamic Cooperation (OIC). After identifying the infrastructure needs of a sample of OIC member countries, this section discusses the role that different sectors of the Islamic finance industry can play in contributing to project development.

III.1 Infrastructure financing needs

The SDG Index (SDGI), based on official indicators that assess SDG achievement, provides a “quick metrics” of the status of the SDGs.⁸ The SDGI uses 77 indicators to develop an indicator that varies from 0 to 100, with higher scores representing better SDG achievement. Estimated for 149 United Nations member countries that had adequate data, the SDGI includes 44 OIC countries in the sample. To assess the status of the SDGs in OIC member countries, 4 groups of 11 countries are arranged according to their SDGI rankings. Table III.1.1 shows the average SGDI status for four OIC country groupings along with averages of the ten best and ten worst scoring countries

⁸ The SDG Index is jointly developed by Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN). SDSN is an initiative of the United Nations to mobilize “global scientific and technological expertise to promote practical solutions for sustainable development” (see <http://unsdsn.org/about-us/vision-and-organization/>).

to give perspective on their relative status.

Table III.1.1 shows that while the OIC countries in the first and second quarters have relatively higher scores (63.1 and 57.5, respectively), the average SDGI for the third- and fourth-quarter countries (43.9 and 36.1, respectively) are significantly lower than that of the 10 highest scoring countries (80.8). The mean score of SDGI of 11 OIC fourth-quarter countries is close to the score of the ten lowest-ranked countries (32.9), with some countries in the former grouping belonging to the latter. The overall status of the 44 OIC countries shows an average SDGI score of 50.1, indicating the need for massive investment to improve their status.

Table III.1.1

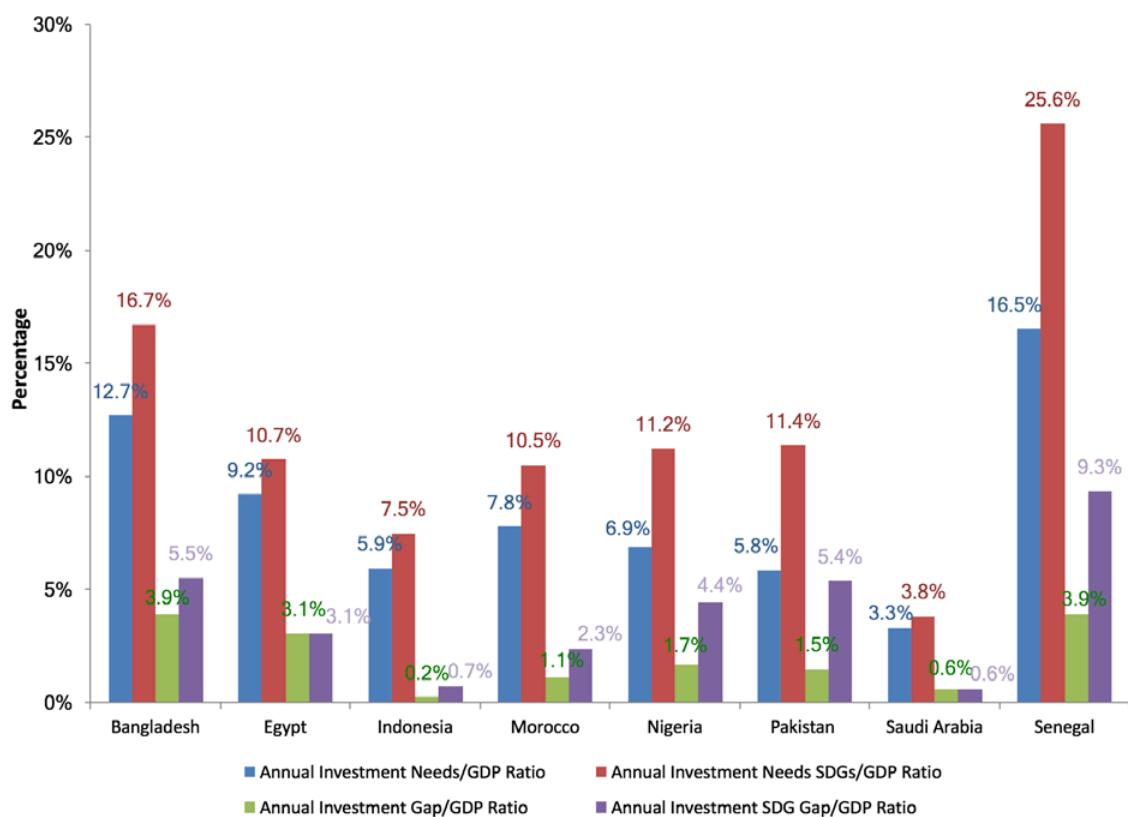
Average SDG Index by different country groupings, 2016

Country groups	Mean SDGI score
Ten highest-scoring countries (Sweden, Denmark, Norway, Finland, Switzerland, Germany, Austria, Netherlands, Iceland, United Kingdom)	80.8
44 OIC member countries	50.1
OIC first-quarter countries (Turkey, Qatar, Tunisia, Kazakhstan, United Arab Emirates, Jordan, Malaysia, Morocco, Azerbaijan, Egypt, Kyrgyzstan)	63.1
OIC second-quarter countries (Albania, Tajikistan, Oman, Iran (Islamic Republic of), Algeria, Saudi Arabia, Lebanon, Suriname, Gabon, Kuwait, Guyana)	57.5
OIC third-quarter Countries (Iraq, Cameron, Senegal, Pakistan, Bangladesh, Uganda, Cote d'Ivoire, Sudan, Togo, Benin, Mauritania)	43.9
OIC fourth-quarter countries (Mozambique, Mali, Gambia, Yemen, Sierra Leone, Afghanistan, Nigeria, Guinea, Burkina Faso, Chad, Niger)	36.1
Ten lowest scoring (Nigeria, Guinea, Burkina Faso, Haiti, Chad, Niger, Democratic Republic of the Congo, Liberia, Central African Republic)	32.9

Source: Bertelsmann Stiftung and Sustainable Development Solutions Network (2017).

Figure III.1.1

Ratio of infrastructure investment gaps to GDP, 2016



Source: Estimated from data from Global Infrastructure Hub, available from <https://outlook.github.org/>, and World Development Indicators, available from <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD>.

Figures III.1.1 and III.1.2 show the projected gaps in infrastructure investment for selected countries. To have a perspective of the relative size and scale of investment needs and gaps, figure III.1.1 presents the need for annual investment as a percentage of gross domestic product (GDP) for 2016 for selected countries. The figures show that some countries would need to invest significantly more to attain the SDGs. For example, for the next 14 years, Senegal would have to invest about 25 per cent of its 2016 GDP and Bangladesh about 17 per cent of its 2016 to achieve the SDGs. For some countries, such as Indonesia and Saudi Arabia, however, the infrastructure investment requirements appear to be low and manageable.

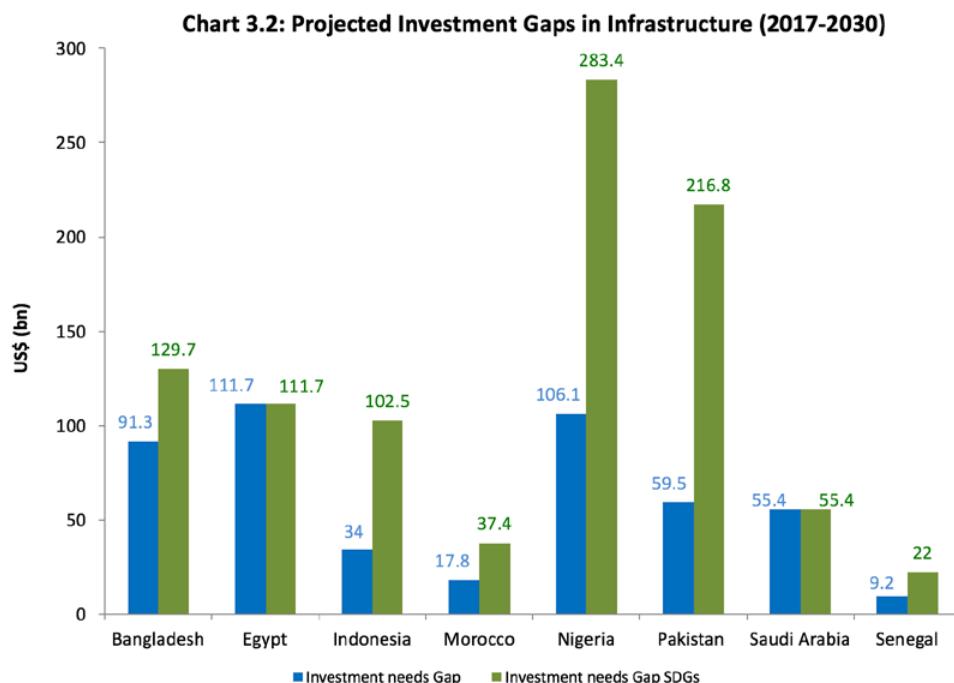
Figure III.1.2 shows infrastructure investment gaps related to the financing needed for normal growth and that needed for meeting the SDGs.⁹ A few countries, such as Nigeria and Pakistan, would require huge amounts of additional infrastructure investment to fill the gaps. At current levels of investment, the projected gaps for these countries would be \$22 billion in Senegal and close to \$130 billion in Bangladesh.

9

For Egypt and Saudi Arabia data on investment gaps for both cases are the same.

Figure III.1.2:

Projected investment gaps in infrastructure, 2017-2030



Source: Estimated from data from Global Infrastructure Hub, available from <https://outlook.gihub.org/>.

Most countries have to raise funds in the coming years to fill the investment gaps in sustainable infrastructure to attain the SDGs. While traditionally the public sector has provided infrastructure investments, it will become difficult for it to fill the gaps due to both the large sums needed and the budget constraints confronting governments. The private sector can play an important role in financing bankable projects in some form of public-private partnership (PPP) framework.

Given the Islamic finance emphasis on real economy, risk sharing and social orientation, one option would be to tap into the private sector to generate the resources. The ways in which different Islamic financial sectors can help increase infrastructure investment are presented below.

III.2 Islamic banking sector and infrastructure financing

Since infrastructure financing involves large amounts of funding, bank financing usually takes the form of syndication (i.e., a group of banks pooling resources to finance projects). Conventional syndication would involve one or a few lead banks acting as an arranger and other banks contributing to financing projects using interest-based loans. The arranger is responsible for assessing different aspects of the project and managing the deal. Although Islamic finance syndications would have similar operational formats and procedures as their conventional counterparts, contracts for syndicate formation and financing the project would differ. The relationship between the lead bank and the other banks will take either a *wakala* or *mudarabah* format, and financing of projects would use one of the Shariah-compliant contracts, such as *istisna*, *murabahah*, *tawarruq*, *ijarah*, *mudarabah* or *musharakah*.

Contracts that create debt (*murabahah*, *istisna* and *tawarruq*) are commonly used in syndicate financing. Under *murabahah*, the syndicate purchases the asset being financed and then sells it to the project company at a markup. *Istisna* is used in projects involving construction, whereby the banks advance funds for the project that is delivered at a later date. *Tawarruq* is used when the project company needs cash. Since debt is created by buying and selling of commodities, no direct linkages exist between the financing and project assets. Debt-

based structures are not liquid as they cannot be sold, cannot be repriced and are usually used for transactions with relatively short-term tenors.

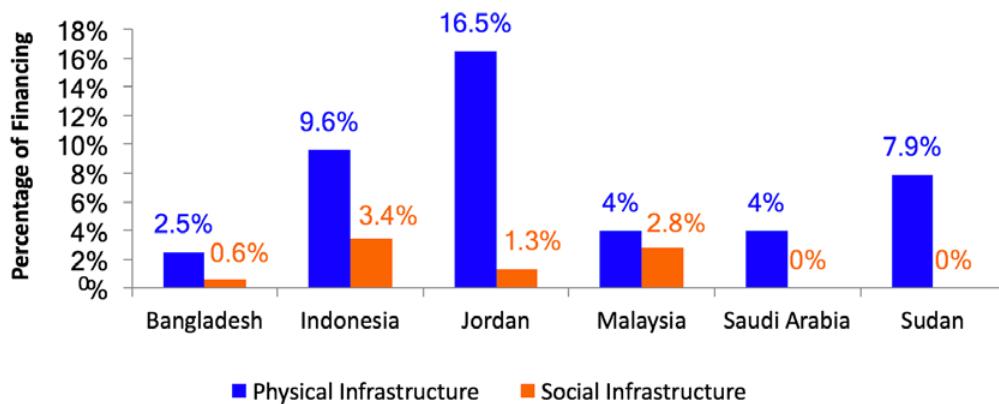
Ijarah-based instruments can have adjustable returns and be used for long-term financing. In principle, both *mudarabah* and *musharakah* can be used in syndicated financing; however, they are employed infrequently due to the inherent risks involved. Since infrastructure project structures are complex, a combination of different contracts is used to satisfy the risk-return preferences of different stakeholders. For example, a common structure used is *istisna-ijarah*, whereby the *istisna* is used for financing the project assets; those assets are then leased to the financee using the *ijarah* contract.

Islamic banks and infrastructure finance

The Islamic banking sectors' contribution to infrastructure-related sectors for a sample of countries in 2016 is shown in figure III.2.1. Although the results show variations in financing for the physical and social infrastructure sectors, the overall contribution to these sectors appears to be low.

Figure III.2.1

Financing of physical and social infrastructure by Islamic banks in selected countries, 2016

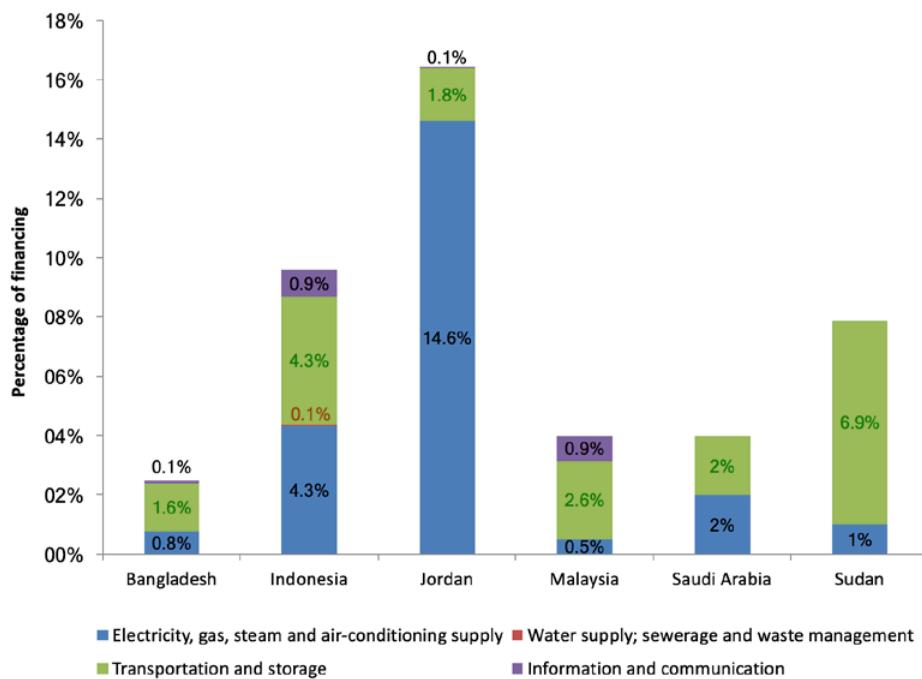


Source: Estimated from IFSB PSIFIs data, available from http://www.ifsb.org/psifi_03.php?selfolder=...

A further breakdown of financing according to specific sectors is shown in figures III.2.2 and III.2.3. Figure III.2.2 shows that most of the physical infrastructure financing by Islamic banks goes to the transportation and electricity and gas sectors. Investments in water and information and communications sectors appear to be relatively small with no financing of these sectors undertaken by Islamic banks in Saudi Arabia and Sudan.

Figure III.2.2

Financing of physical infrastructure by Islamic banks in selected countries, 2016

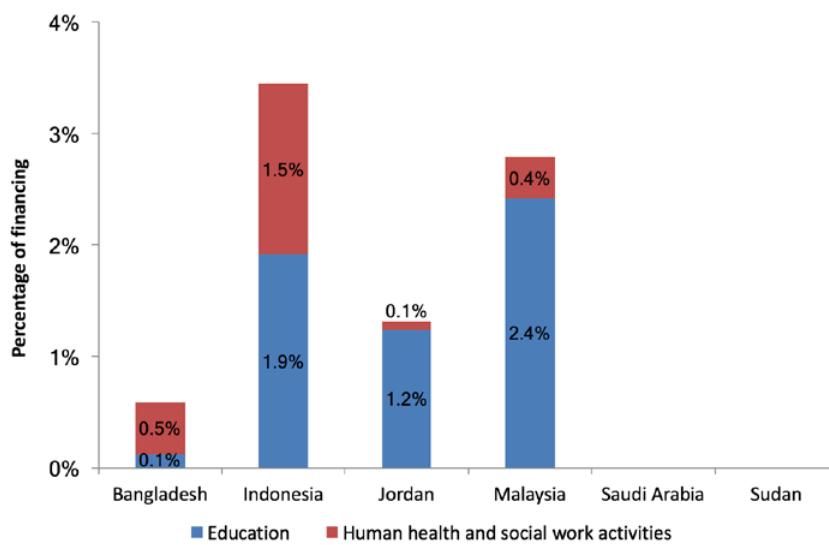


Source: Estimated from IFSB PSIFIs data, available from http://www.ifsb.org/psifi_03.php?selfolder=.

Figure III.2.3 shows the breakdown of financing of the social infrastructure sectors of education and health. Islamic banks in Indonesia invest in both social sectors; in Jordan and Malaysia, the focus is more on education. The figure shows no involvement of Islamic banks with the social sectors in Saudi Arabia and Sudan.

Figure III.2.3

Financing of social infrastructure by Islamic banks in selected countries, 2016



Source: Estimated from IFSB PSIFIs data, available from http://www.ifsb.org/psifi_03.php?selfolder=.

Given that Islamic banks are young and smaller in size, they participate in projects by financing a tranche in a larger project. Many projects are predominantly financed by conventional banks, with Islamic banks financing a portion. For example, one of the first Islamic project financing deals in 1994 involved a \$92 million bridge financing tranche, with limited recourse, in a \$1.8 billion Hub River project in Pakistan by Al Rajhi Bank and Investment Corporation and the Islamic Investment Bank. The Islamic facility was used to procure and install power turbines for the hydroelectric project (Clifford Chance, 2009). However, as the Islamic finance industry expands, the opportunities for financing larger shares of projects using *Shariah*-compliant financing may grow. Two cases in which syndicated financing were wholly done by Islamic banks are presented in boxes III.2.1 and III.2.2.

Box III.2.1

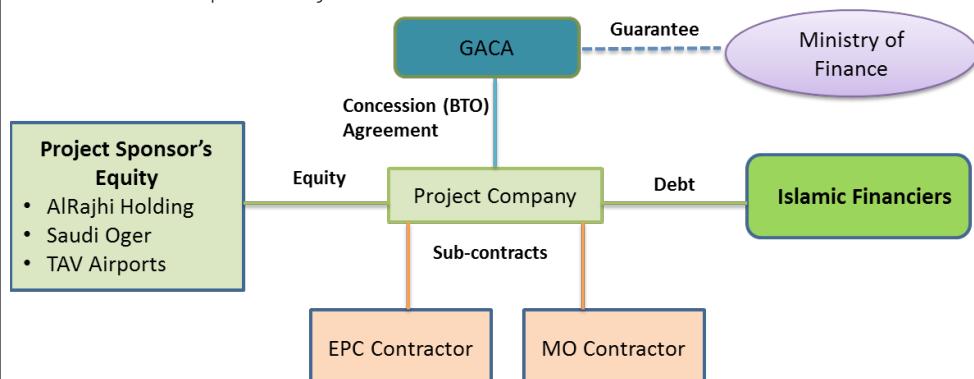
Case 1: Madinah International Airport, Saudi Arabia*

In line with its privatization policies, the General Authority of Civil Aviation (GACA) of Saudi Arabia decided to involve the private sector in the expansion of the Prince Mohammad bin Abdulaziz International Airport in Madinah. The airport is located 12 kilometres from Madinah, one of two holy cities in Saudi Arabia that is frequented by millions of *umrah/hajj* pilgrims every year. The capacity of the airport was five million passengers when the project was initiated. Since traffic grew at the rate of 17 per cent per annum during 2004–2009, reaching 3.5 million passengers in 2009, GACA expected the traffic to increase to 9 million in 2025 and 15 million in 2035. The goal of expanding the airport was to accommodate the expected increase in passenger numbers and promote Madinah as an entry/exit hub for pilgrims.

The expansion of the airport was planned in two phases, with the first phase targeted to increase the capacity to eight million passengers by 2015. The new project involved building a brand new terminal, apron and taxiways; extending runways and access roads; creating a new airport system; and building other ancillary buildings (all together, referred to as “airport assets”). As GACA planned to develop the airport with the private sector using a public-private partnership structure, project proposals were solicited in 2010 and GACA selected the TIBAH consortium (Al Rajhi, Saudi Oger and TAV Airports, Turkey) for construction and operation of the new airport. A build, transfer and operate (BTO) contract was signed with the project company, Tibah Airport Development Company, in October 2011 that included a concession period of 25 years starting 20 June 2012. The project company would transfer management of the airport to GACA upon its completion, while retaining the operating rights during the concession period.

Figure III.2.1A

Madinah International Airport financing structure



The project was implemented by establishing an Islamic Facility Agent (IFA) that acted as the facility agent and owned the rights of building the project assets. While Islamic banks entered into an investment agency (*wakala*) agreement with the IFA, the IFA had an *istisna* arrangement with the project company to construct the airport assets. The estimated cost of the project was \$1.141 billion, financed by sponsors' equity (\$357 million), senior Islamic facility (\$701 million) and pre-completion revenue (\$80 million).

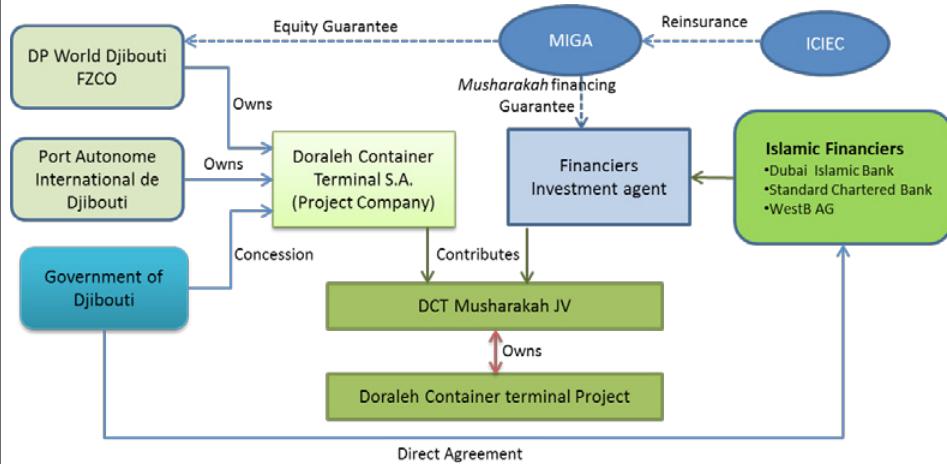
An equity bridge facility tranche of \$436 million was provided by Islamic banks to cover sponsors' equity contribution and pre-completion revenues. The National Commercial Bank provided funding of \$300 million in the senior Islamic facility and \$145 million in the sponsors' equity contributions. With 18 years of financing tenor, the average debt service coverage ratio was estimated at 1.55x and a minimum of 1.35x. The BTO contract stipulated revenue-sharing arrangements between the project company and GACA. Under the contract, GACA was obliged to pay 90 per cent of the senior facility in case of termination of the contract prior to completion and 100 per cent for termination after the completion. The Ministry of Finance provided guarantee for paying GACA termination payments obligations.

Source: World Bank and others (2017); Duranni (2012).

*Mansoor Durrani, Head of Project Finance, National Commercial Bank provided slides and details of the project.

Box III.2.2**Case 2: Doraleh Container Terminal**

Djibouti's Doraleh Container Terminal project was initiated in 2007 and wholly financed by Islamic syndication. DP World of the United Arab Emirates and Port Autonome International of Djibouti were the key sponsors of the project and they established Doraleh Container Terminal S.A. (DCT) as the project company. The port was developed under a 30-year concession agreement. DP World provided \$5 million in equity for the project and \$422 million was raised through Islamic syndication. Dubai Islamic Bank, Standard Chartered Bank and WestLB AG provided the funds in the syndicate through an investment agent.

Figure III.2.2A**Doraleh Container Terminal financing structure**

The Islamic project financing combined four contracts of *musharakah*, *istisna*, *ijarah* and *takaful*. *Musharakah* was used by the project company (DCT) and the financiers to form a partnership to procure the assets of the project. The partnership appointed DCT as their agent to construct the terminal within the stipulated time by using the *istisna* contract. The payments for the construction were made from the *musharakah* to DCT as multiple drawdowns. The *ijarah* agreement was used to lease the financier's co-ownership interests in the project to DCT in return for periodic rental payments. The financiers received advance rental payments during the construction period and after the completion of the terminal they received rental payments that had both fixed and floating components.

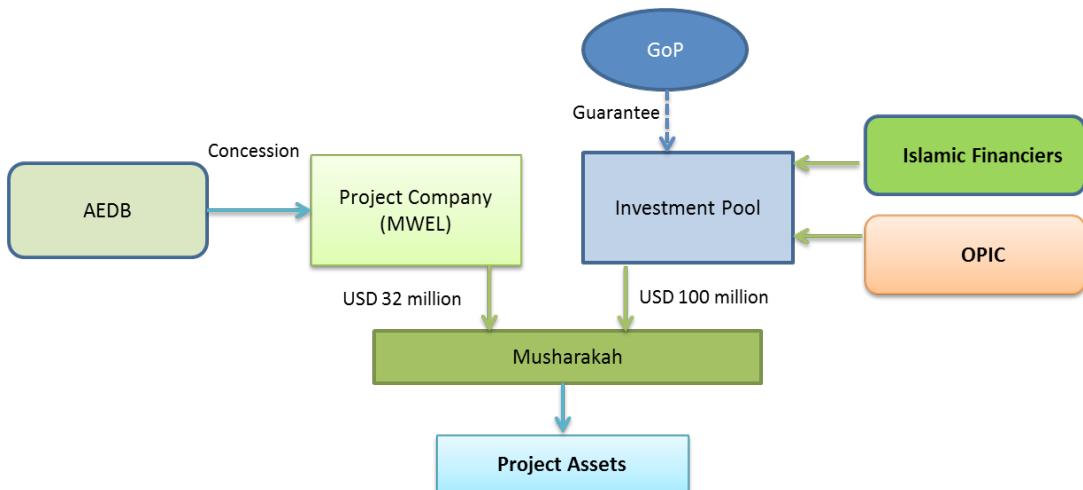
The Multilateral Investment Guarantee Agency (MIGA) provided the guarantees to the investors for \$427 (\$5 million to DP World and \$422 million to the financiers) against risks of breach of contract, restrictions on currency transfers, expropriation, and civil disturbance and war. Islamic Corporation for the Insurance of Investment and Export Credit in turn provided reinsurance for \$50 million to MIGA.

Source: World Bank and others, (2017); MIGA (2008).

Case 3 presents Master Wind Energy Limited (box III.2.3), the first green syndicated financing undertaken by Islamic banks, done in partnership with an international conventional financing facility in Pakistan to finance wind turbines for electricity generation.

Box III.2.3**Case 3: Master Wind Energy Limited, Pakistan**

Master Wind Energy Limited (MWEL) was established by Master Group in Pakistan to initiate a wind farm consisting of 33 wind turbines to generate 50 megawatts of electricity. The goal was to implement the Government of Pakistan's desire to increase the share of renewables and reduce dependence on thermal generation in the energy sector. The Alternative Energy Development Board provided 1,408 acres of land in Jhimpir, Sindh, for the wind farm on a 20-year concession period. The total project cost was \$132 million out of which \$100 million was raised from external sources. External financing was split equally between the US-based Overseas Private Investment Corporation and a syndicate of Islamic banks (Meezan Bank Limited, Habib Metropolitan Bank Ltd. and the Bank of Punjab). The project benefitted from the Upfront Tariff Regime announced by the Government in 2013. The feed-in-tariff (along with permitted indexations and escalations) was applicable throughout the twenty-year concession period. The concession was backed by sovereign guarantees given by the Government under the concession agreements.

Figure III.2.3A**Master Wind Energy Limited sukuk structure**

The Islamic component of the financing used *musharakah* in the construction phase and *ijarah* in the operation phase. In the construction phase, Islamic financiers and project sponsors entered into a partnership with MWEL to co-own the project assets on an agreed upon ratio. The financiers appointed Meezan Bank to act as their agent and the *musharakah* agreement appointed MWEL to construct the project assets. MWEL is responsible for operations and maintenance of the assets. After the completion of the project in October 2016, the *ijarah* contract became active and MWEL leased the assets of financiers and paid lease rentals on a quarterly basis. The project assets are insured and in case of total loss the insurance claims will be distributed among the financiers and project sponsors according to their shares of *musharakah* assets.

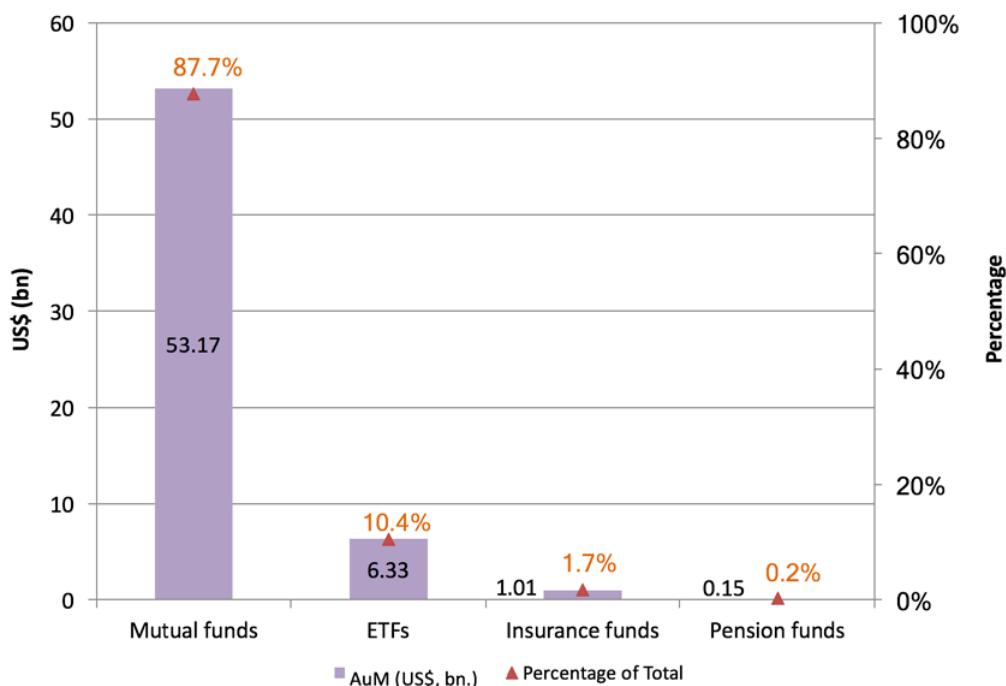
Source: World Bank and others, (2017); Daily Time (2016); Master Wind Energy Limited (undated).

III.3 Non-bank financial institutions/philanthropic sector

The non-bank financial institutions form a small segment of the Islamic finance industry. While data on *takaful* and non-bank financial institutions in section II reveals their relative small size, figure III.3.1 shows the size of different types of global Islamic funds. The bulk (87.7 per cent) of the Islamic funds is in the form of mutual funds followed by exchange-traded funds (10.4 per cent). Insurance and pension funds constituted a very small part of the Islamic funds, with the former being 1.7 per cent of the total and the latter negligible at 0.2 per cent.

Figure III.3.1:

Global Islamic funds: fund types, 2014



Source: Calculated from TR Global Islamic Asset Management Outlook 2015, available from <https://www.scribd.com/document/273997472/Global-Islamic-Asset-Management-Outlook-2015>.

Although no specific information is available on the scope of involvement of the funds in infrastructure-related sectors, the small size of Islamic funds would imply that investment in these sectors would be low. Other than the size of Islamic funds, the issue of quality is also important when it comes to sustainable investments that can contribute to achieving the SDGs. One of the criticisms of the Islamic funds industry is that it does not consider sustainable and impact investments. *Shariah*-compliant stocks are screened for legal compliance in terms of prohibited industries and fulfilling certain financial screening criteria. Since ESG issues are not included in screening to identify Islamic stocks, screening-related sustainability features are absent in Islamic investment universe (BinMahfouz and Ahmed, 2014). Given the small size of the non-bank financial institutions in general and Islamic funds in particular, along with the absence of ESG-related screening to identify stocks, the impact of these sectors on SDGs has been relatively small.

The non-profit sector can play an important role in contributing to infrastructure in many Muslim countries. As indicated in section II, *waqf* is a significant sector in many Muslim countries and can potentially be used to support some of the infrastructure projects. Newer types of *waqf* that use cash have been created in the form of endowments, which can be a source of funds for investment in sustainable infrastructures. Furthermore, some *waqf* can also provide social infrastructure, such as in the areas of health and education. Case 4 on Waqaf An-Nur, which provides health services to the poor in Malaysia, is an example of the contribution of *waqf* in enhancing social infrastructure and services.

Box III.3.1**Case 4: Waqaf An-Noor, Malaysia**

Johor Corporation (JCorp) is the investment organization for the state of Johor, Malaysia. Since its establishment in 1968, JCorp has become one of the largest conglomerates in the country with businesses in oils, food, restaurants, hospitality, property, logistic services and health services. It also has different activities covering corporate social responsibility, including a corporate waqf that was initiated with an initial contribution of RM 200 million from JCorp. Waqaf Al-Nur Corporation Berhad (WANCorp) was registered in 2006 as a limited liability company with assets and stocks kept as endowment. WANCorp holds equity of several listed companies in the endowment and derives income from the dividends distributed annually. After keeping a part for reinvestment, the remaining income is used for different corporate social responsibility programmes.

An important initiative of WANCorp is the network of Waqaf An-Nur clinics and a hospital to serve the health-care needs of the poor. Joining hands with a sister organization of JCorp KPJ Healthcare Berhad, WANCorp has established 18 health clinics (Klinik Waqaf An-Nur or KWAN) across the country, four mobile clinics in Kuala Lumpur, Selangor and Johor and Hospital Waqaf An-Nur (HWAN) in Pasir Gudang, Johor. People from all walks of life can avail outpatient treatments from KWAN by paying a minimum fee of RM 5 only. A total of 1.398 million treatments were provided by clinics and hospital until December 2016. Subsidized treatment for kidney-related problems are provided through dialysis centres, among others, that operate alongside clinics.

Source: World Bank and IDB (2016); JCorp (2016).

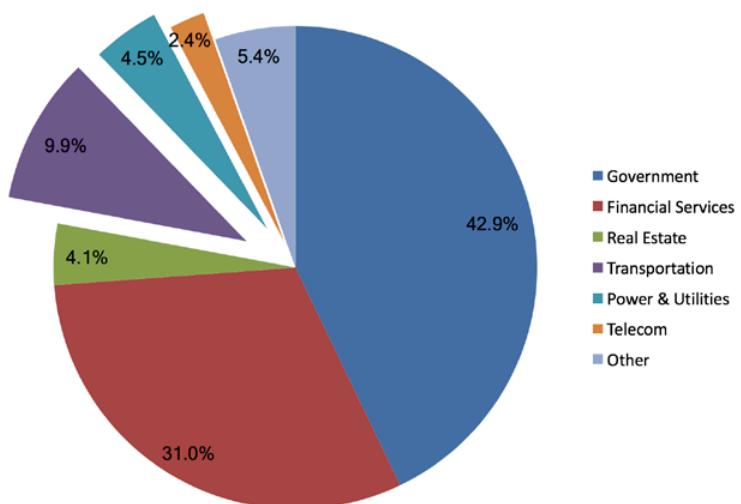
III.4 Islamic capital markets/sukuk and infrastructure financing

Although equity takes the form of initial capital for project companies, it is usually not tradable unless the project company is listed. *Sukuk* can be used to raise funds from different sources to finance infrastructure projects. Figure III.4.1 depicts the share of *sukuk* issuances during 2016 by different sectors. While Governments are still the largest issuers of *sukuk*, accounting for about 43 per cent of the issuances, the financial services sector comes in second with 31 per cent of the issuances. The issuances for the infrastructure sectors are relatively small, with the transport sector issuing 9.9 per cent of the securities, followed by power and utilities (4.5 per cent) and telecom (2.4 per cent).

Figure III.4.2 shows the distribution of the total *sukuk* issuance during 2001-2016 according to their maturities. Nearly 60 per cent of the *sukuk* issued were long term (i.e., had maturities of more than one year). The share of the short-term *sukuk*, however, indicates that there were significant issuances of *sukuk* for money market and liquidity management purposes. This also may be an indication of the preferences of both the issuers and investors towards short-term investments.

Figure III.4.1

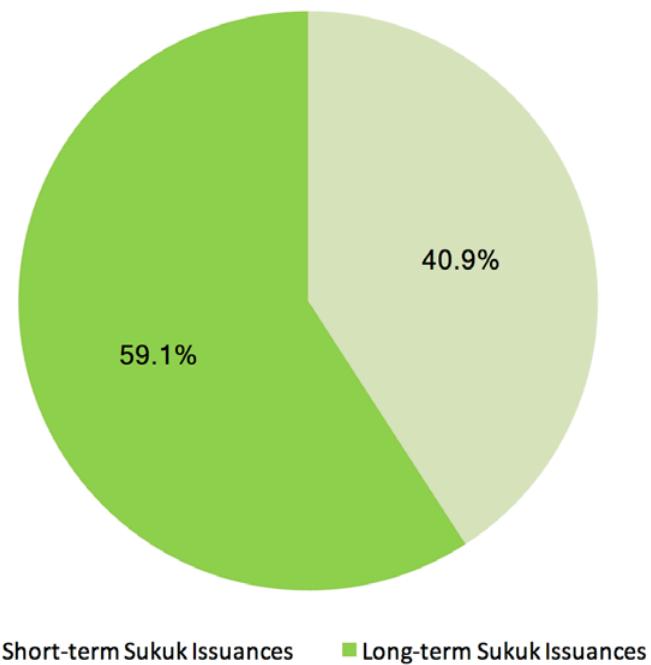
Sukuk issuances by sector, 2016



Source: IFSB (2017).

Figure III.4.2

Short- and long-term sukuk issuances, 2001-2016

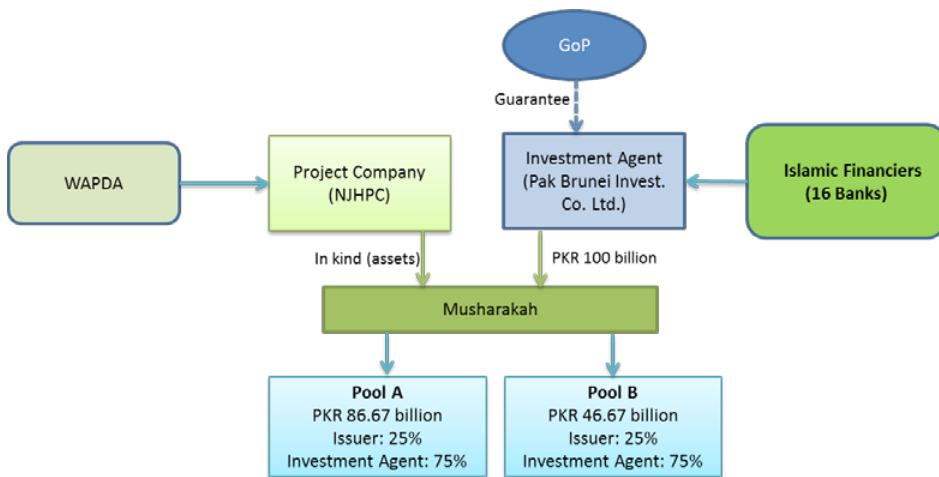


Source: IIFM (2017).

The percentages shown in figure III.4.1 indicate that *sukuk* have not been used to their fullest potential for investment in infrastructure. Moving forward, however, *sukuk* can be used by the private sector to tap funds for financing infrastructure. Some case studies below show successful examples of *sukuk* issuances that were used to finance infrastructure projects. While cases 5, 6 and 7 are examples of *sukuk* used to raise funds for investments in physical infrastructure projects, case 8 is an example of a social impact *sukuk*.

Box III.4.1**Case 5: Neelum Jhelum Sukuk, Pakistan**

Water and Power Development Authority (WAPDA) is a government-owned public utility responsible for power and water in Pakistan. The authority planned the construction of the 969 megawatt Neelum Jhelum Hydropower dam and decided to issue sukuk to partially finance the project. To this effect, it established the Neelum Jhelum Hydropower Company (Private) Limited (NJHPC) that issued sukuk certificates worth PKR 100 billion to fund the project, making it the biggest funds mobilization for a public sector entity. Pak Brunei Investment Company Limited acted as the investment agent for the investors, a consortium of 16 banks led by the National Bank of Pakistan. The sukuk had a maturity of eight years with a two-year grace period, and received a AAA rating by JCR-VIS, a local credit rating agency.

Figure III.4.1A**Neelum Jhelum sukuk structure**

NJHPC and an investment agent formed a *musharakah* wherein a 75 per cent share of the *musharakah* assets were sold to the investors and the issuer contributed the remaining 25 per cent in kind. The asset share of the investors was structured as beneficial interest of the project and distributed into two pools (A and B) of *musharakah* assets worth PKR 100 billion. The project's assets were held in a trust and the investment agent acted as a trustee to ensure that they were held for the benefit of the investors. An *ijarah* contract leased the investors' share of the assets to NJHPC and the Payments Agreement details the semi-annual variable rental flows from the latter to the former. Structured as a diminishing *musharakah*, the sukuk have an amortizing structure with the principal redemption starting from the third year. The investment agent was responsible for taking out *takaful* to cover the ownership-related risks.

Source: World Bank and others (2017); IIFM (2017).

Box III.4.2**Case 6: Danalnfra Retail Sukuk**

Danalnfra Nasional Berhad (Danalnfra), a company owned by the Ministry of Finance of Malaysia was established in 2011 to undertake funding of infrastructure projects assigned by the Government of Malaysia. The first infrastructure project initiated by Danalnfra was the Klang Valley Mass Rapid Transit (KVMRT) Project. The population in the Klang Valley was projected to grow from 6 million to 10 million by 2020. Avoiding gridlocks on roads, the rail-based public transport provides a sustainable transportation system moving large numbers of people quickly and efficiently. With the increase in productivity from better mobility in total, an average of RM 24 billion in gross national income per year will be generated over the next ten years.

Figure III.4.2A**Danalnfra retail sukuk structure**

Danalnfra has raised a total of RM 2.5 billion (\$789.14 million) by selling different tranches of sukuk. One series of sukuk used included retail sukuk targeted towards retail investors. The series comprised three sukuk of RM 300 million (10 year issued February 2013), RM 100 million (15 year issued October 2013) and RM 100 million (7 year issued July 2014) paying profit rates of 4.0 per cent, 4.58 per cent and 4.23 per cent, respectively. The sukuk was structured using a commodity murabahah (tawarruq) contract and coupon payments are made semi-annually. Priced at MYR 100 per unit and requiring a minimum subscription of MYR 1000. Investors can buy the sukuk by using, among other modes, internet banking or automated teller machines (ATMs) of participating banks and financial institutions (Star, 2014; DNB, 2014). Danalnfra Retail Sukuk is listed and traded on Bursa Malaysia.

Source: DINB (2014a and 2014b); Haneef (2016).

Box III.4.3**Case 7: East Klang Valley Expressway Sukuk, Malaysia**

East Klang Valley Expressway (EKVE) is planned to be a 36.16 kilometre expressway with a dual two-lane tolled highway between Bandar Sungai Long and Ukay Perdana. The expressway forms the eastern segment of the Kuala Lumpur outer ring road connecting the southern and eastern part of the Klang Valley. Ahmad Zaki Resources Bhd (AZRB) won a contract to construct the expressway from the Government in 2008 and signed a 50-year concession agreement using the build-operate-transfer concept with the Government to design, construct, operate and maintain the expressway in 2013.

With an estimated cost of RM 1.55 billion to finance the project, AZRB issued a RM 1 billion tawarruq-based sukuk with a tenor of 22 years to partly finance the expressway's construction. A special purpose vehicle called EKVE Sendirian Berhad (EKVESB) was established to become the agent of the sukuk holders to manage their interests. EKVESB carried out the tawarruq transactions with a commodity-trading participant to purchase and sell commodities, resulting in RM 1 billion in cash for EKVESB and creating an obligation of paying a deferred sale price to the sukuk holders in periodic instalments over the tenor of the contract.

Figure III.4.3A**East Klang Valley Expressway sukuk structure**

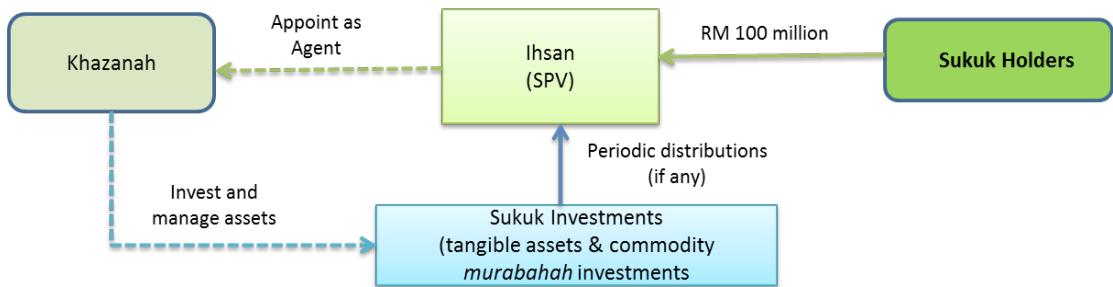
The sukuk are guaranteed by Bank Pembangunan Malaysia Bhd and Maybank Islamic Bhd, and got a rating of AAA (bg)/Stable from RAM Ratings. The rating is better than the company's stand-alone rating and reflects the AAA-ratings of the guarantors Maybank Islamic Berhad and Bank Pembangunan Malaysia Berhad.

References: World Bank and others (2017); RAM (2017).

Box III.4.4**Case 8: Khazanah sustainable and responsible investment sukuk**

Khazanah Nasional Berhad (Khazanah) issued a RM 100 million sustainable and responsible investment sukuk in 2015 to fund schools through the non-profit foundation Yayasan AMIR (YA) Trust School Programme. YA was founded by Khazanah to improve the accessibility of quality education in Malaysian government schools through a public-private partnership arrangement with the Ministry of Education. The first of its kind, the seven-year tenor sukuk was issued via an independent special purpose vehicle Ihsan Sukuk Berhad (Ihsan) which plans to raise a total of RM 1 billion through its sukuk programme. The sustainable responsible investment (SRI) sukuk was fully subscribed, with participation from foundations, corporations, banks, pension funds and management companies. CIMB Investment Bank Berhad was the lead manager and the sukuk was structured using the principle of *wakalah bil Istithmar*.

The sukuk was priced with a price guidance of 4.30 per cent per annum. Key performance indicators (KPIs) that would be assessed over a five-year timeframe were identified to measure social impact. If the KPIs were to be fully met at maturity, the investors would forgo or contribute up to 6.22 per cent of the nominal value due under the sukuk. This would reduce the effective yield to 3.5 per cent and be considered as payment for success, recognizing the positive social impact produced by YA, and reflecting the social responsibility of the sukuk holders. If KPIs are not met or met only partially, investors receive up to the nominal value of the sukuk as agreed upon at issuance. The sukuk also had the option of converting the investment into a donation at any point during the tenure of the instrument. By the end of 2016, the Trust Schools Programme was implemented at 83 schools in 10 states, providing better outcomes for over 65,000 Malaysian students.

Figure III.4.4A**Khazanah**

In 2017, Khazanah issued the second tranche of RM 100 sukuk that also has a retail component allowing individuals to participate in the scheme. The sukuk have features of the step-down of returns upon achieving KPIs and the option to donate the principal to the Trust School Programme.

Source: Khazanah press releases, 2015 and 2017.

IV. Conclusion and recommendations

Development of sustainable physical and social infrastructure will be key to achieving the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). This paper highlighted the huge infrastructure investment needs and the gaps in fulfilling them. While Governments have traditionally been responsible for developing infrastructure, most of them are burdened with large deficits and debt limiting their ability to generate further resources. There is, therefore, a need to come up with innovative ways in which new players and financiers can fill the gaps and contribute to the development of sustainable infrastructure. The private and non-profit sectors can contribute to the development of different types of sustainable infrastructure. In particular, the financial sector can play an important facilitating role in mobilizing funds for infrastructure projects.

This paper examined the role that Islamic finance can play in promoting infrastructure financing. The current status of the SDGs in many OIC member countries is poor and the infrastructure investment gaps are huge. Achieving the SDGs would therefore require mobilizing a vast amount of resources to fill the gaps. In this regard, Islamic finance can play a facilitative role. Not only is Islamic finance more acceptable and conducive to the cultural and religious norms of populations in Organisation of Islamic Cooperation (OIC) member countries, the principles and values of Islamic finance, such as emphasis on risk sharing, links to real economy and social orientations, conform with investments in infrastructure projects.

The paper shows that while the industry as a whole has made relatively small contributions to the infrastructure sector, there is growing use of Islamic finance in countries where the industry is more developed. Other than the small size, other factors that inhibit the financial sector's role in infrastructure financing also apply to Islamic

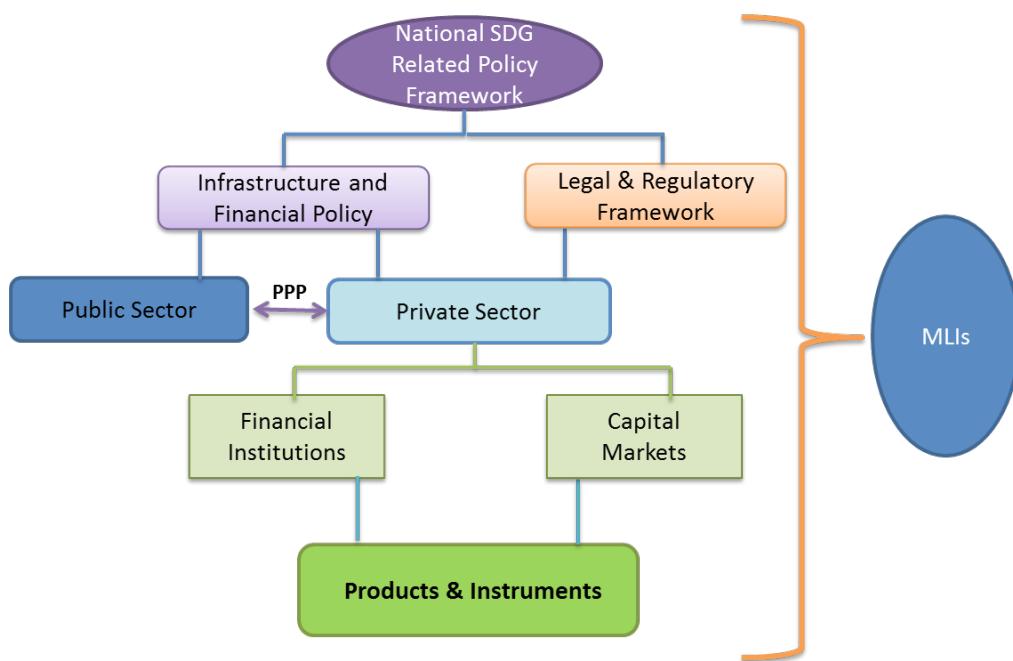
finance. Figure IV.1 presents a framework for policy recommendations at different levels that will be needed to increase sustainable infrastructure financing by the domestic private sector to promote the SDGs.

Given the ambitious and comprehensive nature of the 2030 Agenda for Sustainable Development, a national strategy to achieve the SDGs is necessary. This national strategy must drive infrastructure development plans as well as set up policies to create an enabling legal and regulatory framework. The former will identify, *inter alia*, the role of the private sector in contributing to the infrastructure development projects and the latter will create the environment under which the private sector can operate and finance these projects. A key aspect of the private sector's contribution to infrastructure development will be to have a financial policy that identifies the role of the financial sector, which has two broad segments: financial institutions and capital markets. The financial sector segments have to use appropriate products and instruments for financing infrastructure projects.

At the international level, multilateral institutions (MLIs) such as the United Nations, the World Bank Group and the Islamic Development Bank also have important roles to play in strengthening the national-level framework and capacities of infrastructure finance. Some specific issues that arise at different levels and are relevant to enhancing the role of Islamic finance in contributing to financing infrastructure investments are discussed below.

Figure IV.1

Policy recommendations framework related to sustainable infrastructure financing



IV.1 National SDG strategy and infrastructure-related policies

Given the importance and urgency of the SDGs in many developing countries, the economic and financial policies have to be more aligned with the SDGs at the national level. To ensure achievement of the 2030 Agenda for Sustainable Development and the SDGs there is a need to have a national-level strategy that will include an infrastructure plan and an accompanying financial policy. As indicated in section I, a limiting factor that inhibits infrastructure investments in many countries is the lack of a list of bankable projects. Governments need to identify the infrastructure needs, develop long-term plans and communicate these in a transparent way. The infrastructure plan would entail a sectoral-level plan that identifies projects needed for different sectors such as energy, transport, water and communication. For each of these sectors, a pipeline of projects has to be developed. A clear infrastructure plan should not only have a list of infrastructure projects in the pipeline, but also

a clear financial plan and policy on ways these projects will be financed from various sources.

IV.2 Financial policy

Other than providing the pipeline of the projects, the infrastructure financing plans must be transparent with well-defined roles of international, domestic, public and private sectors. The financial policy would consider projects according to their economic, social and environmental features. While infrastructure projects that are more bankable from an economic perspective will be suitable for the private sector, projects with more social returns will be better addressed by the public sector. In the context of financial planning, the role of Islamic finance can be factored in. Although both the public and private sectors can tap into Islamic capital markets, the role of Islamic financial institutions would be more appropriate in infrastructure financing taken up by the private sector or undertaken under public-private partnership (PPP) arrangements.

Financial policy should incorporate sustainability and environment, social and governance (ESG) issues in order to align the financial systems with sustainability goals. Other than focusing on the quantitative issues of raising funds, new policy frameworks would also include social and environmental factors. This would involve, inter alia, focusing on policies that encourage long-term investments in environmentally friendly green infrastructure projects.

For the financial sector to contribute to sustainable development, the industry itself has to be resilient and be able to reduce its own risks. Recognizing the vulnerabilities of the financial sector and its detrimental impact on output and welfare as highlighted by the global financial crisis, the Addis Ababa Action Agenda suggests taking steps to enhance its resilience and strengthen financial and economic stability (United Nations, 2015b). The Shariah principles of risk sharing and linking finance to the real economy can, in this regard, contribute to a resilient and stable financial system. The evidence shows that Islamic banking withstood the shocks of the global financial crisis much better than its conventional counterpart.¹⁰ Thus, the goal of including the Islamic finance industry in financial policy would be diversification of the overall financial sector in order not only to have alternative sources of financing, but also to increase resilience against negative shocks.

IV.3 Legal and regulatory framework

Infrastructure investments are long term and complex, involving many parties and having a cobweb of contracts creating different types of risks. The private sector will get involved in infrastructure development if laws can protect the interests of the stakeholders and mitigate the legal and political risks. Given the long-term nature of most infrastructure projects, they also need to be confident of the constancy of the rules and laws governing the project. Thus, a stable and predictable legal and regulatory system that can enforce the various contracts will be a necessary condition to give investors confidence that their rights are protected over the longer term and to create the right incentives for investing in infrastructure projects.

In the absence of laws that recognize and can enforce Islamic finance contracts, Islamic financing of infrastructure will not be forthcoming. Most countries in which Islamic finance operates have either common law or civil law legal systems. If supportive laws for Islamic finance are not introduced, problems can arise in settling disputes involving Islamic contracts, thereby creating uncertainty about Islamic financial transactions. Thus, there is a need to have a supporting legal regime that can cater to the needs of Islamic finance in general and infrastructure financing in particular, and that reduces uncertainty and instils confidence among investors.

Growth of capital markets would require securities laws and regulations that ensure fair, efficient and transparent markets, protect investors and reduce systemic risks.¹¹ To have a robust sukuk market, detailed codified securities, disclosure and bankruptcy laws from an Islamic framework are also required. These laws should in-

10 Hasan and Dridi (2010) show that during the years immediately after the crisis, Islamic banks were more resilient and their credit and asset growth were relatively higher compared to conventional banks. As a result, Islamic banks were assessed more favourably by ratings agencies in the post-crisis era. Beck, Demirguc-Kunt and Merrouche (2010) studied the status of Islamic and conventional banks for the period prior to the crisis (1995–2007) and found that Islamic banks had higher capitalization and liquidity reserves relative to conventional banks, indicating more stability.

11 These are broad objectives of the International Organization of Securities Commissions (IOSCO). See IOSCO (2003).

clude specific rules and requirements regarding *sukuk* holders' rights, reorganization and liquidation rights (of creditors), transparency and disclosure, and comprehensive accounting standards.

Other than finance laws, other laws also affect financial transactions and products. Tax laws play an important role in determining the product types affected. There are tax implications for most Islamic financial contracts since they are either asset or equity based. For example, a *murabahah* contract that involves buying and selling of an asset would lead to double taxation, making Islamic financial products more expensive unless the tax laws are changed. The current tax regimes also seem to favour debt over equity, which inhibits the use of the latter. For sustainable infrastructure projects, there may also be issues about providing tax relief or subsidies. Since Islamic finance has a preference for asset-based and equity financing, levelling the tax regimes for debt and equity will encourage the use of these modes.

A key law relevant to infrastructure financing is the concession law that defines the rights and obligations of different parties at various stages of the transaction of a project, particularly under PPP arrangements.¹² Private sector participation in these projects would require supporting laws and regulations that protect property rights during the concession period. While EBRD (2006) identifies a list of core principles for a modern concession law, these may have to be adapted for Islamic finance since some *Shariah* issues can arise with concession arrangements. For example, there are issues related to ownership of assets during the concession period and security sharing in syndicated financing. Islamic finance emphasizes ownership of assets to derive returns; however, in many countries, public assets cannot be transferred to private parties (World Bank and others, 2017).

While the Basel III standards were introduced to reduce systemic risks that have detrimental effects on economies, they can also create disincentives to invest in longer-term projects as these can invite higher capital charges. There must be ways in which regulations and policies can be balanced to ensure both financial stability and infrastructure investment (United Nations, 2013, p. 2).

There is also a need for new laws and regulations that support sustainable investment. Examples include regulatory guidelines on upfront tariff for alternative energy sources in Pakistan, which defines the rules and tariff rates paid for generating electricity from solar and wind power. The case study on Master Wind Energy Limited shows that one of the determining factors that led to undertaking the project was the certainty of tariffs and expected revenues that would be generated. Similarly, the introduction of the Sustainable and Responsible Investment *Sukuk* framework by Securities Commission of Malaysia in 2014 facilitated the launching of the Khazanah Sustainable and Responsible Investment *Sukuk* in 2015 and a green *sukuk* in 2017.

IV.4 Public-private partnerships (PPPs)

While Governments are responsible for ensuring adequate, sustainable infrastructure in an economy, there is an increased recognition of the role of the private sector in infrastructure development and use of PPP to achieve some of the goals. The United Nations (2013, p. 2) asserts that the public sector can take various steps to incentivize the participation of the private sector in infrastructure investment. The policies include creating an enabling legal, regulatory and policy framework to reduce risks and barriers to investment at the macro level and aligning private sector incentives with public sector goals and sharing risks between the public and private sector by using new financing models at the project level. Furthermore, a sound PPP framework would include elements related to (i) project selection and implementation, (ii) contracts that ensure appropriate pricing and transfer of risks, (iii) fiscal accounting and reporting standards, and (iv) legal, regulatory and monitoring framework (Jomo and others, 2016).

The World Bank and others (2017) identifies specific recommendations to increase the participation of Islamic finance in PPP projects. Other than raising awareness, they suggest developing new products and expanding the existing ones, and standardizing the documentation and approaches. There is also a need to address the *Shariah* issues that arise in PPP structures. As concessions involve transfer of assets for a limited period of time, issues related to transfer of ownership and/or lease of the asset and the responsibilities of the parties involved need to be addressed from a *Shariah* perspective. While the Islamic financial sector has been dealing with some of these issues on a case-by-case basis, a sound framework would be necessary for their wide use.

12

See EBRD (2006) for a list of core principles for a modern concession law.

IV.5 Capital markets

Capital markets play an important role in mobilizing funds from both institutional and retail investors. While *sukuk* have been used to raise funds for some projects, Islamic capital markets are still underdeveloped in many countries and their share is still small. The International Organization of Securities Commissions (IOSCO) identifies the key factors necessary for the development of Islamic capital markets as an appropriate regulatory framework, *Shariah* compliance and convergence, a range of products, lower transaction costs, development of market professionals, investor education, and knowledge-sharing (IOSCO, 2004).

A prerequisite for an efficient *sukuk* market includes the existence of standardized securities that are well understood by the relevant stakeholders, including investors.¹³ The range of products in a *sukuk* market varies across regions, incorporating both debt-like and equity-type securities. Part of the problem relates to the *Shariah* governance framework that can create differences in *Shariah* rulings (*fatwas*) by *Shariah* supervisory boards (SSBs). While there is uniformity of rulings in countries that have SSBs at the national level, in other countries, a diversity of rulings exist within one jurisdiction (Grais and Pelligreni, 2006). Such diversity of *fatwas* can introduce reputational and legal risks and hamper the development of the *sukuk* market. Thus, there may be a need to have a national *Shariah* authority that harmonizes the *Shariah* rulings and oversees their implementation, and to standardize some of the *sukuk* structures at the regulatory level to minimize uncertainty and legal risks.

Developing the *sukuk* market will not only help raise funds for infrastructure projects, but also help support the growth of a liquid secondary market that would increase the asset choices for institutional investors. While the infrastructure sector has the potential to take the *sukuk* market beyond a threshold level that makes it viable, there are other requisites that need to be in place for the market to function. Other than providers and users of funds, there is a need for liquidity providers, as they act as agents who facilitate transactions in secondary markets.¹⁴ Liquidity providers, such as brokers and dealers, buy and sell securities and help trading in the markets. There is need for a threshold level of *sukuk* to provide for a flourishing secondary market. Governments can facilitate the process by both providing the necessary legal and regulatory frameworks and market infrastructure, and taking the initial lead to issue sovereign *sukuk* for different infrastructure projects.

IV.6 Financial institutions

While a significant part of conventional infrastructure financing comes from non-bank institutional investors, data on Islamic finance industry show these institutions to be very small in size and making little contribution to the infrastructure sector. While the assets of banks constitute 33.5 per cent of total global financial assets, with the remaining 66.5 per cent of the assets managed by non-bank institutional investors (figure 1.3), assets of Islamic banks comprise close to 73 per cent of the total Islamic finance assets (figure II.5.1). There is, therefore, a need for greater diversity not only between financial institutions and capital markets, but also within financial institutions. Specifically, there is a need to increase the share of *takaful* companies, Islamic pension funds and Islamic infrastructure funds that can lead to increasing investment in the infrastructure sector.

One reason for having a dominant banking sector is the relatively emerging nature of the industry. In countries where Islamic finance has been operating for longer periods, the development of capital market and non-bank financial institutions segments appear to be larger. Malaysia is a good example, where the Islamic finance industry is distributed in a more balanced way into segments of Islamic banking (38.6 per cent), non-bank financial institutions (11.3 per cent) and capital markets (50.1 per cent). However, a balanced growth in Islamic finance would require a supportive legal and regulatory environment in which Islamic non-bank financial institutions can be established and flourish.

The social sector is significant in many countries and can grow further if attention is given to the governance and operational issues. Promoting the institution of *waqf* also has the potential to contribute to the develop-

13 Merton and Bodie (1995) assert that as the products offered by financial intermediaries increase in scale by serving a larger customer base, they can be standardized and sold in financial markets. More recently, one of the recommendations by the Basel Committee of Banking Supervision (BCBS) after the global financial crisis is the standardization of documents used for securitization in financial markets. See BCBS (2011).

14 Chami, Fullenkamp, and Sharma (2009) assert the important role of liquidity providers in efficient functioning of financial markets. In the absence of these agents, markets tend to become "buy and hold" and inactive.

ment of social infrastructure. The growth of Islamic non-bank financial institutions is also contingent on a robust Islamic capital market that creates Shariah-compliant investment opportunities for the former. In this regard, infrastructure projects not only provide new investment opportunities, but also create synergies for Islamic non-bank financial institutions and capital markets to grow together.

IV.7 Products

Infrastructure can be considered as a separate investment class with different risks and returns features compared to equities and debt. The average rates of return expected by companies involved in infrastructure is between 5-10 per cent for new projects, 5-6 per cent for utilities and power, 7-8 per cent for energy and 9-10 per cent for engineering and construction companies (Bielenberg and others, 2016, p. 28). Although infrastructure is an attractive investment class giving relatively good returns, a lack of products prevents investors from participating in this sector.

As it involves real assets serving social purposes, infrastructure financing fits well with Islamic finance ethos and principles. However, for the Islamic finance industry to invest in infrastructure would require coming up with products that satisfy the risk-return preferences of investors. While the recent growth in ESG investments in the conventional finance sector is now also witnessed in Islamic finance, there is a need to come up with new innovative products that can finance sustainable infrastructure projects. Examples of the green syndicate financing by Islamic banks in Pakistan and impact sukuk in Malaysia show that there is a need for supporting legal and regulatory frameworks to create incentives for launching sustainable products.

Islamic banks can increase their share in infrastructure investment further if the nature of the investment accounts can reflect the feature of risk sharing. In this regard, the Islamic Financial Services Act 2013 has taken the lead by distinguishing between deposits and investment accounts. Whereas the stringent capital adequacy regulatory requirements apply to assets financed by the former, the latter is not bound by them as investors bear the risk. One of the ways in which the pool of investment accounts can be used is to invest in infrastructure projects that will not only provide stable and relatively higher returns but also fulfil the social obligations of Islamic banks.

A small and illiquid Islamic capital market hampers the use of *sukuk* to raise funds for infrastructure projects. Islamic debt-based instruments have inherent problems of tradability and liquidity. As debt-based securities form the dominant part of infrastructure finance that cannot be traded, there is a need to create products that can enhance tradability. One way to resolve the issue is to have composite securities in which the debt-based component is minority. Another way to increase the marketability of the debt-based Islamic securities is to have the embedded option of a debt-equity swap (Khan, 2002).

Given the complexity of infrastructure financing and the relatively nascent nature of Islamic finance, structuring appropriate products can be challenging. The problem becomes acute since there is a lack of professionals in the investment banking sector who understand both Islamic law and complex financial transactions (Sole, 2008). Other than national level initiatives that can enhance the capabilities of professionals, the multilateral institutions (MLIs) can also provide technical assistance in transferring expertise and experience beyond national borders.

IV.8 Multilateral institutions (MLIs)

Since the 2030 Agenda for Sustainable Development was initiated at the global level by MLIs, they have a keen interest in ensuring its success. MLIs, such as the United Nations, the Organization for Economic Cooperation and Development (OECD), the World Bank Group, the Islamic Development Bank, etc., can play a facilitative role in contributing to increasing investment in sustainable infrastructure. One obvious way in which multilateral development banks (MDBs) contribute to infrastructure development is through direct investment in projects. The bulk of the portfolio of the MDBs consists of investments in infrastructure and social sectors. Some MDBs also have established infrastructure funds that pool resources from different sources for investment in infrastructure projects. The Islamic Development Bank has been instrumental in establishing Islamic infrastructure funds, including the Islamic Asia Infrastructure Fund with the Asian Development Bank. There are other ways in which the MLIs can help increase the capacities of domestic markets to enhance financing in sustainable

infrastructure projects.

In line with the Addis Ababa Action Agenda (United Nations, 2015b) that calls for standard-setting bodies to make adjustments for long-term investments, other international bodies such as OECD and the World Bank Group also recommend a standardized approach to sustainability in order to streamline and improve the qualities of infrastructure projects (UNEP, 2016, p. 25). Currently, numerous sustainability standards exist which can create confusion with regard to what is expected in infrastructure projects.¹⁵ Thus, a standardized global definition of sustainability and its implications for infrastructure projects is essential. The standard can be used by different stakeholders to assess the sustainability features that include the ESG factors of different infrastructure projects across the globe.

A key aspect of the standards would be to include the ESG-related issues on evaluating infrastructure projects. Several global-level initiatives provide frameworks and approaches for setting up institutions and organizations that can promote sustainable development in general and infrastructure investments in particular. These initiatives include Inquiry into the Design of a Sustainable Financial System (United Nations Environment Programme (UNEP)), the Principles for Sustainable Insurance (UNEP Finance Initiative), the Equator Principles, the Green Bond Principles, the Principles for Responsible Investment and the Sustainable Stock Exchange Initiative (United Nations and KPMG International, 2015). While the World Bank Group and the International Finance Corporation do have screening criteria that includes ESG factors, there is a need for the Islamic Development Bank to also develop and use similar screening standards that comply with Islamic values and principles.

Given the complexity of infrastructure projects, there are estimates that the costs of structuring the projects by using lawyers, engineers, advisers, etc., can be from 1-5 per cent of the project costs. Some of the development and transaction costs and legal risks can be lowered by having consistent processes and standardized financing structures and contracts. The problem is more acute in Islamic infrastructure finance due to its nascent and emerging nature. In this regard, the Islamic Development Bank and IIFM can leverage on its experiences and develop standardized Shariah compliant structures that can be used for different projects.

An area in which MLIs and MDBs can help promote infrastructure development is to assist in creating the human capital and build capacity for Islamic infrastructure financing. Since the infrastructure projects are dispersed in different countries, the MLIs and MDBs are well placed to bring the different stakeholders together to share their experiences and expertise. Drawing on their experiences in project financing, MDBs can help promote domestic private investment in infrastructure by identifying investible projects and providing advice on structuring and underwriting the projects in terms of technical assistance. For example, the International Finance Corporation's role in providing support for private sector involvement in infrastructure includes advising on regulatory reform; concession and structuring related to PPPs; project preparation; investment and monitoring (International Finance Corporation, 2012b). Given that Islamic finance is a relatively new industry and Islamic infrastructure financing is scant, all the resources should be used to enhance the knowledge and skills in Islamic infrastructure financing mechanisms. MLIs related to the Islamic finance industry—such as the Islamic Development Bank and other organizations, including the Islamic Financial Services Board and International Islamic Financial Market—can help the financial industry in similar initiatives.

Given the important role that Islamic finance can play as an alternative source of financing and also its potential to diversify the financial sector to enhance stability and resilience, stakeholders need to highlight the industry's contribution to achieving the SDGs at various international forums. Under the presidency of Turkey of the G20 group and the co-chairmanship of Indonesia of the infrastructure working group in 2015, discussions on Islamic finance in general and sukuk as an infrastructure financing tool were incorporated in the documents and deliberations of the group's meetings (Vizcaino, 2015). In this regard, countries with a large and growing Islamic finance industry (such as Indonesia, Iran (Islamic Republic of), Malaysia, Pakistan, Saudi Arabia, Sudan and Turkey, among others) can continue to promote and champion the incorporation of discussions on the role of Islamic finance's contribution to the SDGs in different international forums, including the annual ECOSOC Forum on Financing for Development follow-up.

15

UNEP (2016, p. 25) indicates the number of such standards to be about 500.

IV.9 Conceptual outlook and mindset

One key issue arising in moving from the Millennium Development Goals (MDGs) to the SDGs is the emphasis on sustainability—an emphasis that requires a fundamental change in orientation and mind-set. The 2030 Agenda for Sustainable Development necessitates incorporating the ESG-related issues in assessing the projects for investment. There are four areas in which there is need for reorientation, both in terms of conceptual outlook and practice.

First, the decision-making process in the context of infrastructure investment needs to move from a purely economic perspective to a sustainable perspective. Sustainable finance requires additional qualities in decision-making that include being participatory, ethical and resilient, and having consciousness of social and environmental impact (PRI, 2016, p. 12).

Second, the necessary system-wide shift from short- to long-term financing will require a corresponding shift in mind-set. For this to happen, however, there must be an enabling legal and regulatory framework that can mitigate risks, create incentives and support long-term investment.

Third, the misconception that Islamic finance is for Muslims only persists. Islamic finance should be considered as an alternative ethical source of finance that can be used by all, irrespective of their religious orientations. Not only have many non-Muslim countries—such as Hong Kong SAR, Luxembourg, South Africa and the United Kingdom of Great Britain and Northern Ireland—raised funds by issuing *sukuk*, the demand for these Islamic instruments has been very high, with a significant percentage of investors being non-Islamic entities.

Finally, the practice of Islamic finance has been focussed on legal compliance with Shariah, paying little attention to the broader goals (*maqasid*) of Shariah. To contribute meaningfully to the SDGs, a change in outlook is required to ensure that Islamic finance practice reflects the spirit and substance of Shariah, which calls for promoting welfare (*maslaha*) and preventing harm (*mafsada*). Moving forward, this would require more proactively incorporating the social and ethical dimensions and participatory modes in their operations and financing decisions.

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